

The Scottish Enlightenment

"Edinburgh is a hotbed of genius" - Tobias Smollett

Introduction

The Scottish Enlightenment was a term coined by William Robert Scott in 1900 to describe a glorious age of intellectual awakening in Scotland that led to a renaissance in many fields of



knowledge including, but not confined to: philosophy, sociology, geology, science, technology, history, medicine, literature, architecture and art. It developed in an age blessed by a sufficiency of wealth and leisure for the fortunate few who could afford to dedicate at least a portion of their time and energy to these great matters. There was a surge in that curiosity manifest throughout recorded history to better understand the mental, emotional and moral attributes of humankind. It followed that they sought - often through science - to better understand the nature, the limitations and the potentialities of their environment. In the end, it

was a quest for the knowledge and the means to effect improvements in self and society, in social relationships and, to the extent possible, in the physical world in which they lived.

The time period it encompassed has no easily definable beginning or end; occasional flickers can be detected at least as early as the 16th century, while some residual embers glowed well into the 19th. But its golden age ran mainly from about 1730 until the last decade of the 18th Century, give or take a few years. And while drawing important contributors from Glasgow and beyond, it was largely centred in the burgeoning city of Edinburgh - for a brief time Europe's Athens of the North.

This paper seeks to provide an outline of the history and substance of this period in Scotland's colourful history. As a less than comprehensive treatment, it profiles only those protagonists who are generally considered to have occupied the Enlightenment's centre stage. At the risk of testing the reader's tolerance for detail, the main tenets of some of the more important contributors to this movement are summarized, quite briefly, though not too 'paucily', as the Scots would say. A reasonably clear understanding (even in outline) of the complex philosophies or achievements of some of these prodigies requires more than a few lines. This is particularly true of David Hume and Adam Smith, but for those wishing to know more, the time spent should be well rewarded.

The Genesis

But how did this so-called period of enlightenment come about, and what confluence of auspicious circumstances came together in 18th Century Edinburgh to create and nourish it? Serendipity played its part, but we can speculate on certain other historical, social and cultural

precursors that may have helped to pave the way. The Union of 1707 was seen by many at the time as a disaster for Scotland, but it probably helped to create at least some of the conditions that contributed to this phenomenon. Certainly, it brought peace to Scotland, or at least reduced the level of conflict with England. The rebellion of '45 came as a rude interruption, but was mercifully brief and decisive. Gradually - particularly after about 1750 - Scotland began to reap significant international trade benefits under the protection of the British Royal Navy.

There was also the vital role of education, which for most of the 18th Century saw Scotland positioned in the vanguard of Europe. The reformers under John Knox had established a goal of placing a school in every parish throughout Scotland. This undertaking rolled out only slowly, but thanks to four main Acts of the Scottish Privy Council and Parliament over an eighty-year period, by about the mid-18th Century the coverage of these schools was impressive. The parish school system, while neither universal nor entirely free (there was a school tax on landowners that kept fees comparatively low), it succeeded in making a good basic education available to many more of Scotland's youth compared to virtually every other country in Europe. In 1750, about 75% of Scots could read, compared to only 53% in England. Perhaps leading on from that was the fact that 18th Century Scotland could boast of five universities, while its much larger neighbour to the south could claim only two. And, á propos the Enlightenment, this network of parish schools and the comparatively high number of reasonably affordable university places led to a system of meritocracy whereby the brightest and most determined of the children of commoners could occasionally aspire to a university education and rise through society to achieve greatness and wealth. This was much more common in Scotland than in England or elsewhere.

And then there were the benefits that derived from Scotland's history of conflict with England that encouraged stubborn independence of mind and culture and prompted affiliations with continental Europe, of which the 'auld alliance' with France was the most obvious example. This served to broaden the field of educational options that many young Scots were naturally drawn to, in many cases at least supplementing their education in leading universities on the continent - principally in Holland, Germany and France - where they were exposed to new and sometimes 'enlightened' ideas that they brought back to their native soil.

The Literati - Loud and Proud

The men (and almost all were men) who were the creative force behind this Enlightenment were largely drawn from what is often referred to as the **literati**. This was the pompous title appropriated to themselves by a number of Scotland's brash, confident cognoscenti in the mid-18th Century; the term has a ring of elitism about it, an irritation that was not lost on some of their contemporaries. Indeed, when a number of these talented gentlemen formed what they conceitedly named 'The Select Society' in 1754, a few of Scotland's eligible luminaries gave the meetings of the group a wide berth. Nevertheless, its membership did encompass most of the leading writers, artists and philosophers of Scotland, many of them current or former Presbyterian ministers. But other less pretentious-sounding societies proliferated during Edinburgh's golden years, including: The Tuesday Club (their meeting night, we assume), The Poker Club (as in a poker that might be used to stir up debate in support of a heretofore banned Scottish militia), The Oyster Club (for the mountains of that mollusc consumed during their meetings), The Cape Club, of which the poet Robert Fergusson was a member, the Crochallan

Fencibles, to which the printer and encyclopedist, William Smellie, belonged (and to which he introduced Robert Burns), The Dirty Club (no clean linen, if you please) and many, many others.

Why Edinburgh?

"Here I stand at what is called 'The Cross of Edinburgh', and can, in a few minutes, take fifty men of genius and learning by the hand". So remarked an English gentleman of distinction who spent two years in the city in the mid-18th Century.

The nature and design of 18th Century Edinburgh (or, more descriptively, *Auld Reekie*) provided an interesting theatre for the ensuing drama that was about to play out. Unlike other great European cities that could muster similar gatherings of uber-intelligentsia, Edinburgh and Scotland offered no special official support or encouragement that would help to explain this congress of overachievers...no government-funded institutes, for example, nor wealthy philanthropic patrons to speak of.

Certainly the coincidental pool of brainpower and native talent was an essential pre-requisite. But it was also providential that Edinburgh was such a compact community with most of its inhabitants living so cheek-by-jowl; in fact, almost literally on top of one another in their dank multi-story tenements (with their closes and pends) towering above a bustling array of cobbled streets and narrow wynds. The residents could scarcely avoid constantly meeting on the streets and in the taverns. Contemporary accounts from visiting travellers in the mid-18th Century remarked on the vitality and social exuberance of the inhabitants of Edinburgh, fortified as they were by generous servings of claret. Reputedly, up to two or three bottles of this social lubricant were consumed by each diner of an evening at one of the many taverns or oyster bars. Ale was the popular day-time tipple, probably to salve the worst effects of the previous evening's excesses. Men of genius would gather with their cohorts at their favourite watering holes and for three or four hours engage in lively debate, punctuated by laughter and provocative banter. Learned papers or extracts of lengthy treatises-in-the-making would be shared and critiqued. This was the very stuff of collaborative creativity.

Starting in about 1751, a number of clerics - including William Robertson and Hugh Blair, but with the support of influential laymen such as Henry Home and Adam Smith - formed a 'Moderates Society' for the purpose of steering the Kirk and its holy beagles away from its doctrinaire, evangelical roots and its fire-and-brimstone approach to the guidance of its congregations. With the dominance of the Evangelicals at the fore of the Kirk establishment and the General Assembly, it would prove an uphill battle, but by the late 1760's the moderates appear to have succeeded in becoming the leading influence within the Church of Scotland's hierarchy. Besides campaigning for a more nurturing ministry, they advocated for greater freedom of life and worship.

While most important movements can be said to have many fathers, it is generally agreed that the founding members of the Scottish Enlightenment were two men possessed of very different personalities. One - Francis Hutcheson - was a soft-spoken, one-time clergyman turned charismatic teacher, while the other - Henry Home (pronounced 'Hume') - was a gruff, hardened pragmatist, a lawyer and eventual judge of Scotland's high court, the Court of Sessions, at which time he assumed the title of Lord Kames.

"The proper study of mankind is man." - Alexander Pope

Francis Hutcheson (1694-1746)

Francis Hutcheson was born in County Down, Ulster, but educated mainly at Glasgow University. He was licensed as a minister in the Church of Scotland, but soon abandoned that for teaching at his own private academy in Dublin until being appointed professor of Moral Philosophy at Glasgow University in 1729, a post he held until his death in 1746. In that role, he was without peer throughout his tenure at Glasgow. Many of his students later reported having developed a fondness for him personally, and lavished great praise on his inspiring tutoring. His lectures left a deep impression on such leading figures as David Hume and Adam Smith.



In his posthumous *System of Moral Philosophy* (1755), Hutcheson staked out what would later be referred to as 'new light' thinking (based on the New Testament teachings of Christ) that held God to be a benevolent being, not the vengeful, jealous taskmaster portrayed all too often in the Old Testament and in the teachings of John Knox. He concluded that man is designed by God to be virtuous by nature, having an innate moral sense and an ability to tell right from wrong, unlike the orthodox Calvinists who believed that man was born in sin and must be taught right from wrong through stern study, including memorizing Knox's catechism which was based almost solely on the Ten

Commandments and its stern 'Thou shalt not...!' interdictions.

Hutcheson believed that, as humans, our most important goal in life is to be happy and that we derive our greatest joy from making others happy. What injures our friends or loved ones makes us unhappy. Love is our most important God-given emotion. He took a lead from the English philosopher, John Locke, in insisting that we are all created free, including having the right to freedom of speech and freedom of religion, and he was staunchly opposed to slavery. He argued for a kinder, more compassionate church ministry that eschewed messages of fear for those that would uplift and inspire. His ideas later gave rise to the Moderate Party and attracted like-minded reforming Enlightenment characters like Matthew and Dugald Stewart, as well as William Robertson and Hugh Blair, former students of Hutcheson.

Subscribing to the theories of other philosophers, including especially Ireland's Lord Shaftsbury, Hutcheson believed that political, religious and social liberty were essential to man's well-being and development, and that he has a right to resist any authority that attempts to limit those fundamental rights. Being moral means doing good to others, which makes us happy, while being wicked or vicious will only make us miserable.

Henry Home - Lord Kames (1696-1782)

While Kames accepted most of Hutcheson's philosophy concerning mankind's innate moral sense, he believed that acquisitiveness and the need to protect property were man's primary motivating impulses.

Through the rigours of his legal training and experience, he took a more pragmatic view of human nature, which he believed was not immutable, but rather moulded and changed by the

environment and by the evolutionary nature of societies in response to progress. In asking why men enact laws, he answered that it was primarily to protect property. From a very early age - even as children - we are driven by an instinct to protect what is ours. That instinct, along with a strong desire for justice, gives rise to the need for a governing authority and laws that men



agree to despite having to trade away a good deal of their personal freedom. What we own forms part of who we are; we only see ourselves as whole and complete when we are united with our property (i.e., what is 'proper' to us). Referring to this same inclination, the contemporary philosopher and friend of Kames, David Hume, remarked that: "This avidity alone of acquiring goods and possessions for ourselves and our nearest friends is insatiable, perpetual, universal, and directly destructive of society." Kames believed that community harmony and collective happiness were only achieved when law and culture matched. And culture is constantly evolving, so the law has to keep up.

Kames identified four separate 'stages' of civilized development: hunting and fishing, which is the primary state of early societies, followed by the pastoral-nomadic stage, then the agricultural stage, and finally the commercial. The first two of these really require no special laws or institution of government, only the authority of a head of household or of the clan. With agriculture comes more specialization, including skilled trades and greater interaction between community members, along with an increase in the number of rights and obligations; all of which call for more orderly conduct enshrined in laws, leading to the creation of a governing authority that has the power to enact and enforce those laws for the common good.

Commerce takes this a significant step further. At that stage, Kames asserted, the society will have achieved a high measure of polish and 'politeness', which will make the need for the harsh application of the law and its sanctions less necessary. More socialized behaviour becomes internalized, evident in the development of a more highly developed social conscience.

Community members make their own value decisions and act on them with more altruistic motivation. This evolution of responsible community values provides a link (in its final stage at least) between Kames's property-based imperative driving human nature and that of Hutcheson's innate morality premise; ergo, a final conjunction, at least in theory.

William Robertson, a leading cleric and historian of the time, successfully tested Kames' four stages and illustrated their practical application in a study of European history from the end of the Roman era in his book, *The History of the Reign of Emperor Charles V*, published in 1769.

There was one other very valuable contribution that Henry Home made in his lifetime. He was a man of many interests, and one was farming, or more particularly farming improvements. In 1776 he published *The Gentleman Farmer*, considered as something of a bible on the subject of good farming practices in Britain throughout the late 18th and early 19th Centuries. When Robert Burns undertook a serious study of farming practices and improvements it is thought that he likely turned to this excellent guide.

David Hume (1711-1776)

David Hume is considered to be one of the most important English-language philosophers in the history of that imprecise science, and quite probably its greatest.



He was a philosopher, essayist and acclaimed historian, even dabbling in the field of economics. As a philosopher, he is classed as a skeptic and an empiricist, his theoretical approach (as skeptic) being premised on 'experience' as being the only reliable basis of knowledge, especially sensory experience - what we can see, hear, touch etc. - and (as an empiricist) verifiable evidence. This contrasts with the more abstract, metaphysical, 'innate' reasoning favoured by Francis Hutcheson and others. Throughout his life Hume strove to develop a science of man wherein man's nature and motivations could be subjected to scientific experimentation and proof. But that has never been fully achieved, neither by him nor any subsequent philosopher.

His theories were both provocative and original, challenging most of his fellow contemporary philosophers (including those in Europe) to completely re-think their assumptions. He did not reject Hutcheson's 'innate moral sense' premise but relegated it to a minor role in the determination of moral outcomes. As a complete reversal of the dogma that philosophers had held to for over two thousand years, Hume believed that man is ruled, not by reason, but by his passions (or desires) and his emotions, both those that are looked upon as vices (greed, lust, envy, anger etc.) but also those that are considered virtuous and conducive to good order in society. It is not reason that teaches us the constraining virtues, but experience, which he referred to as 'habit' or 'custom'. We *learn* to avoid or rein in the passions that tend to deny us our objectives in life and, out of pragmatism (employing reason), we pursue those that get us what we want. He famously asserted that reason is, and should be, the slave of passion, meaning that our desires drive our motivations and objectives, while reason helps us navigate towards achieving our goals in a manner that is socially acceptable and lawful.

Hume published the first two volumes of his defining *Treatise of Human Nature* in 1739 when he was just 28 years of age, followed by a third and final volume in 1740. The work was received with much excitement among the literati and his fellow philosophers throughout Europe, but it failed to catch the imagination of a wider, financially profitable audience, and two planned final volumes were abandoned. In 1740 he anonymously published a summary (in the form of a sixpenny pamphlet), or *Abstract* of his main concepts laid out in the *Treatise*, hoping that it would help to increase sales. It didn't, but it has proved most useful to modern students of his work in clearly identifying what he considered were the most critical tenets of his beliefs. Although he would later earn a reputation as a master of linguistic and literary style, his presentation in the *Treatise* was ponderous and abstruse, but nevertheless embodied most of the principals that appeared later in his more popular collections of essays, in particular his *Political Discourses*.

Other philosophers (such as Kames) had recognized the importance of self-interest in driving societal imperatives, but the novelty Hume introduced was that self-interest is virtually

everything. The most basic instinct in man's nature is self-gratification. But experience teaches us the necessity to conform to the rules and proprieties of society and to rein in those excesses of passion that the community will not tolerate. He agreed with Kames that a vital role of governments is to protect property, but also to act to constrain (and if necessary punish) our destructive passions. He accepted the view of Thomas Hobbes (the 17th Century English political philosopher and author of *Leviathan*) that man is by nature depraved and hedonistic, while largely downplaying Hutcheson's altruistic model. But to survive, societies develop rules, conventions, personal habits and ultimately laws to sooth the savage breast and maintain the order that allows us all to pursue our selfish, but still legitimate, goals in an atmosphere of freedom and mutual acceptance. Hobbes referred to these voluntary and imposed behaviours as constituting a 'social contract'. Through the latter, Hume contends, the passions that are potentially so destructive are canalized into useful and effective tools to achieve acceptable results. Lust, for example, while abhorrent in general, becomes a socially beneficial passion when it leads to marriage and happy family life. Homicidal tendencies are lauded as courage in war. Greed can motivate constructive entrepreneurship that increases national wealth.

Governments must impose constraints on the harmful pursuit of self-interest, but not at the expense of freedom reasonably exercised. So, there will always be push-pull between the libertarian goal of maintaining the rights and freedoms of individuals, and the need to enforce limits on the exercise of personal liberties to protect the common good. But the two goals must be in balance. Neither chaotic anarchy nor totalitarian authority is tolerable. Both are poisonous to a free and productive society. The compromise is found in community members agreeing to cede a reasonable portion of their personal liberty to a governing authority. But how much is reasonable? That was the thorny question that Hume never managed to answer, although others would try. And still we struggle with that very same question two hundred and fifty years later.

Hume believed that the manifestation of a mature and civilized society was one under which commerce could thrive. Commerce creates wealth and the opportunity to acquire luxuries, and a more refined society encourages the arts and sciences to flourish. The wealth of the commercial class trickles down and benefits the masses, an illustration of how selfish avidity - legally pursued - can benefit and enrich society as a whole. Here we see Hume applying his behavioural philosophy to the field of economics, and the effects of human behaviour in that sphere.

Regardless of the demons that sometimes wrestle with our innate benevolent instincts (and occasionally prevail), overall Hume inclined to an optimistic view of humankind. In his *Enquiry concerning the Principle of Morals* (1751), he philosophizes that "All mankind so far resemble the good principle that, where interest or revenge or envy perverts not our disposition, we are always inclined, from our natural philanthropy, to give the preference to the happiness of society, and consequently to virtue above its opposite. Absolute, unprovoked, disinterested malice has never perhaps place in any human breast." In a troubled world where evil often appears gratuitous and unprovoked, we might have reason to challenge such an optimistic conclusion.

Peer reaction to Hume's *Treatise* (and its later revamped two-volume '*Enquiry*' series) was mixed, prompting enthusiastic praise from some, and virtual shock and horror from others. Hutcheson was appalled and did his best to undermine Hume, successfully blocking his attempt to secure a university appointment. Thomas Reid fundamentally disagreed with Hume

concerning the uncertainty of our perceptions and the absence of an innate understanding of the real world except through experience, discussed further below.

Hume also spoke out against 'superstition', including the notion of miracles and religious supernaturalism (he was almost certainly an undeclared atheist), as well as doctrinally imposed religious beliefs. This put him on the wrong side of the Kirk, and the General Assembly of the Church of Scotland tried very hard to have him censured, although without success. But some of Europe's leading thinkers (including Immanuel Kant, who did not agree with all of his ideas) acknowledged that Hume had changed the game in a positive way, opening up a whole new and exciting line of thought. Adam Smith, more than most, understood his theories and undertook to make them more relevant in his *Wealth of Nations*.

Interestingly, while his *Treatise* was a commercial flop, as an historian Hume was among the most acclaimed and successful of his age. He authored a six-volume *History of England* that went through over 100 editions.

Adam Smith (1723-1790)

Adam Smith was born in Kirkcaldy, the posthumous son of his namesake father who had died at a comparatively young age. He was kidnapped by a band of tinkers at the age of three, but happily was recovered after a few hours. He never married - although seems always to have held out the hope of matrimony - and lived with his mother (whom he adored) until her passing only six years before he himself died. He received his formal education at Glasgow University and at Balliol College, Oxford; he had a low opinion of the merits of the latter, and left before graduating. He was invited by Edinburgh University to give a series of lectures there, which were very well received during the three-year period that he delivered them. This led to his being appointed to the Chair of Moral Philosophy at Glasgow University's in 1752, and despite being no great speaker, he distinguished himself as a great favourite of his students for 12 years.



Smith did not aspire to be an economist, but rather a philosopher who began by seeking answers to the great philosophical and social questions of his age, including what motivates and drives the human spirit. His first great work of philosophy that explored those matters, *The Theory of Moral Sentiments*, was published in 1759, proving to be a virtual best seller. He did of course go on to publish his great masterpiece, *The Wealth of Nations* in 1776; this work was in large part intended as a sequel to his *Moral Sentiments*, applying those earlier mainly philosophical theories to the world of commerce and the political environment in which it could flourish.

In his *Moral Sentiments*, Smith set out to frame a philosophical explanation of moral judgement. He rejected the so called 'rationalist' school of philosophers, in favour of the 'empiricists'. Both Francis Hutcheson - his former, much esteemed teacher - and his friend, David Hume, belonged in the latter category. Smith recognized that Hutcheson's philosophy was incomplete, and despite it appearing to be at odds with David Hume's, Smith endeavoured to better explain and integrate many elements of both of their philosophies, which he cleverly succeeded in doing.

Smith agreed with Hume's core premise that man is driven by his passions, but learns to channel and temper them in his own best interests. He saw these modifiers as including, in Smith's words, 'the awful virtues' of self-discipline, moral rectitude and the consequent righteous anger at wrongdoing. But he thought Hutcheson was right in claiming that as social beings we have a natural affinity with our fellow humans, taking pleasure in their happiness and being saddened at their pain. This was a quality Smith described both as 'mutual sympathy' and 'fellow-feeling', which were what he meant by the *moral sentiments* part of the title of his first major publication. Smith elaborated on Hutcheson's ideas, noting that we cannot know precisely how another feels, so in observing his pain or his joy, or any of his various emotion-based actions or reactions, we try to imagine how we ourselves would feel in a like situation. We do this by splitting ourselves into an agent performing an action and a judge observing it, and then deciding (i.e. being judgemental about ourselves) the propriety of our own behaviour. Similarly in judging another's morals, we observe how they act in a given situation and judge the appropriateness of their actions according to how we think we ourselves would have acted.

Life also provides us with a mirror of sorts that reflects back the consequences of our social interactions, teaching us what is virtuous and pleasing to others and what offends or displeases them. Because we thrive on, and are made happy by, the approval of others (and vice versa at their disapproval), we strive to act accordingly. This interactive observation plays a vital part in providing us with our moral compass, or conscience. But we also judge ourselves against the standards that we expect of others, including honesty, generosity, compassion and trustworthiness. Even if we judge that society's morals and behaviours are deficient, we can fall back on those higher ideals we have set for ourselves to guide our personal behaviour. Thus, Smith felt that he had successfully blended and reconciled the theories of Hutcheson and Hume into a more complete philosophy of man. Standing alone, both were incomplete, but combined they represented a near-comprehensive picture of the human condition

It is thought that Smith considered his *Theory of Moral Sentiments* to be his best work, and he continuously revised it throughout his lifetime. But he is now best known as the world's first modern political economist through his seminal work, **The Wealth of Nations**, or **An Inquiry into the Nature and Causes of the Wealth of Nations** to give it its full title. And while the latter is regarded as mainly a work of economics, a great many of its underlying concepts that relate to human behaviour and motivation are carried over and applied to the world of commerce. Indeed, *The Wealth of Nations* can be read, not only as a work of original genius, but in the words of Arthur Herman: "It is also the *Summa* of the Scottish Enlightenment, a summation of the nature of human progress - and its salute to the triumph of the modern". It has been suggested by some that (excepting The Bible, perhaps) it competes for the honour of being the most important book ever written, and that it has made the greatest contribution to the theory of how governments should function.

Smith began by introducing what he considered was the most important concept in determining the wealth of nations, namely the division of labour, or in the lexicon of modern economics, *specialization*. It is thought that he was the first to coin the expression and to clearly explain how it could be achieved. He would, of course, develop many other themes to his overall theories of national economics, but most were dependent on the successful implementation of this pre-

requisite, along with the mechanized technical innovation that he believed it would be sure to stimulate.

The concept itself was not inherently difficult to understand, and Smith was a master of clarity which he reinforced with very illustrative examples; he was, after all, a teacher. By way of better explaining his concept of the division of labour, he used the example of a pin factory. The manufacture of each pin, he informs us, involved about eighteen different operations and the employment of various tools and machines. By allocating discrete parts of the process to specific workers, each became highly skilled at his assignments and was able to devise (or assist engineers to design) tools or technology that would make the work more efficient. If one man were to undertake all eighteen tasks, particularly without the availability of these mechanical aids, Smith estimated that he would likely manage to produce little more than one pin in a full work day. Yet in the case of an actual small factory that produced pins under a production system of labour specialization employing just ten workers, the daily production was actually 50,000 pins.

So, breaking down the production processes into very small units of work leads to workers developing greater skills, which stimulates the invention of specialized technology, thus improving worker productivity. This increases profits that are reinvested, fueling growth in the economy and leading to ever-increasing growth in national wealth.

He went on to reinforce the concept of division of labour citing other more complex examples, including illustrating how the manufacturer of a product might depend on contracted tradesmen or external service providers for part of his production, so that the benefits of the division of labour were not only confined to the manufacturer's own employees. The car industry would be a present-day example of this mixed internal versus contracted services model. Through these efficiencies, a modern society is not only able to supply a wide variety of luxury goods to the wealthy, but because each worker is able to produce more than is required for his own basic needs, his wages enable him to acquire more goods than he otherwise could have if he were a member of a more primitive society. This illustrates the trickle-down effect of wealth: not only are the rich able to afford their luxuries, but there is a modest surplus available to the common majority that allows them to acquire more than the bare essentials of life.

Division of labour can also be profitably applied to international trade. Smith was a strong supporter of free trade, which - again through the application of specialization tied to the efficiencies of international comparative advantage - would benefit all trading nations. Free trade requires that protective tariffs be kept to a minimum, which Smith strongly argued for. He urged governments to abandon the **mercantilist** system of trade that most European states had modeled their economic strategies on up to that point. These tightly regulated and carefully protected economies protected traders and manufacturers, usually through monopolistic charters. Typically, these were awarded by the government or the Crown to a select few insiders. It favoured that nation's traders and industrialists at the expense of their domestic consumers who ended up having to pay more for a less varied choice of products.

Smith advocated a more self-directed system of commerce (similar to what we now call 'capitalism', although the term had not yet been coined), each producer/merchant and each

tradesman being free to maximize his own profit. While these individuals can be expected to selfishly pursue their own self-interest, nevertheless a free and competitive marketplace unencumbered by unnecessary regulation will almost always lead to the creation of greater national wealth than in a tightly regulated economy. Similar to the mantra we often hear today, Smith held that government officials lack the knowledge and experience to successfully pick market winners and losers. However, governments do have a vital role to play in such areas as national defense, education, law and order etc. They should confine their activities to those common-good areas.

Smith covered many other topics in his *Wealth of Nations*, which cannot be discussed in a brief overview such as this. Many of his theories have been challenged, and even rejected, by modern economists, but he was a pioneer in this field, and he was able to provide a template that others could further develop.

So respected was Adam Smith following publication of his *Wealth of Nations* that the government in London actively sought his advice and implemented many of his economic and free trade recommendations. As such, he not only foretold the success of Britain's Industrial Revolution (and her ascendancy as the 'workshop of the world', albeit for an all-too-short reign of glory), but also was partly responsible for it.

Thomas Reid (1710-1796)

Thomas Reid, was a Presbyterian minister who in 1751 was appointed as a regent tutor at King's College, Aberdeen, and as Chair of Moral Philosophy at the University of Glasgow in 1764. Reid set out to refute a concept that ran throughout the works of David Hume (in his role as a



skeptic), namely that our perceptions of the world around us and the conclusions we draw from them are uncertain, which then requires that we rely on habit and accepted convention to guide our actions. Hume (and Locke before him) held that our 'ideas' about objects might conflict with, and even seem to contradict, reality. Poppycock! Reid declared. Our senses - teamed with experience and memory - are our most important tools by which we come to understand the world we live in, and they serve us very well. We also come into this world with an innate rational capacity...*common sense*. With these natural attributes we are eminently well equipped to gain a wealth of knowledge about our world and how to navigate through it. And knowledge is power.

Power through knowledge, Reid insisted, is available to all men. A society's progress will be most fully realized when as many of its members as possible possess the utmost store of knowledge. And that will make us free! Morally and functionally. With the capacity for observation that our senses afford us along with our ability to learn by experience, so many of the fundamentals of life no longer need to be proved...they become self-evident to us. We cannot do less than accept them for what they appear; and we can trust that how they appear is how they ARE.

In his day Reid's philosophical theories were more universally accepted than those of David Hume. They were embraced by the American colonial revolutionaries, and the imprints of his philosophy can be easily detected in the Constitution of the new nation (*'We hold these truths to be self-evident, that all men are created equal...*), and in its ongoing approach to education. Reid's ideas helped to create the distinctive cultural philosophy of early America and its citizens. To quote Arthur Herman, it sought to embody: "an independent intellect combined with an assertive self-respect, and grounded by a strong sense of moral purpose." This might even describe the enlightened 18th Century Scot.

Dugald Stewart (1753-1828)

Dugald Stewart was among the most intellectually brilliant and academically accomplished of all of the enlightenment figures. Like his two illustrious predecessors in their time - Francis



Hutcheson and Adam Smith - he was esteemed by his students as the most respected and revered professor in Scotland. He began teaching mathematics at the University of Edinburgh at just 19 years of age, three years later becoming a full professor, and in 1785 succeeding Ferguson in the chair of Moral Philosophy at Glasgow, a post he occupied for the next 25 years. He published extensively on various aspects of philosophy, the most important being *Elements of the Philosophy of the Human Mind*.

He studied under both Adam Ferguson and Thomas Reid, becoming a disciple and strong proponent of the latter's 'common sense realism' philosophy which in his lectures at Glasgow University he attempted to merge with Adam Smith's 'moral realism' in economics. These lectures (being delivered, as they were, to many of Britain's future leading intellectuals and politicians) not only spread the gospel according to Thomas Reid, but also served to hugely popularize Smith's *Wealth of Nations*, for many years helping to make it the bible of economic thinking throughout the English-speaking world. In fact, Stewart crafted his lectures so as to meld the writings of Reid and Smith into one system. And he did much to convince English readers of the merits of the Scottish school of philosophy. Probably his most valuable contribution to the Scottish Enlightenment was his success as its Ambassador.

The Adam Family - Architects Extraordinaire

While architecture, like the pure sciences, may seem an unlikely product of the Scottish Enlightenment, the renaissance of form, style and beauty pioneered by the Adam family was deeply rooted in the brave new world of ideas and innovation that the enlightenment spawned.

The family patriarch - William Adam - was an acclaimed architect who pioneered the Palladian style (after the Italian Renaissance architect Andrea Palladio) in Scotland. Some leading British architects, such as London-based James Gibbs and Colen Campbell, had been developing their own unique British Palladian forms. These featured smooth lines and monumentality that were intended to display pure grandeur and proclaim the wealth and importance of the owner. While following the core rules of Italianate Palladian style, with its greater use of porticos and domes and giant columns, it was primarily designed to impress, sometimes at the expense of interior

function. It was this style that William Adams introduced to Scotland, an example of probably his finest work being Hopetoun House, near South Queensferry, Edinburgh.

But sons Robert (1728-1792) and the younger James (there was a third brother, John, also an architect) rejected this style as being insufficiently artistic and picturesque, and not suited enough to the principle that form should follow function. Both brothers spent several years in Italy and Europe intently studying both the new Palladian examples, and the old classical Roman remains



of homes and public buildings, many becoming only recently viewable as a result of archeological excavation and restoration. The brothers were impressed by the simple beauty, artistry and functionality of the interior of these ancient buildings...exemplifying form and function in happy consort. But those constructed in the style of Palladio struck them as lacking the interior proportions and human scale evident in the ancient examples. They did not visit Greece, but were able to access the work of others who made their sketches of ancient Greek buildings (many of which had also been excavated and restored recently) available, especially in the publication by James Stuart and Nicholas Revett, *Antiquities of Athens*. These exhibited many of the superior aspects and advantages they had noted in the

Roman examples, particularly regarding the interiors, but also the exterior surroundings with their gardens, picturesque views and other features that served not just to inspire awe in the edifice itself, but to delight in the more gracious human qualities of gaiety, grace, delicacy and beauty. And the Adams brothers saw how decoration (statuary, vases, carved heads etc) could 'add greatly to the picturesque of the composition.' This form of decoration was taboo to the British Palladians.

The brothers enlisted the talents of leading artists to add beauty to their architectural commissions as well as elegance, refinement and sophistication. They believed that any building could be made to look beautiful, whether a house, a factory, a warehouse or public building. These concepts were given a boost following the publication of Lord Kames's *Elements of Criticism* which posited that mankind is graced with an innate sense of beauty, and that artists have a role to play in stimulating that appreciation in the human consciousness.

Robert had cut his professional teeth designing military complexes and fortifications, commissions channeled to him by his father in the early years of his career, for which he demonstrated a particular flair. But following his father's death, he and brother James set out on their voyage of discovery. Upon returning after 4 years studying in Europe, Robert re-established his career in England. After making valuable contacts in the Capitol, he



began to receive lucrative commissions. He worked in and around London for many years where he enjoyed great success and a national reputation, following which he returned to Edinburgh at the invitation of the Edinburgh town council to design the final phase of the New Town development at Charlotte Square. This was in 1792 just as his health was markedly failing, and although he died later that year, he did manage to complete his plans, and construction of Charlotte Square (partial illustration shown) was finally completed in 1820, a beautiful and elegant

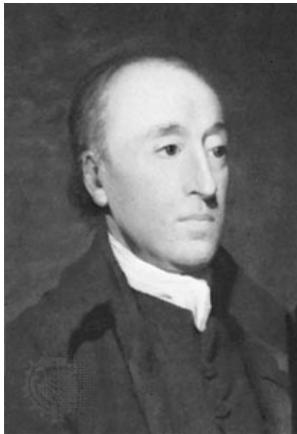
example of his genius.

His contemporaries praised Robert Adam not only for his achievements, but also for his great amiability and worth, which they claimed was second to none. He was a true product of the Scottish Enlightenment, developing his theories of architecture at just the right time in that movement's rise, and benefiting from its spirit of bold, innovative thinking, as well as from a clientele that dared to be different. Although not always associated with the core enlightenment thinkers who plied their genius mainly in the areas of the social and physical sciences, he was no less a product of that explosion of brilliance and creativity. And because of the continuing survival of most of his works (including Edinburgh's New Town and Culzean Castle), his creations are one of the few visible memorials celebrating and epitomizing Scotland's Enlightenment.

The Scientists and Engineers

Science and engineering flourished in Scotland throughout most of the 18th and 19th Centuries, drawing perhaps from the same wellspring of energy, optimism and irrepressible confidence that stimulated and nurtured the other fields of enquiry and endeavour in Scotland during that period. The life and works of a few of the leading scientists and engineers of this time are reviewed in brief.

James Hutton (1726-1797) apprenticed for a few months in law, but as his real interest was in chemistry he took up the study of medicine, the curriculum of which was heavily weighted in favour of chemistry. He qualified as a medical doctor in 1749, but apparently he had no wish to actually practice the black art. Instead, having inherited a good deal of farm land, he turned to agriculture. At about the same time, he teamed up with a friend, James Davie, to develop an inexpensive process for the manufacture of an industrial chemical, ammonium chloride. Both his farming and the chemical manufacturing venture proved very profitable.



In the course of his farming endeavours (in which he maintained an active interest throughout most of his life and later published *The Elements of Agriculture*), he started to take a keen interest in the geological features he observed on the surface of the earth and in rock formations locally. He soon began to develop theories of how the earth had changed over vast periods of time, sometimes building itself up, then suffering a diminution (through volcanic eruptions, erosion, the laying down of sedimentary materials, etc.) before once again restoring itself. He travelled to various regions of Scotland in search of different rock and strata features, and where fossils might be found... places where nature revealed her secrets to his observant eye and provided him with the empirical, scientific evidence that helped form or reinforce his evolving theories.

After spending a short time in London, he returned to Edinburgh in 1768, finding to his delight more intriguing formations in and around the city that were rich sources of ancient geological changes, in particular at Salisbury Crags and Arthur's Seat. He would later travel throughout Scotland again, discovering many other geological features which he was able to study and

catalogue. The science of geology was in its infancy, and the work he was doing was leading edge for its time. The wealth of new knowledge that he was gathering and documenting would result in his being acclaimed the founder of modern geology. In his lifetime he succeeded in establishing geology as a distinct branch of science.

He soon became firm friends with many of the enlightenment figures, including David Hume, part of whose 'moral philosophy' he managed to weave into his own philosophy of the earth's past and future. He also befriended Adam Smith and Joseph Black at that time. As a non-academic, he revealed most of his findings and theories through papers and presentations given at meetings of the Royal Society of Edinburgh. Later works included *The Theory of the Earth* published in 1788 (just two years before his death) which described his hypothesis that the earth is of almost timeless origin, with the likelihood of an equally timeless future, and that the vast changes that it has gone through are evidenced in the marks left behind and visible in rock strata, fossils, sedimentary deposits and so on. Hutton was one of the first credible scientists to declare that the earth was at least many millions of years old, which put him in conflict with the 6000-year doctrine preached by most Christian faiths.

Hutton well might have beaten Darwin in being recognized as the father of evolution but for the fact that as a deist he could not accept the notion that separate species could evolve (such as birds from dinosaurs) independently of God's creation. But he did theorize that each species evolves within its genus through a process of natural adaptation to become more capable of surviving under changing environments and other terrestrial conditions. These traits, he believed, can then be genetically passed on, leading to a natural system of survival of the fittest.

Joseph Black (1728-1799) and James Watt (1736-1819) have both been associated with the cadre of scientists identified as rightly being part of the Scottish Enlightenment, and who shared a connection in their work. Both worked at the University of Glasgow, and collaborated on a number of joint projects and experiments.

Joseph Black was William Cullen's most brilliant and successful student, becoming a noted physician who developed a passion for chemical experimentation and discovered carbon dioxide. But his more important discoveries were associated with the properties of heat, in particular of latent and specific heat, knowledge that was invaluable to James Watt in the invention of his revolutionary steam condenser.

James Watt began his work life as an instrument maker employed by the University of Glasgow. He proved to be something of a mechanical genius who could turn his hand to making almost any device or solving any mechanical problem. His accomplishments were many, but he is remembered best for improving an existing piece of technology - the Newcomen steam engine, which was being used mainly as a water pump - by inventing a separate condenser that spectacularly improved its efficiency and usefulness. Later he adapted the engine to produce rotary motion, which became a source of power for a whole range of industrial applications that facilitated the modern factory and launched Britain's Industrial Revolution. He would later be acclaimed one of history's most influential men.

Thomas Telford (1757-1834) was a truly remarkable Scot, and yet attracts less attention than he deserves in the annals of Scotland's past. He was certainly a renaissance man, and a man of great energy and genius, but was he of the Scottish Enlightenment? Probably, but the point is moot. His great accomplishments during the period of the enlightenment undoubtedly earn him a place in this account.

He was born near Westerkirk, not far from Dumfries. Beginning life as a stonemason, he taught himself to be an architect and an engineer...quite a feat in itself. His staggering list of accomplishments are too numerous to detail here, but to mention just a few, he was responsible for three major bridges spanning the River Severn, two great aqueducts carrying the Ellesmere Canal across valleys in Wales, two mighty suspension bridges, including the longest suspension bridge in the world at that time (580 ft.) spanning the Menai Straits, about a thousand lesser bridges, many canals, a thousand miles of roadway, numerous harbour works, many churches...and on and on! Exhausting as all of that would have been for any normal mortal (exhausting even to contemplate), he still found time to accept the commission to engineer and oversee the construction of the 60-mile long Caledonian Canal, a project so massive that it is unlikely that any government today could have afforded its huge cost.

The Men of Medicine

Any discussion of the Scottish Enlightenment would be incomplete without some separate treatment of the contributions made by the pioneers of medicine. In most cases their interests, their studies and their work included some branches of pure science, particularly chemistry, which subject was a major component of the medical curriculum in the universities in the 18th Century. Scotland in general, but Edinburgh in particular, was at the forefront of the great advances that were made in medical knowledge from the late 17th Century through the 18th. During that period, Edinburgh earned a well-deserved reputation as one of world's leading centres of medical learning. In the limited space here, it is only possible to give a very brief overview of how Edinburgh achieved this remarkable pre-eminence.

Beginnings can always be a subject of debate, but we can start with Sir Robert Sibbald (1641-1722), although the early years are also a tale of two family dynasties and an Edinburgh Lord Provost. Sibbald was a graduate in medicine from the University of Angers in Western France who commenced practice as a physician in Edinburgh in 1667, and in that same year he and Dr (Sir) Andrew Balfour started the 'Physic Garden' that later evolved into The Royal Botanical Gardens Edinburgh. He helped found the Royal College of Physicians of Edinburgh in 1681, and was elected its president in 1684. The following year he was appointed the first professor of medicine at the University of Edinburgh. Sibbald could therefore be seen as a pioneer who helped establish the foundations of Edinburgh's future reputation in medicine.

It was not until a number of years later that Edinburgh began to be recognized as a Mecca of medical excellence in Europe, with students soon flocking to it from all over Europe. Much of the credit for this leap forward goes to George Drummond (1688-1766) who was Lord Provost of Edinburgh for thirty-six years over six terms in office. Given his accomplishments over that period, he could well be considered one of the city's important enlightenment figures in his own right. He was a prime mover and fundraiser behind the establishment of the Royal Infirmary (designed by William Adam and opened in 1748) and a great supporter of the University of

Edinburgh, but in particular he was the driving force behind the establishment in 1726 of its faculty of medicine. He is also known as the driving force behind development of the New Town.

One of the dynasties alluded to earlier was that of the Monro family...Alexanders all, and sometimes distinguished as Alexander primus, secundus and tertius respectively. The patriarch, Alexander Monro senior, began lecturing in anatomy and surgery at the University of Edinburgh in 1719 at the age of twenty-three, and (thanks to the support of George Drummond) became its first Professor of Anatomy. He was also the founder of Edinburgh's Royal Infirmary. His son, Alexander, assisted him before replacing him in 1758. *His* son - Alexander, of course - served with his father from 1798 as a professor before he too replaced dear old dad as Chair of the Faculty in 1808. Through the excellence of their teaching (especially anatomy), the first two of these Monros accomplished a great deal that helped to establish Edinburgh's international medical reputation. Alexander tertius was very competent, but unlike his two familial antecedents, uninspiring to his students.

The other dynasty was that of the Gregories. They were dominant both in the fields of Mathematics and Medicine, being influential professors at the Universities of Aberdeen, Edinburgh and St. Andrews. The patriarch, James (1635-1673), was the first professor of mathematics at Edinburgh. His son, Dr James Gregory, was professor of Medicine at Aberdeen, being succeeded in that position first by his brother, and then by his son John, who in 1766 was appointed 'Professor of the Practice of Physic' at the University of Edinburgh, a post he held until his death in 1773. He in turn was succeeded by his son, James.

Another of the great medical teachers and practitioners who played a leading role in establishing and maintaining Edinburgh's pre-eminence in this field was William Cullen (1710-1790), a Glaswegian, whose command of chemistry was as crucial as his medical training, and who was as much a researcher as a practitioner. After qualifying as a physician and surgeon, he practiced in that field for a time before becoming a lecturer in chemistry at his alma mater, the University of Glasgow, before succeeding to its Chair of Medicine in 1751. At the urging of John Home (Lord Kames) he moved to Edinburgh University four years later, lecturing again in chemistry, and later taking over the Chair in Medicine. He became one of the founding members of the Royal Medical Society. He was a great all-round scientist, but excelled as a teacher, his reputation in that regard being well-known even in America.

There were many other ground-breaking Scottish (and Scottish-educated) physicians, including Edward Jenner, John Pringle, and some who gave their names to diseases or conditions first identified by them. Among these were Richard Bright, Thomas Addison and Thomas Hodgkin. A brief final mention goes to two brothers, William and John Hunter. They were trained in Scotland, but moved to London, where they became hugely successful as physicians and surgeons to the rich and famous. William was physician to Queen Charlotte, and John to the King, and justly deserving of their high reputations. Among other notable achievements, William pioneered the field of medical obstetrics, and John helped establish dentistry as a medical specialty. John also led the move that resulted in physicians taking over the critical and highly specialized task of surgery from untrained, backstreet barbers.

Unlike their English-trained brethren (who were usually reluctant to even properly examine their patients, particularly if that involved physical contact), the physicians educated in Scotland were hands-on, scientific-minded practitioners who were encouraged to experiment, to probe, to diagnose and to risk new, untried remedies. They became the leading physicians throughout Britain, and blazed a trail that led to the adoption of the science-based medicine we enjoy today.

Developments in Scots Law and their importance to the Enlightenment

It may seem a stretch too far to suggest that developments affecting the legal system in Scotland during this period should fall within the compass of the Scottish Enlightenment, but in fact Scottish jurisprudence was, if not a key component, at least a vital foundational precursor. As a general comment, the laws of any nation or society, taken as a whole (and particularly one as distinct as Scotland in the 18th Century following the Act of Union), can serve as an important source of national pride and cultural identity. As well, it is axiomatic of all successful, civilized societies that commerce can only thrive under a comprehensive, equitable and predictable body of civil law, while protection of the individual and his property must be guaranteed by a robust criminal code. The law must be enforceable and must be presided over by a competent, free and independent judiciary. All of these conditions prevailed to a substantial degree on the eve of the Scottish Enlightenment.

Thanks to a few men of vision, the late 17th and early-to-mid 18th Centuries were a time of great advances in the development and codification of Scots law. But what made these jurists integral to the Scottish Enlightenment was their approach to writing about and teaching law. Beginning principally with James Dalrymple (1st Viscount of Stair), his *The Institutions of the Law of Scotland* published in 1681 not only treated of the legal system itself, but, in the words of David Daiches: "...in a context of philosophical inquiry into the fundamental principles of law and their relation to morality, social structure and custom, politics and economics...". This approach was largely followed by later writers and professors, including Lord Kames and Baron David Home. They all endeavoured to weave in the anthropologic elements of social change and the resulting economic, political, philosophical and moral changes in society, all of which shaped the evolution of a constantly adaptive legal system. This manner of enquiry became a model for the philosophers, historiographers, economists and other enlightenment thinkers that followed.

One of the privileges - or concessions - that Scotland retained under the Act of Union of 1707 was the preservation of Scots law within its jurisdiction. Scots law was notably different from England's. Both were substantially based on statute and common law, but the English system placed greater reliance on legal precedent. Scottish judges were not so constrained by precedent in reaching their decisions; instead, they looked more to the application of equitable remedies with the goal of preventing or reducing hardship, and (probably more by exception) looked even to Roman (or 'Justinian') law to fill in the gaps in Scotland's jurisprudence. Scots law, therefore, more closely resembled continental European law, which probably explains why most aspiring Scottish advocates spent two years of their studies at universities in France, Holland or Germany.

Other contributors to the Scottish Enlightenment

There were several other intellectuals who have been recognized as important members and contributors to the Scottish Enlightenment, including artists, scholars and scientists. They are too numerous to include here, but a few are deserving of particular mention.

Hugh Blair (1718-1800) was an ordained minister and university professor. He ministered in three different churches (including the Canongate), until being 'promoted' to St Giles High Kirk in 1758. Under the patronage of Lord Kames, in 1759 he delivered a series of lectures on literary composition at the University of Edinburgh. These were so successful that they led to his being appointed to a newly created chair of Rhetoric and Belles Lettres in 1762.

Blair was a member of the Church of Scotland's moderate literati, his sermons focussing on the presumption of man's innate moral sense and inherent goodness, and preaching humane, benevolent Christianity, mirroring to a large extent the moral philosophy of Francis Hutcheson. It has been claimed that the Moderatism movement played a significant role in creating a climate in which the enlightenment could flourish. Undoubtedly it did, but probably to a minor extent only. Blair's sermons were very popular (except with the auld licht fire-and-brimstone 'High Flyers') and beginning in 1777 were published in five volumes, with printings in several languages. The volumes were hugely successful.

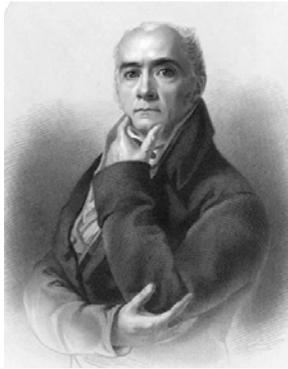
William Robertson (1721-1793), a leading Church of Scotland minister who became Moderator of the General Assembly and was a leading member of the 'Moderate Society'. His most important contribution to enlightenment thinking was the publication of *The History of the Reign of Emperor Charles V*, which validated Lord Kames's defining 'four stages' theory and helped to establish Robertson as the leading British historian of his time.

Adam Ferguson (1723-1816), like so many of the literati, began his professional life as a cleric, but abandoned that for other pursuits, including becoming Professor of Natural Philosophy at the University of Edinburgh in 1759 and Professor of Moral Philosophy there in 1764, a post that he occupied for over 20 years. He was personable and flamboyant, and, virtually alone among the literati, was fluent in the Gaelic. He wrote extensively, but is most noted for his *Essay on the History of Civil Society* (1767), in the words of Sir Walter Scott: "...an intellectual history that traces humanity's progression from barbarism to social and political refinement". It is regarded as a treatise primarily on sociology, a pioneering work that has earned him the title of 'father' of that new academic frontier.

Allan Ramsay (1713-1784) and Sir Henry Raeburn (1756-1823) were leading British painters of this era, as were also Alexander Runciman, David Allan and Alexander Naysmith.

Allan Ramsay - born in Edinburgh - was the eldest son of that other renowned Allan Ramsay, the poet and author. He began his artistic training in Edinburgh, but moved to London for a while, and continued his studies in Italy. Following that, he returned to Edinburgh before again settling in London. He established a popular reputation as a portraitist, and upon being appointed Principal Painter in Ordinary to George III in 1767, he dedicated most of the rest of his career (until being disabled in an accident in 1773) to producing royal paintings that were generally hung in public buildings. But he executed many other very fine paintings during his career, both of Edinburgh gentlemen and their ladies as well as his royal paintings. His style emphasized naturalness that conveyed the warmth and personality of his subjects. The portraits of Francis Hutcheson and David Hume displayed in this paper are by Allan Ramsay. He is considered to be Scotland's greatest portrait painter. He was the founding member of the Select Society.

Henry Raeburn was first apprenticed as a jeweller but began to experiment with the painting of miniatures. His talent was noticed, and for a short time seems to have received some instruction



from Scottish painter David Martin, but as an artist he was mostly self-taught. Although focusing on miniatures in his early period, like Allan Ramsay, he graduated to full portrait painting for the most part. As a bon vivant, he became a popular figure in Edinburgh society. From a shaky start (given his lack of professional training) he developed into a world class, highly acclaimed artist. He was appointed to the Royal Academy in 1815, and was knighted by George IV in 1822, and soon after appointed 'His Majesty's Limner' (miniature portraitist) for Scotland. The portraits of Dougald Stewart and James Hutton shown above were the work of Henry Raeburn, as well as his self-portrait displayed here.

Conclusion

The Scottish Enlightenment could well be described as one of the most unusual and fortuitous events in Britain's (and Scotland's) long and eventful history. It is a chronicle of how - through some extraordinary, unexplained alchemy - genius, time and place combined to advance the knowledge and understanding of humankind, both as individuals and as societies. It was manifest in a seemingly spontaneous outpouring of creative energy that helped to engender an environment in which not only philosophy, but also literature, science, medicine, architecture, art and other knowledge-based advances provided much of the foundation upon which our own world of learning and technology has been built. There were many others of genius ploughing the same fields of inquiry - both before and after these remarkable Scots - and Hume, Smith, the Adam family, Watt and the others were not always the sole originators of all of the theories and ideas that they developed and refined and eventually shared with the world. But for the most part they were original thinkers whose considerable contributions expanded, enriched - and often revolutionized - the knowledge and understanding within their personal intellectual spheres.

Unfortunately, this golden age did not survive its masters. Their learned pursuit of knowledge, introspective in its conception but often encouraged and nurtured in the collegial discourses that took place in the taverns and oyster houses of old Edinburgh, flourished best in a world that was still comparatively calm and ordered. It was a world that respected history and tradition, but would soon yield to the chaos of revolution and martial empire building, and even the approaching juggernaut of the Industrial Revolution and the social dislocations that event kicked up in its wake. But the legacy remains. Those of us with Scots blood can be proud; all others can be thankful.

Acknowledgements

The sources of research for this paper (in approximate order of reliance) have included:

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