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ECONOMICS 303Y1

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Lecture Topic no. 3

I. GREAT BRITAIN AS THE HOMELAND OF THE MODERN INDUSTRIAL REVOLUTION, 1750 - 1815

B. **The Scientific, Social, Religious, and Cultural Foundations of the British Industrial Revolution: The Roles of Technology, the 'Scientific Revolution', Protestant Dissenters, Education, and Social Attitudes in the Industrial Revolution (1760 - 1830)**

C. The Government, State Finance, and Warfare, during the Industrial Revolution, 1760 - 1815

[for independent reading and essays only: no lecture]

B. The Scientific, Social, Religious, and Cultural Foundations of the British Industrial Revolution: The Roles of Technology, the 'Scientific Revolution', Protestant Dissenters, Education, and Social Attitudes in the Industrial Revolution (1760 - 1830)

1. Technology and the Industrial Revolution

a) **Technological change was indeed the very essence and heart of the modern Industrial Revolution**:

i) **many economic historians half-facetiously,** though also quite seriously, cite the view (attributed to a student's exam paper) that the Industrial Revolution was simply 'a wave of gadgets'.

ii) **but technological change was hardly a new phenomenon, even in manufacturing industry**: (1) later I shall have to refer to many important technological changes between 1500 and 1750,

(2) especially in the metallurgical and coal-burning industries, though not so much in textiles

(3) and certainly, also, very important innovations in agriculture.

iii) **What was new and so significant about this era was the clustering of interrelated innovations, with a far greater impact in increasing profitable productivity**:

(1) which consequently led to a great acceleration in the rate of industrial change,

(2) as one change introduced bottlenecks or disruptions in the industrial flow necessitating complementary innovations to resolve those production problems.

b) **Some aspects of technological changes to keep in mind**:

i) **what counts is entrepreneurship: innovation and not mere invention**:

(1) i.e., the economic application of an invention or some organizational change, with positive results in increased outputs at lower costs.

(2) That fundamentally depends more on the entrepreneur than upon the inventor himself;

(3) Thus, James Watt, the inventor of the steam engine, would never have succeeded without the assistance of Matthew Boulton and John Wilkinson, leading entrepreneurs in the iron industry;

(4) In the cotton industry, Richard Arkwright, often credited as inventor of the water-frame in spinning, was no inventor -- he stole that idea -- but he was a very successful entrepreneur.

ii) **Technology involved much more than just 'gadgets':**

(1) **Some important innovations did not involve mechanical inventions at all**: but rather new methods of organizing existing technology and inputs: i.e., innovations in industrial organization.

(2) **Good examples may be found in the modernization of the agricultural sector** after 1750, which raised productivity by changing the use of land, with virtually no new machinery.

(3) **Another example, in the manufacturing sector itself,** is the application of the factory system to the existing knitting and hosiery industries: without any powered machines, or any new machines at all.

iii) **Labour, Land, and Capital: as the three chief economic inputs:**

(1) While we think of most innovations as being labour-saving, economizing on human labour, many were

in fact economically much more productive and important by economizing on land (i.e., natural resources) and capital.

(2) When we examine the agrarian sector in this period, we will see that most of the innovations were land-saving (i.e., by increasing productivity per acre) rather than labour-saving per se.

(3) In the industrial sector itself, we shall also see that most of the innovations in metallurgy (iron-making) economized more on land and resources than on labour itself.

(4) In the cotton industry -- for many the true heart of the British Industrial Revolution:

- the oft-neglected American invention of the cotton gin vastly economized on land;
- and innovations in bleaching and dyeing similarly economized on resources.

(5) Finally, the steam engine, perhaps the most important innovation of this whole era: although it was, to be sure, very labour-saving, it economized even more on both land and capital.

iv) **The crucial role of population growth (the 'Demographic Revolution') in promoting technological changes:**

(1) As I shall try to show next week, in discussing the market and demography (i.e., population):

(2) those innovations that economized on resources were partly in response to growing population pressures, to an unprecedented growth of both British and European population, from the 1740s.

(3) As noted last day, England's population:

- doubled from about 6 million in 1760 to about 12 million in 1810;
- and tripled again to about 36 million in 1914

(4) In examining each of the economic sectors in turn, we will see the impact of population growth in necessitating technological changes, especially in agriculture and in both extractive (mining) and manufacturing industries during the Industrial Revolution era.

v) **Technology and Capital:**

(1) **Technological innovations did generally promote a greater degree and rate of capital formation:** but not in all cases, and not in any linear fashion.

(2) Some innovations, especially in those metallurgy and transportation (e.g., railroads), were indeed very capital costly.

(3) But in textiles, the early machinery, at least in spinning, was generally very cheap to build and operate.

(4) Some innovations economized on the use of capital itself, as stressed with the steam engine, which was far cheaper to build than the current and main source of mechanical power: water mills and the requisite hydraulic machinery.

(5) In sum, it is the quality rather than the actual quantity of capital investment that is the crucial issue in the Industrial Revolution.

c) **What was the nature of technological change during the Industrial Revolution era? Fortuitous or**

determinist?

i) **Was it 'A Random Walk:**' a purely stochastic process: a matter of chance? [1]

(1) Was it Britain's particular good fortune to produce a number of outstanding inventors and entrepreneurs?

(2) Would there have been an Industrial Revolution if there had been no Watt or Arkwright, etc.?

(3) Or as Ralph Davis has commented (in the widely used textbook *The Rise of the Atlantic Economies*) about the origins of the Industrial Revolution, focusing on the cotton industry:

> It could be argued that no explanation is needed. The events that were decisive were two in number: the invention of the spinning jenny by Hargreaves, and of the water frame by Arkwright... . These two isolated events may have been fortuitous: the chance of personalities and their good fortune in seeking along the right lines. But the economic historian instinctively recoils from such explanations.'

ii) **Was it instead a more deterministic process of 'challenge and response**:' to use Arnold Toynbee's famous expression? [2]

(1) Should we argue instead that the crucial technological changes were rational, specific responses to historically produced challenges that demanded certain economic changes, e.g. population growth

(2) in particular the resolution of specific bottlenecks in the economy?

(3) Those changes may not have been predetermined and inevitable, but they were also not random:

- they could be seen as rational and predictable changes;
- or the rational choice from options presented.

(3) But many of those specific challenges and bottlenecks, the fuel problem in particular, had been there for a long time; and many of them were also to be found in other countries.

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[1] See the debate between Nick Crafts, W.W. Rostow, and David Landes: N.F.R. Crafts, 'Industrial Revolution in England and France: Some Thoughts on the Question 'Why Was England First?',' *The Economic History Review*, 2nd ser., 30:3 (August 1977), 421-41; W.W. Rostow, 'No Random Walk: A Comment on 'Why Was England First?',' and N.F.R. Crafts, 'Entrepreneurship and a Probabalistic View of the British Industrial Revolution: Reply', *The Economic History Review*, 2nd ser., 31:4 (November 1978), 610-14; Rondo Cameron, 'Was England Really Superior to France?' *Journal of Economic History*, 46:4 (Dec. 1986), 1031-39; David Landes, 'No Room for Accident in History? Explaining Big Changes by Small Events', *Economic History Review*, 2nd ser., 47:3 (August 1994), 637-56; N.F.R. Crafts, 'Macroinventions, Economic Growth, and 'Industrial Revolution' in Britain and France,' *The Economic History Review*, 2nd ser., 48:3 (August 1995), 591-98; David S. Landes, 'Some Further Thoughts on Accident in History: A Reply to Professor Crafts,' *The Economic History Review*, 2nd ser., 48:3 (August 1995), 599-601; Nicholas F. R. Crafts, 'Exogenous or Endogenous Growth? The Industrial Revolution Reconsidered', *Journal of Economic History*, 55:4 (December 1995), 745-72.

[2] Arnold Toynbee, *A Study of History*, 11 vols. (London: Oxford University Press, 1934-61)

iii) **Hence the fundamental question**: why did these innovations take place in Great Britain, why in the 18th century, and why in those specific industries?

2. Science and Industrial Technology in 17th and 18th Century Britain: 'The Scientific Revolution'

a) **The Scientific Revolution:**

i) **The so-called Scientific Revolution,** which is usually dated from the 1660s:

(1) has been seen by many as a necessary precondition if not the proximate cause of the Industrial Revolution:

(2) and so what was this supposed century of scientific revolution, from the 1660s to the 1760s?

ii) **Foundation of the Royal Society in London, in 1660**: formed to foster scientific experimentation and discovery with the specific and proclaimed objective of applying science to industry, improving and promoting English industry.

iii) **The Age of Newton**:

(1) **Sir Isaac Newton (1642-1727):** as the most famous scientist and philosopher of this era; [3]

(2) **Robert Boyle (1627-1691):** in the field of modern chemistry, establishing the basic principles of scientific experimentation.[4]

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[3] Isaac Newton (Answers.com): * Born: 4 January 1643
- Birthplace: Woolsthorpe, Lincolnshire, England
- Died: 20 March 1727 (bladder stone)
- Best Known As: The genius who explained gravity. Isaac Newton's discoveries were so numerous and varied that many consider him to be the father of modern science. A graduate of Trinity College, Cambridge, Newton developed an intense interest in mathematics and the laws of nature which ultimately led to his two most famous works: Philosophiae Naturalis Principia Mathematica (1687) and Opticks (1704). Newton helped define the laws of gravity and planetary motion, co-founded the field of calculus, and explained laws of light and color, among many other discoveries. (A famous story says that Newton uncovered the laws of gravity after being hit on the head by a falling apple. There is no proof that this story is true. However, his assistant John Conduitt later wrote that Newton had said he was inspired to think about gravity after seeing an apple fall in his garden around 1666.) Newton was knighted in 1705 and upon his death in 1727 was the first scientist given the honor of burial in Westminster Abbey. Newton is often ranked 1-2 with Albert Einstein among history's leading physicists. Newton held the Lucasian Chair of Mathematics at Cambridge -- a post later held by Stephen Hawking.

[4] Robert Boyle (Answers.com): * Born: 25 January 1627
- Birthplace: Lismore Castle, County Waterford, Ireland
- Died: 31 December 1691
- Best Known As: the 17th century chemist who came up with Boyle's law. Robert Boyle was a 17th century intellectual whose emphasis on experimentation and quantification helped lay the foundation for modern chemistry. Born in Ireland to an aristocratic family, he entered Eton College at the age of 8. He then toured Europe and studied abroad as a young teenager, at one point having a religious experience that turned him into a devoted Christian. A student of natural philosophy, he proposed an early atomic theory of matter, formulated the first definition of an element and conducted rigorous experiments with detailed documentation.

(3) Undoubtedly they did revolutionize the study of mathematics and physical sciences in Britain (indeed in Europe).

(4) **Newton and Newtonian Physics** are especially important here, I think, for providing (rightly or wrongly) a **mechanistic** concept of the universe, of a mechanistic world in which we live.

b) **Nevertheless establishing a definite causal link between the Scientific and Industrial Revolutions poses certain problems**: which have been formulated best by the eminent historian of science, A. Rupert Hall, in his still valuable monograph, *The Revolution in Science, 1500 - 1750* 3rd edn. (Longman: London, 1983; 1st edn, 1954):

i) **The Royal Society's direct interest in applying science** to industries and mechanical trades had waned by the 1690s, when the Royal Society's interests were diverted to more esoteric and far less practical issues.

ii) **The case of steam power**:

(1) In 1697, the Royal Society did indeed publish some papers on current experiments in steam power, undertaken by the Frenchman Papin and the Dutchman Huygens;

(2) but those studies were evidently never seen by the Englishmen Savery, who produced a steam pump the next year (though Newcomen's steam-engine of 1712 did employ their piston principle).

iii) **Indeed and in fact,** no significant technical innovation in any industry can be directly attributed to either publications or patronage of Royal Society.

iv) **Furthermore, to establish any link,**

(1) how do we explain away the almost century long lag between onset of the so-called Scientific Revolution and beginnings of the Industrial Revolution itself: from the 1660s to the 1760s?

(2) Surely that is rather too long of a time lag.

v) **In any event, Hall contended, no great amount of scientific knowledge was really required for the crucial inventions of the Industrial Revolution**:

(1) thus most of the inventors were not really scientists but rather mechanical tinkerers;

(2) science, in his opinion, did not really come to play a major role in technological change and industrialization until the mid-19th century (and especially with the so-called Second Industrial Revolution, from the 1860s: in electricity and chemicals).

vi) **Finally, the levels of scientific research and education,** during the later 17th and 18th centuries were

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With his Oxford assistant Robert Hooke, Boyle devised an air pump that allowed him to experiment with vacuums and the properties of gases, metals, combustion and sound. He is known for Boyle's law, which states that the pressure and volume of gas at a constant temperature have an inversely proportional relationship (in France it is known as Mariotte's law, for Edme Mariotte). A prolific writer throughout his career, he wrote on matters of science and religion and posthumously financed a lecture series designed to use science to defend Christianity.

evidently much higher in France, Italy, and Germany than they were in Great Britain.

c) **The scientific opposition: Musson and Robinson.**

i) **Subsequently two prominent historians of science,** A.E. Musson and E. Robinson, published several articles and two major books to refute the negative views of A.R. Hall.

ii) **I will briefly summarize their views** from *Science and Technology in the Industrial Revolution* (1969) and Musson's *Science, Technology, and Economic Growth in the Eighteenth Century* (1972).

d) **Their key arguments about science and industry in 18th century England:**

i) **That practical scientific knowledge, as distinct from pure science, was much more widely diffused and deeply imbedded in Great Britain** than on the continent, and much more closely related to industrial concerns.

(1) **Hence indeed the chief significance of the Royal Society:**

- in strongly encouraging a fruitful interaction between scientists, engineers, and industrial tradesmen and entrepreneurs;
- and indeed many of the latter belonged to the Royal Society -- not just pure scientists (see below).

(2) On the continent, no scientific academy in Paris, Berlin, Rome, Madrid, etc., produced any programme promoting application of science to industry, as did the Royal Society.

(3) If the Royal Society's programme was admittedly quite far from being really successful, nevertheless the climate of opinion that it helped inculcate, the pro-industrial attitudes, and the linkage between science and industry still remained important.

ii) **The level of pure science, they further contend, was also higher in Britain than on the continent;** but this is highly debatable .

iii) **Many aspects of technical innovation during the Industrial Revolution did in fact require some sound scientific knowledge**:

(1) Especially in the field of steam power:

- they point out that James Watt, usually called a technician, was really a scientist at University of Glasgow,
- and that he owed much to his physics professor, Dr. Joseph Black.

(2) Most of the advances in the British chemicals industry (which we must regrettably omit) were directly related to university research and teaching, in Scottish universities especially.

iv) **Amongst members of the Royal Society were many innovative entrepreneurs:** for example, Watt himself, Boulton, Wilkinson, Smeaton, Wedgwood (potteries) and many others were members.

v) **Most of the inventors and many of the entrepreneurs had had some practical scientific training,** including also Crompton in cottons.

vi) **Finally, the Royal Society was not alone in promoting ties between science and industry;** vii) **and**

an even more important institution appeared in the next century, on the very eve of the so-called Industrial Revolution, to which we now briefly turn:

e) **The Lunar Society of Birmingham, ca. 1764**: its foundation and developments certainly lends much support, I believe, to the Musson-Robinson arguments.

i) **It was called the Lunar Society because it members met on the first Monday nearest the full moon:** and naturally its adherents were called Lunatics.

(1) the famous British historian of science Lord Ritchie-Calder (1906-82) has stated that it was 'one of the most important coteries in the history of science and technology'; [5]

(2) also claiming that it revitalized British science in the late 18th century, when the Newtonian era seemed to be flagging, or coming to an end.

ii) **In the view of many such historians,** the Lunar Society was also important in re-invigorating the Royal Society from the later 18th century.

iii) **The Lunar Society was founded in 1764 by three friends of the noted American scientist Benjamin Franklin (who himself became a corresponding member)**:

- Dr. William Small (a professor of Mathematics and Newtonian Physics);
- Dr. Erasmus Darwin (physician and grandfather of Charles Darwin);
- and Matthew Boulton, one the greatest entrepreneurs of the Industrial Revolution
- and partner (with William Small) of James Watt, who also became a member.

iv) **Boulton and Watt together:** achieved the major breakthroughs in the industrial revolutions in both steam power and iron making .

v) **Other major figures of the Industrial Revolution era**: who all became members of the Lunar Society of Birmingham:

- John Roebuck: entrepreneur who created the Carron Ironworks in Scotland;
- Joseph Priestly: major figure in industrial chemistry;
- Josiah Wedgwood: the leading entrepreneur in industrializing the pottery industry.

vi) **All had formal training in physical sciences and/or medicine;**

(1) all were instrumental in the direct industrial applications of science and technology to industry during this very era;

(2) and all, or almost all the members, were also members of the Royal Society.

viii) **Thus the eminent economic historian David Landes, who had once contemptuously dismissed the**

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[5] Peter Ritchie Calder (1906-1982), who was made a life peer in 1966: as Lord Ritchie-Calder of Balmanshanner. Professor of International Relations at the University of Edinburgh (1961-67). See Ritchie Calder, *Profile of Science* (London: Allen and Unwin, 1953); Ritchie Calder, *Man and the Cosmos: the Nature of Science Today* (New York: Praeger, 1968).

importance of the so-called Scientific Revolution), was later forced to admit its true importance on p. 63 of his *Unbound Prometheus* (2nd edn. 2003), where he states:

> Even more striking is the theoretical knowledge of these men. They were not on the whole the unlettered tinkerers of historical mythology.

e) **Conclusions:**

i**) Let me conclude by citing these two observations from Ralph Davis, in *Rise of the Atlantic Economies* (1973)**:

> (1) 'Industrial innovation was more vigorously promoted and more readily accepted in England than in 18th-century France'; (p. 308);
>
> (2) 'Although the need for innovation was as strong in France as in England, French society offered a less congenial climate to innovation than did English society.' (p. 313)

ii) **To see why this may have been so,** at least in part, we must now turn to the subjects of religion and education in 18th-century Britain.

3. Religion and Society in the Industrial Revolution: the Dissenters [6]

a) **The Dissenters or Non-Conformists of the 17th Century**

i) **the term given to various Protestant sects that had broken away from the official and established Church of England (Anglican)**:

(1) i.e., they dissented from and thus refused to conform to the established church of England: hence the dual term of 'Dissenters' or 'Non-Conformists' (meaning the same thing).

(2) which itself had broken away from the Catholic Church in the mid-16th century, under King Henry VIII – from 1536.

(3) i.e., with England's Protestant Reformation establishing a separate and independent Church of England: separate from Rome and Roman Catholicism.

ii) **Why are they important: why should we care about them?**

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[6] For a fuller account of this story, see John Munro, 'Tawney's Century (1540 - 1640): the Roots of Modern Capitalist Entrepreneurship', in David Landes, Joel Mokyr, and William J Baumol, eds., *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*, Kauffman Foundation Series on Innovation and Entrepreneurship (Princeton: Princeton University Press, 2010), pp. 107-55. See also: John Munro, 'Usury, Calvinism and Credit in Protestant England: from the Sixteenth Century to the Industrial Revolution', in Francesco Ammannati, ed., *Religione e istituzioni religiose nell'economia europea, 1000 - 1800/ Religion and Religious Institutions in the European Economy, 1000 - 1800*, Fondazione Istituto Internazionale di Storia Economica 'F. Datini', Prato, Serie II: Atti delle 'Settimane de Studi' e altri Convegni no. 43 (Florence: Firenze University Press, 2012), pp. 155-84.
For these and other of my online publications (in PDF format), go to this URL:
http://www.economics.utoronto.ca/index.php/index/research/publications?personId=51

(1) Because, as I shall stress later in greater detail,

- this very small minority group came to play a disproportionately large role, as scientists, innovators, and entrepreneurs, during the Industrial Revolution era of the later 18th century:
- a very small minority of about 5% -8% of the English that helped create that Industrial Revolution
- or more precisely: in England & Wales;
- in Scotland, where Calvinists predominated, the situation was rather different, though Scottish entrepreneurs had the same religious and economic outlooks as did their counterparts in England (and Wales).

(2) In the following narrative story, just listen to it as a story, without taking detailed notes, until you come to the important conclusions. Now, for the story.

ii) **The English Civil War of the 1640s (1642 - 1651): provides true origins, in terms of religious and social forces: i.e., with the bloody and bitter warfare between King and Parliament**, during which religious issues played such a major role.[7]

(1) The original Dissenters were those Calvinists or Puritans, within the established Church of England, who had sought both to reform and indeed to dominate this Church during the early to mid 17th century:

(2) They were the followers of one of the two major leaders of the Protestant Reformation, the French theologian John Calvin (1509-1564),

- who had fled French persecution to seek refuge in Switzerland (Basel)
- in 1541, he founded a Swiss theocracy, in which all matters of both state and individual life were governed by his new Reformed Church: supremacy of the Church over State.[8]

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[7] From Answers.com: The English Civil War (1642-1651) was a series of armed conflicts and political machinations between Parliamentarians and Royalists. The first (1642–1646) and second (1648–1649) civil wars pitted the supporters of King Charles I against the supporters of the Long Parliament, while the third war (1649–1651) saw fighting between supporters of King Charles II and supporters of the Rump Parliament. The Civil War ended with the Parliamentary victory at the Battle of Worcester on 3 September 1651. The Civil War led to the trial and execution of Charles I [in 1649], the exile of his son, Charles II [after his defeat in 1651], and replacement of the English monarchy with first, the Commonwealth of England (1649–1653), and then with a Protectorate (1653–1659), under Oliver Cromwell's personal rule. Cromwell himself died of natural causes in 1658, and was succeeded by his son Richard, who was deposed a year later, in 1659. Charles II was invited home from exile, and in 1660 assumed the throne [Restoration of the Monarchy]. Previously, under Cromwell, the monopoly of the Church of England on Christian worship in England ended with the victors' consolidating the established Protestant Ascendancy in Ireland. Constitutionally, the Civil Wars established the precedent that a British monarch cannot govern without Parliament's consent, although this concept was established only with the Glorious Revolution (1688-89), later in the century.

[8] The other, and more famous, is Martin Luther (1483-1546), in fact the one who inaugurated the Protestant Reformation. See the Appendix on the Protestant Reformation: for both Luther and Calvin. See the Appendix on the Protestant Reformation.

- but it was quasi-democratic: run by church elders or ‘presbyters’ [hence: Presbyterian]
- clergy could not be state officials; and vice versa
- John Knox (1514-1572): a Scottish refugee and disciple who returned to Scotland in 1559, where he established the Presbyterian Church of Scotland, with great influence on the English Dissenters (in the next century, at least)

(3) These Dissenters, chiefly Calvinists or much influenced by Calvin, played a very major role in the English Civil War: the war between Parliament and the king (Charles [ruled 1625-1649] I: who was captured, dethroned, and beheaded

(4) after the execution of Charles I in 1649 and the subsequent dictatorship of Oliver Cromwell (1649-58), these Dissenters dominated both the state government and the Church.

(5) In Scotland, as just noted, the established Church of Scotland did in fact consist of Calvinists, known as Presbyterians [see above],

- and they had considerable influence and power within England as well during the Civil War and the following Republican period under Oliver Cromwell;
- but only so long as Cromwell lived, until the 1658, when he was succeeded by his indolent and rather unintelligent son Richard, who was soon deposed.

iii) **The Restoration of the Monarchy in 1660:**

(1) Not long after Cromwell's death, the Republican government, managed by his aforesaid ineffectual son, was overthrown and the monarchy was restored in 1660 (with Charles II, son of the executed Charles I, who returned from exile in France: 1660 - 1685).

(2) Consequently, the Puritans and other Calvinists were soon ousted from both Church and State offices

(3) since they were viewed as enemies of the restored monarchy and Church of England, suspected of Republican sympathies, they obviously suffered both political and religious persecution under the Restoration.

(4) But Roman Catholics probably suffered more persecution, especially as the public feared growing Catholic influence at the court of Charles II – and Catholics had long been persecuted (and priests were executed) since the reign of Elizabeth (1558-1603), and her successor James I (1603-1625).

iv) **The major sects comprising Dissenters or Non-Conformists were**:

(1) **the Independents of the Civil War Era**:

- the very strict Calvinist Puritans, who later called themselves Congregationalists (when many were no longer so Calvinist or Puritan)
- in early 20th century Canada, they were one of the three groups that formed the United Church of

Canada (in 1925: along with the far larger groups of Presbyterians and Methodists)

(2) **the Presbyterians**: i.e., the Calvinists of the official Church of Scotland, which gained some considerable following within England.

(3) **the Baptists**:

- originating in early 17th century (from the more radical continental Anabaptist sects);
- they were not Calvinist, though closely aligned in ideology and theology.

(4) **Unitarians**: with a 16th-century continental (Socinian) background: rejecting much of Protestant as well as Catholic theology.[9]

(5) **the Quakers, or Society of Friends**: which George Fox founded in England in 1667.

(6) **The Methodists**:[10]

- a group originally within the Church of England, founded by John Wesley around 1739;
- they broke away from the official Church of England in 1795.
- but they still remained more closely aligned to traditional Church of England theology than to Calvinism.

(7) **the Evangelicals**: radical but not Calvinist in theology.

(8) **Important to note,** therefore, that while Puritans formed the original nucleus of Dissenters, the Calvinists were no longer dominant amongst Dissenters during the later 18th and 19th centuries.

v) **Official discrimination against religious minorities:** the Corporation Act of 1661 and the Test Act of 1673. [11]

(1) Together these two statutes required anyone seeking to hold any Church or government-related position (including the army, local justices, education, etc.) and those who wished to hold any form of public, civil, or state office:

- to conform to the Church of England,

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[9] The Unitarians denied the divinity of Christ and thus the entire concept of the Trinity: God the Father, God the Son (Christ), and God the Holy Ghost, central to both Catholic and much of Protestant theology. They owed their origins to the sixteenth-century Italian theologian Lelio Sozzini (1525-62), whose followers, principally in Poland (to which Sozzini had fled), were called Socinians.

[10] The Methodists were founded by John and Charles Wesley, at Oxford's Holy Club, in 1729 (nicknamed 'Methodists' by critics).

[11] The Corporation Act, 1661: statute 13 Car. II c. 1 was the initial stage of the Earl of Clarendon's programme to reassert Anglican supremacy after the Restoration: it required anyone holding municipal office to qualify by taking communion with the Church of England. The Test Act, 1673: 25 Car. II c. 2 required all office-holders under the crown, including Members of Parliament, to receive communion according to the rites of the Church of England at least once a year, and to make a declaration against the Catholic doctrine of 'transubstantiation'. Neither was repealed until 1828, which repeal was followed by the Catholic Emancipation Act of 1829.

- to subscribe to the 39 Articles of the Church of England
- and to take official Church of England communion:
- i.e., to take this test of affirmation of support for the established Church.

(2) though these parliamentary laws were aimed principally against Catholics, they were also used against those considered to be Puritans, i.e., those now called Dissenters or non-Conformists.

(3) To repeat the earlier explanation of the terms: those Protestants who refused to subscribe to the 39 Articles and submit to the other religious tests were thus known as Non-Conformists or Dissenters.

(4) As just noted, along with Calvinists and Presbyterians, this group included such other Protestant sects as Baptists, Quakers, Unitarians and later the Methodists.

(5) This act thus barred all Catholics and Dissenters from any state offices until its repeal, as late as 1828.

vi) **The Glorious Revolution and Religious Toleration: 1688-89**

(1) As I noted in last day's lecture (written version), in discussing the Glorious Revolution of 1688,

- Parliament overthrew the current monarch, James II (brother of Charles II: 1685-1688), who was rightly suspected of being a Catholic,
- and replaced him with his daughter Mary (r1689-1694), who was married to a Dutch Calvinist prince, William of Orange [Stadhouder, i.e., leader, of Holland], who became King William III (r. 1689 - 1702).

(2) Anxious to protect his Calvinist co-religionists, William III asked Parliament to enact the Toleration Act of 1689: [12]

- it provided most Dissenters (except Unitarians) with freedom of worship and religious toleration.
- but the same freedom was not extended to Roman Catholics
- Catholics were granted considerably greater freedom, a century later, in 1791.[13]
- but Catholics did not get full freedoms until the Catholic Emancipation Act of 1829, the year after the repeal of the Test Act (1828).

(3) The Glorious Revolution was not finally secured, however, until William III's victory over the deposed former King, James II, and his Irish Catholic armies, at the Battle of the Boyne, on 12 July 1690, in eastern Ireland (near Drogheda):[14]

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[12] 24 May 1689: Statute 1 William. & Mary c. 18.

[13] In 1791 the Roman Catholic Relief Act repealed most of the disabilities in Great Britain, provided that Catholics took an oath of loyalty, and in 1793 the army, the navy, the universities, and the judiciary were opened to Catholics, although seats in Parliament and some offices were still denied.

[14] William's army consisted not only of Englishmen, but also Scots, Ulstermen from northern Ireland, and French Calvinist Huegunots, along with Dutch and Danish (Protestant) soldiers. James II was aided by the French – to no avail.

- William then conquered Dublin, imposed British Protestant rule on Catholic Ireland, thus ending any further possibility that James II would regain his throne.
- William himself was wounded and almost killed at the Boyne:
- and thus had his forces been defeated and had James II regained the throne (with Irish and French support), England would have been a very different country – and perhaps without an Industrial Revolution, as one recent author (Jack Goldstone) has suggested.[15]

(4) This English Toleration Act – in giving the Dissenters so much greater freedom – was in strong contrast to France,

- where Calvinist Protestants (known as Huguenots) were suffering vigorous persecution[16]
- and the expulsion: after Louis XIV had revoked their charter, the Edict of Nantes, in 1685.[17]

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[15] On this scenario, see the fascinating essay: Jack A. Goldstone, 'Europe's Peculiar Path: Would the World Be "Modern" if William III's Invasion of England in 1688 Had Failed?', in Philip E. Tetlock, Ned Lebouw, and Geoffrey Parker, eds., *Unmaking the West: What-If Scenarios That Rewrite World History* (Ann Arbor, Michigan: University of Michigan Press, 2006), pp. 168-96.

[16] From http://www.huguenotsociety.org.uk/history/ The Huguenot Society of Great Britain. Who were the Huguenots? The origin of the word is obscure, but it was the name given in the 16th century to the Protestants in France, particularly by their enemies. The impact of the Protestant Reformation was felt throughout Europe in the early 16th Century. Its greatest protagonists were the German Martin Luther and the Frenchman Jean Calvin. In France Calvinism penetrated all ranks of society, especially those of the literate craftsmen in the towns and of the nobility. There were eight civil wars in France between 1562 and 1598 - the Wars of Religion. In 1589 the Protestant Henri de Bourbon, King of Navarre, inherited the French throne after the deaths of his three Valois cousins, sons of Catherine De Medici. Civil war continued, so in 1593, in the spirit of 'Paris is worth a Mass', Henri converted to Catholicism. Five years later the civil wars ended and Henri issued the Edict of Nantes which gave the Huguenots, his former co-religionists and comrades in arms, considerable privileges, including widespread religious liberty. Over time Huguenots became loyal subjects of the French crown. However, their position became increasingly insecure as King Louis XIV, grandson of Henri IV, listened more and more to those who advised him that the existence of this sizeable religious minority was a threat to the absolute authority of the monarch. Gradually the Huguenots' privileges were eroded. In the 1680s Protestants in certain parts of France were deliberately terrorised by the billeting of unruly troops in their homes ['the Dragonnades']. Finally, in 1685 Louis revoked the Edict of Nantes, while exiling all Protestant pastors and at the same time forbidding the laity to leave France. To the considerable surprise of the government many did leave, often at great risk to themselves. Men who were caught, if not executed, were sent as galley slaves to the French fleet in the Mediterranean. Women were imprisoned and their children sent to convents. About 200,000 Huguenots left France, settling in non-Catholic Europe - the Netherlands, Germany, especially Prussia, Switzerland, Scandinavia, and even as far as Russia where Huguenot craftsmen could find customers at the court of the Czars. The Dutch East India Company sent a few hundred to the Cape to develop the vineyards in southern Africa. About 50,000 came to England, and perhaps about 10,000 moved on to Ireland.

[17] The French Edict of Nantes was issued by the new king Henry IV of Navarre in 1598, to end the French civil war between Protestants and Catholics: it provided for religious toleration for Protestants (known as Huguenots). Henry IV himself was a Protestant – but agree to turn Catholic to secure this throne and peace in France. Louis XIV revoked the Edict of Nantes in 1685. See the previous note.

(5) It is important to note, as well, that:

- in the French economy of the 17th century, these Protestant Huguenots had also played a very disproportionately active, aggressive, and highly successful role as merchants, entrepreneurs, industrialists, lawyers, etc.,
- and in so doing had engendered a considerable amount of jealous hostility from the traditionally Catholic population.
- many French Huguenots then came to play a very important part in the English economy from the 1690s (especially in the formation of the Bank of England, from 1694).
- As we shall later see (in February), in analysing French industrialization in the 19th century, the small remnant of remaining Huguenots in France also played a significant role in the French economy.

vii) **But English toleration of Dissenters was nevertheless only a half-way house of limited toleration**:

(1) English law still retained many important restrictions previously imposed in the infamous, unrepealed Test and Corporation Acts of 1661 and 1673 (to repeat: not repealed until 1828).

(2) Dissenters (and Catholics) still found themselves still barred from all the normal and traditional avenues of power, wealth, and social prestige:

- the established Church, Parliament, the army and navy,
- indeed any crown agency or corporation, or any agency of public office or government service, national or local (civic).

(3) Dissenters and Catholics were also barred from the established universities and grammar schools, affiliated with the established Church of England.

b) **The Economic and Social Significance of the Dissenters for the Industrial Revolution era: the climate of innovation**

i) **As I noted at the beginning of this topic,** and as I now repeat for emphasis:

(1) they played a disproportionally large role in the Industrial Revolution.

(2) Various surveys of late-18th century English inventors and entrepreneurs and of others who have figured in the Industrial Revolution demonstrates the highly disproportional role that Dissenters played in that Industrial Revolution:

- the evidence indicate that about half, 50% of them, were Dissenters
- in so far as their religious affiliation can be identified -- more difficult to identify, obviously, than for official members of the C of E.

ii) **At same time,** in early 18th century, England and Wales had no more than 1250 Dissenting congregations, in a population of about 5.76 million.

(1) and thus they represented no more than 5% (certainly well under 10%) of the total population.

(2) In approximate terms, therefore, a social-religious grouping representing little more than one twentieth

of population accounted for about half of major figures in the Industrial Revolution:

iii) **And also in the Royal Society: R. K. Merton,** in his study *Science, Technology, and Society in Seventeenth-Century England* (rev. edn. 1970) found that Puritans and Dissenters accounted for almost as high a proportion of scientists and other members of Royal Society.

iv) **Subsequently, however,** the number of Dissenting congregations did grow during the late 18th and early 19th centuries, to become a somewhat higher proportion of total population, though still a very distinct minority in English society (if not in Scottish society, where clearly the Calvinists were a majority).

v) **Such evidence led various economic historians -- in particular T.S. Ashton, Ralph Davis, David Landes, Michael Flinn, and others -- to stress the significant social role of Dissenters** in the Industrial Revolution.

vi) **To quote Ralph Davis once more:** (*Rise of Atlantic Economies*, p. 310):

> Dissent was strongest in northern and Midland England, where industry was growing most rapidly, and an extraordinarily high proportion of known inventors, innovators, and successful entrepreneurs of the later eighteenth century have been shown to be Dissenters. Their peculiar social position had no French counterpart, and France was economically the worse for this.

4. Explanations for the Significance of Dissenters in the Industrial Revolution.

Some theories to be advanced:

a) **Minority Status with some social discrimination: Exclusion from the normal avenues of social prestige, power, and wealth**:

i) **their exclusion from the normal roads to power and wealth in civic and military offices, Church, government, etc.,** meant that men of special talent who might otherwise have been drawn to such fields had to find alternative routes to wealth, power, and social prestige.

ii) **many found that route instead in business or in land (i.e., commercial agriculture),** as really the only such routes open to them.

iii) **the discrimination that Dissenters suffered:** was not so strong and oppressive as to prevent the more ambitious from surmounting or hurdling the various barriers placed against them.

iv) **the socio-psychological consequences of discrimination against minorities:**

(1) **fear and insecurity**: stronger incentives to acquire and maintain wealth for security in a hostile world, and for defence of the family

(2) **inner compulsion to prove their worthiness,** status, social acceptability – both to themselves (and families) and to their neighbours – by excelling in those limited avenues, those endeavours open to them, especially business, finance, trade, industry.

(3) **profit maximization:** to achieve both goals: security (wealth) and prestige

v) **economic networks: minority status also compelled co-operation in socio-economic networks with others facing the same discrimination:** especially co-religionists, as was true of Huguenots and Jews.

(1) that led to the establishment of networks of coreligionists (i.e., fellow Dissenters), indeed international networks, often originally for social and religious reasons, but networks that also served valuable business functions.

(2) principal-agent relationship based on both knowledge and trust between them: is found so often in early-modern business and commercial-financial relations.

(3) especially true (as it was of medieval Italian merchants) for international commerce and finance.

vi) **What about Roman Catholics as another disadvantaged minority**?

(1) Were Catholics in fact a similar minority?

(2) **No:** and why not? Because they felt themselves to be part of the European majority.

c) **The Weber-Tawney thesis, on 'the Protestant Ethic' and Capitalism**: which really only applies to those who were truly Calvinists or Puritans in their religious theology:[18]

i) **Many social historians, writing in the 19th century,**

(1) observed that there was a positive correlation between countries in both Europe and the Americas that were predominantly Protestant and more economically advanced, with a much larger commercial and industrial middle class.

(2) Those who subsequently wrote on this issue were seeking only a rational explanation for a social phenomenon that most scholars had long accepted.

ii) **The German sociologist Max Weber (in 1904), and the British social historian Richard Tawney (in 1926),** argued that:

(1) the religious doctrines of one particular form of Protestantism -- namely Calvinism (John Calvin) --- ultimately produced certain socio-psychological consequences

(2) that actively promoted the modern ethos, ethic, or spirit of capitalism,

(3) or at least created a much more favourable social climate for early-modern capitalism.[19]

iii) **Please note that Weber, Tawney, and their supporters never ever claimed that Protestantism or**

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[18] This is a special essay topic for my ECO 301Y course, second term; and it is posted (short and long form bibliographies) on my web page for that course. But see also my own views on this question in: John Munro, 'The Weber Thesis Revisited - and Revindicated?' *Revue belge de philologie et d'histoire*, 51 (1973), 381-91. [*Belgisch tijdschrift voor filologie en geschiedenis.*]

[19] Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (original German edition, 1904-05; English translation by Talcott Parsons, New York, 1930); and Richard H. Tawney, *Religion and the Rise of Capitalism* (London, 1926).

Calvinism was responsible for the rise of modern capitalism,

(1) for they fully admitted the obvious: that European capitalism was medieval in its origins,

(2) and thus long pre-dated the Protestant Reformation.

iv) **For Weber and Tawney,** three particular and peculiar Calvinist doctrines were responsible together, by the later 17th century, for promoting so successfully this ethos of modern capitalism, or the those rules of social conduct most conducive to successful capitalism:

(1) the doctrine of Predestination

(2) The doctrine of the 'Calling'; and what they called

(3) 'Worldly Asceticism'.

v) **Predestination is in fact a theological doctrine present in all forms of Christianity**, but one that had long been suppressed in popular religion and revivified, restored to the forefront of religious beliefs by John Calvin:

(1) the doctrine is based on this simple premise: that since God is omnipotent— all powerful, and man is thus nothing, therefore God alone -- existing outside of time and the universe -- had and has decided, is deciding, and will decide uniquely the salvation of a certain select few:

- known as the 'elect':
- i.e., those whom God has elected to enjoy salvation with Him

(2) Because of Original Sin (Christian doctrine of original sin, with Adam and Eve), because of our inherent wickedness, all of the rest of mankind has suffered and will suffer eternal damnation, in Hell.

(3) Calvin and his immediate followers, in the 1530s and to the late 16th century, all stated categorically that for believers to seek signs of election, of salvation by predestination, was wrong and wicked (and thus implicitly a sign that one was destined to damnation in Hell).

(4) But understandably it was extremely difficult for the Calvinist laity to accept such a horrifying doctrine with mental ease, without needing some self-assurance of election and salvation.

(5) Within a century, i.e., by the mid 17th century, so argued both Weber and Tawney,

- Calvin's original injunctions had been forgotten and the majority of Calvinists did believe -- as a matter of popular religion -- that there were definite signs of election that could be determined,
- to give them that self-assurance;
- and those were sought in the other two doctrines mentioned: so that economic success became the most tangible sign of 'election' and eternal salvation.

vi) **The Doctrine of the Calling**: a belief and social as well as religious outlook that:

(1) since God is omnipotent and has so ordained that the world be formed according to His will that all occupations and manners of livelihood not proscribed and forbidden by scriptures and the civil laws are fully worthy of God; and that therefore -

(2) each individual can best do his/her duty to God -- and that is the prime directive, the prime duty -- by striving to do one's best the most successfully in one's chosen Calling in life;

(3) for Calvin those callings included the occupations of merchants, lawyers, businessmen, etc.

- all honourable occupations or roles in the eyes of God,
- and all worthy avenues of success (including professors).

(4) For merchants, industrialists, businessmen -- so it was argued -- what more tangible sign of success and thus of election could there be but profits, and thus of profit maximization? [i.e., the 'bottom line', as the current saying goes].

- In the past, in medieval society, striving for individual success and individual profit accumulation was generally deemed to be at the expense of the community and thus undesirable;
- but according to this later, popular view of Calvinist life, profit maximization as a manifestation of serving God became far more socially desirable.
- Thus the sanctity of what is now (irritatingly) called the 'bottom line'.

vii) **The Ethos of Worldly Asceticism**: a term coined by Weber and popularized by Tawney. **Consider the following:**

(1) If those profits so maximized went into personal consumption -- what we would now call 'conspicuous consumption' -- then clearly the goal of profit-seeking would not be the glorification of God but glorification of Mammon, of self-enrichment to satisfy selfish desires;

(2) indeed, for offending God by placing Him last.[20]

(3) But if those profits were re-invested in the business or enterprise

- to expand and enlarge its scope and thus better to honour and serve God (and thus better to maximize future profits),
- then socially this goal of profit maximization would be seen by society as a worthy pursuit of Calvinist ideals to glorify God: as again in the modern phrase, 'the bottom line'.

(4) Profit-reinvestment, most economic historians have rightly observed, was indeed the chief mechanism of capital accumulation to add to the stock of producers' goods during the Industrial Revolution era.

(5) Furthermore, rational profit-maximization, along with the rational postponement of current consumption for future gains, provide the fundamental core of modern micro-economics.

(6) Modern economic theory accepts those propositions as both rational and axiomatic;

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[20] As Jesus is recorded as saying in the Sermon on the Mount (Matthew 6:24, *Holy Bible: Revised Standard Version: New Testament*, 1952, p. 7): 'No one can serve two masters ....You cannot serve God and mammon'. *Mammon* is derived from the Aramaic word *ma-mona* –– in the language that Jesus spoke (one related to Hebrew) – meaning 'riches, avarice, and worldly gain, which was personified as a false god in the New Testament'. Catholicism and Protestantism (Calvinism) shared a mutual hatred of avarice.

(7) but they would not have been deemed either so rational and far from being seen as axiomatic or even acceptable in medieval society.

(8) **The Protestant 'Work Ethic':** Finally this concept of 'worldly asceticism' (combined with the other two doctrines) meant

- not just frugality, self-denial, and profit-maximization in Weber's sociology of early-modern Calvinism – important though they were,
- but also what is now called the 'Protestant work ethic': i.e., to work as hard as possible, as productively as possible, and thus as profitably as possible
- and that Protestant ethic applies as much to the labouring and artisan classes as it does to businessmen.
- but a Christian aversion to its opposite, sloth and indolence, had been very common as well in medieval Catholicism: so that the Protestant 'work ethic' was not then entirely new

viii) **To what extent do these social mores and religious outlooks typify Dutch Calvinists, Scottish Calvinists, English Dissenters, and American Puritans in the later 17th and 18th centuries —** where they were NOT disadvantaged minorities**?**

(1) Perhaps a matter of considerable debate, as evidence is produced of some conspicuous consumption in these societies.

(2) But these may be exceptions to a more general social ethos by which these Puritans and Dissenters did both value and practise frugality, thrift, self denial, and business success.

(3) Perhaps the fundamental issue is the extent to which:

- their beliefs did provide a strong compulsion and inner striving to prove oneself of the Elect,
- to provide self-assurance of salvation,
- to strive ceaselessly for such success as a sign of election, by seeking and attaining success in one's Calling,
- and thus made most tangible by business profits and frugality.

(4) **It may be observed that amongst the Dissenters:**

- many non-Calvinists similarly practised frugality, thrift, hard work, sobriety, etc.,
- perhaps because those had the become the social norms in the previous era of Calvinist dominance amongst dissenting Protestants within England.

d) **Dissenters and Education in the 18th Century**:

i) **Dissenter Education**:

(1) to quote T.S. Ashton, 'a simpler explanation [for the relationship between Dissenters and their disproportionate role in the Industrial Revolution] lies in the fact that, broadly speaking, the Nonconformists

constituted the better educated section of the middle classes'. [21]

(2) Furthermore, that Scottish universities were then 'in advance of that of any other European country at this time';

(3) And finally, his important statement that: 'This view is supported by a consideration of the part played in the economic movement by the stream of energy that poured into England from Presbyterian Scotland after the Union of 1707.'

(4) For this see the interesting book: Arthur Herman, *How The Scots Invented the Modern World* (New York: Three Rivers Press, 2001).[22]

ii) **In England, the Dissenters or Nonconformists,** were, as noted earlier, denied entrance into the traditional classical-oriented, church-affiliated schools and universities

(1) in response, they established their own special schools, known as Dissenting Academies,

(2) and they also established much higher standards of education than those at the regular, established schools.

(3) And they established as well more practical and business or professional oriented curriculums

(4) In doing so, most would not have allowed their children to attend regular Church of England schools and universities: self reinforcing mechanism.

iii) **Dissenting Academies, in contrast to official Church-of-England schools, strongly stressed:**

(1) **in particular mathematics,** the sciences, modern languages and practical subjects (accounting, surveying, engineering, etc), and history

(2) rather than the traditional classics (Greek and Latin), literature, philosophy, theology, etc. that formed the core education in official, church-sponsored schools.

(3) Obviously, an educational curriculum that stressed mathematics, sciences, engineering, accounting, and other practical subjects was more useful for someone entering the world of business enterprise than was the traditional curriculum in church-dominated schools: especially Greek and Latin.

(4) The opportunity cost of pursuing the traditional Church-oriented curriculum — with such a heavy emphasis on theology, the Classics (Greek and Latin) and literature – was not to allow the time and resources to study mathematics, sciences, etc..

iv) **In Presbyterian Scotland, furthermore,**

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[21] Thomas S. Ashton, *An Economic History of England: the Eighteenth Century* (London, 1955; reprinted 1961).

[22] And especially chapter 12: 'Scots in Science and Industry', pp. 320-44. The author (PhD Johns Hopkins) is co-ordinator of the Smithsonian Institution's Western Heritage Program, and formerly Professor of History at George Mason University and Georgetown University. See also E.G. West, *Education and the Industrial Revolution* (London: B.T. Batsford, 1975), especially chapter 6, 'Scottish Elementary Education', pp. 59-73; and also Rosemary O'Day, *Education and Society, 1500 - 1800: The Social Foundations of Education in Early Modern Britain* (London, 1982).

(1) the general secondary and university education was then, as just indicated, far in advance of English traditional education (and perhaps more advanced than European schools), particularly in mathematics and sciences.

(2) These Scottish schools had a very strong influence on the intellectual formation of Dissenting Academies.

v) **Nevertheless the question is begged rather than resolved**:[23]

(1) why were Scottish Presbyterian schools and English Dissenting Academies so superior?

(2) so much more science-oriented, more practical, with higher educational standards than traditional English schools?

vi) **Some possible answers:**

(1) That those who had founded and promoted such schools, the Dissenting Academies, were not encumbered with centuries of educational traditions.

(2) That the Dissenters came from predominantly middle-class urban households, in which the fathers were predominantly in commerce & finance, or industry, or professions.

(3) Thus Dissenting Academies, in servicing and providing for these urban professional-commercial communities were more likely to promote more modern practical subjects, those more oriented to a business-commercial-professional world, than those deemed necessary or desirable by the church, gentry, aristocracy.

(4) Latin, though it was certainly taught to some extent in Dissenting Academies, and valued for its role in promoting a better use of English and in promoting rational, logical discourse, would nevertheless be viewed in a very different light, and less favoured, than in traditional Church of England grammar schools:

- Latin, was and had always been (or from the 4th century) the universal language of the Catholic Church: and the sole language for the mass, other liturgy, and the bible.
- therefore, those Dissenters who had wanted to 'purify' (as in Puritan) the Church of England of all those elements that seemed to be carried over from Catholicism would be hostile to any overemphasis on the teaching of Latin (along with theology, etc)

(5) The vital distinctions involving the role of science – vs. religion

- So, conversely, to the extent that Church of England schools maintained the customs, traditions, and practices of former Catholic education, they would not promote sciences, which seemed to be in opposition to Christian faith and theology.
- Consider that the essence of Christianity, certainly in Catholic form, has been the unquestioning acceptance of religious dogma, of unquestioning faith.
- The essence of the sciences, on the other hand, was to engage in rational debate, to question accepted orthodoxies, and certainly to reject any form of religious (or other) dogma, and what was regarded

[23] 'Begging the question' is a form of logical fallacy in which a statement or claim is assumed to be true without evidence to support that contention other than the statement or claim itself.

as mere superstition.

e) **Some even more recent views on the economic importance of the Dissenters: Stanley Chapman:**

i) **Stanley Chapman, in his impressive monograph on *Merchant Enterprise in Britain,*** provides much additional supporting evidence for the unusual economic and social role of the Dissenters in the Industrial Revolution era, [24]

(1) stressing in particular the importance of their international mercantile connections with co-religionists abroad (especially in the American colonies),

(2) indeed the vital importance of both their family and religious ties for providing the necessary trust involved in 'the transmission of credit and trading reports'.

(3) Certainly, in so far as they were dealing with co-religionists in business, at home and abroad, most economists would quickly recognize the importance of principal-agent relationships that were based on both knowledge and trust in those with common religious, social, and business activities, and a common need to unite for protection against many hostile forces.[25]

ii) **Chapman also contends that 'economic ideology'** played a major role as well in the striking mercantile success of the Quakers and Unitarians in the eighteenth and nineteenth centuries.

f) **In conclusion**: read first chapter of David Landes' *Unbound Prometheus* (2003 version)-- well worth the price of the book itself:[26]

i) **in particular his discussion of the cultural values that promoted the advent of the Industrial Revolution in Britain,** especially his discussion of the development of the 'scientific method' as the proper approach to problem-solving, combining both deductive logic or scientific theory with practical experimentation. To quote Landes directly:

> These it seems to me are the crucial values of that European culture and society that gave birth to the modern industrial world: rationality in means and activist, as against quietist, ends;

ii) **i.e., rationality,** as opposed to magic, superstition, and faith; what he calls a 'rational manipulation of the environment,' as stressed by Weber -- Weber's concept of rationality in the cultural development of the

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[24] Stanley Chapman, *Merchant Enterprise in Britain from the Industrial Revolution to World War I* (Cambridge and New York: Cambridge University Press, 1992), pp. 43-47.

[25] Similar arguments have been advanced for both French Huguenots and Jews, both engaged in 'diasporas', in the 18th and 19th centuries.

[26] See also the readings for the essay topic 'The Protestant Dissenters and the Industrial Revolution: The role of religious factors in entrepreneurship and modern industrialization' [Topic no. 6]. This year it is an A-list topic. The Landes chapter is one of the recommended readings.

Protestant Ethic.[27]

C. Warfare, the State, and the Industrial Revolution:

This year: a B List Essay Topic: and for general reading.

[27] For his most recent views on these themes, which many find Eurocentric, see: David S. Landes, *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* (New York and London: W.W. Norton, 1998). For a contrasting point of view, see Kenneth Pomeranz, *The Great Divergence: Europe, China, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000).

The Protestant Reformations: Luther and Calvin[28]

Martin Luther (1483 - 1546)

Biography

The German reformer Martin Luther (1483-1546) was the first and greatest figure in the 16th-century Reformation. A composer of commentaries on Scripture, theology, and ecclesiastical abuses, a hymnologist, and a preacher, from his own time to the present he has been a symbol of Protestantism.

Martin Luther was born at Eisleben in Saxony on Nov. 10, 1483, the son of Hans and Margaret Luther. Luther's parents were of peasant stock, but his father had worked hard to raise the family's status, first as a miner and later as the owner of several small mines, to become a small-scale entrepreneur. In 1490 Martin was sent to the Latin school at Mansfeld, in 1497 to Magdeburg, and in 1498 to Eisenach. His early education was typical of late-15th-century practice. To a young man in Martin's circumstances, only the law and the church offered likely avenues of success, and Hans Luther's anticlericalism probably influenced his decision that his son should become a lawyer and increase the Luther family's prosperity, which Hans had begun. Martin was enrolled at the University of Erfurt in 1501. He received a bachelor of arts degree in 1502 and a master of arts in 1505. In the same year he enrolled in the faculty of law, giving every sign of being a dutiful and, likely, a very successful son.

Religious Conversion

Between 1503 and 1505, however, Martin experienced a religious crisis which would take him from the study of law forever. His own personal piety, fervently and sometimes grimly instilled by his parents and early teachers, and his awareness of a world in which the supernatural was perilously close to everyday life were sharpened by a series of events whose exact character has yet to be precisely determined. A dangerous accident in 1503, the death of a friend a little later, and Martin's own personal religious development had by 1505 started other concerns in him.

Then, on July 2, 1505, returning to Erfurt after visiting home, Martin was caught in a severe thunderstorm in which he was flung to the ground in terror, and he suddenly vowed to become a monk if he survived. This episode, as important in Christian history as the equally famous (and parallel) scene of St. Paul's conversion, changed the course of Luther's life. Two weeks later, against the opposition of his father and to the dismay of his friends, Martin Luther entered the Reformed Congregation of the Eremetical Order of St. Augustine at Erfurt. Luther himself saw this decision as sudden and based upon fear: "I had been called by heavenly terrors, for not freely or desirously did I become a monk, much less to gratify my belly, but walled around with the terror and agony of sudden death I vowed a constrained and necessary vow."

Luther's early life as a monk reflected his precipitate reasons for entering a monastery: "I was a good monk, and kept strictly to my order, so that I could say that if the monastic life could get a man to heaven, I should have entered." Monastic life at Erfurt was hard. Monks had long become (with the friars and many of the secular clergy) the targets of anticlerical feeling. Charged with having forsaken their true mission and having fallen into greed and ignorance, monastic orders made many attempts at reform in the 15th and 16th centuries. The congregation at Erfurt had been reformed in 1473. The year before Luther entered the Augustinian order at Erfurt, the vicar general Johann Staupitz (later Luther's friend) had revised further the constitution of the order.

Luther made his vows in 1506 and was ordained a priest in 1507. Reconciled with his father, he was then

[28] Source: taken from Answers.com (online)

selected for advanced theological study at the University of Erfurt, with which his house had several connections.

Luther at Wittenberg

In 1508 Luther was sent to the newer University of Wittenberg to lecture in arts. Like a modern graduate student, he was also preparing for his doctorate of theology while he taught. He lectured on the standard medieval texts, for example, Peter Lombard's Book of Sentences; and he read for the first time the works of St. Augustine. In 1510 Luther was sent to Rome on business of the order and in 1512 received his doctorate in theology. Then came the second significant turn in Luther's career: he was appointed to succeed Staupitz as professor of theology at Wittenberg. Luther was to teach throughout the rest of his life. Whatever fame and notoriety his later writings and statements were to bring him, his work was teaching, which he fulfilled diligently until his death.

Wittenberg was a new university, founded in 1502-1503, strongly supported by the elector Frederick the Wise. By 1550, thanks to the efforts of Luther and his colleague Philip Melancthon, it was to become the most popular university in Germany. In 1512, however, it lacked the prestige of Erfurt and Leipzig and was insignificant in the eyes of the greatest of the old universities, that of Paris. It was not a good place for an ambitious academic, but Luther was not ambitious in this sense. His rapid rise was due to his native ability, his boundless energy, his dedication to the religious life, and his high conception of his calling as a teacher.

The intellectual climate which shaped Luther's thought is difficult to analyze precisely. The two competing philosophic systems of the late Middle Ages - scholasticism (derived from the Aristotelianism of St. Thomas Aquinas) and nominalism (derived from the skepticism of William of Ockham and his successors) - both appear to have influenced Luther, particularly in their insistence on rigorous formal logic as the basis of philosophic and theological inquiry. From Ockhamism, Luther probably derived his awareness of the infinite remoteness and majesty of God and of the limitation of the human intellect in its efforts to apprehend that majesty.

Luther's professional work forced him further to develop the religious sensibility which had drawn him to monasticism in 1505. In the monastery and later in the university Luther experienced other religious crises, all of which were based upon his acute awareness of the need for spiritual perfection and his equally strong conviction of his own human frailty, which caused him almost to despair before the overwhelming majesty and wrath of God. In 1509 Luther published his lectures on Peter Lombard; in 1513-1515 those on the Psalms; in 1515-1516 on St. Paul's Epistle to the Romans; and in 1516-1518 on the epistles to the Galatians and Hebrews. Like all other Christians, Luther read the Bible, and in these years his biblical studies became more and more important to him. Besides teaching and study, however, Luther had other duties. From 1514 he preached in the parish church; he was regent of the monastery school; and in 1515 he became the supervisor of 11 other monasteries: "…. write letters all day long," he wrote, "I am conventual preacher, reader at meals, sought for to preach daily in the parish church, am regent of studies, district Vicar, inspect the fish-ponds at Leitzkau, act in the Herzberg affair at Torgau, lecture on St. Paul, revising my Psalms, I seldom have time to go through my canonical hours properly, or to celebrate, to say nothing of my own temptations from the world, the flesh, and the devil."

Righteousness of God

Luther's crisis of conscience centered upon the question of his old monastic fears concerning the insufficiency of his personal efforts to placate a wrathful God. In his own person, these fears came to a head in 1519, when he began to interpret the passage in St. Paul's Epistle to the Romans which says that the justice of God is revealed in the Gospels.

Luther, the energetic monk and young theologian, felt himself to be "a sinner with an unquiet conscience."

After an intense period of crisis, Luther discovered another interpretation of St. Paul's text: "I began to understand that Justice of Go…. to be understood passively as that whereby the merciful God justifies us by faith…. At this I felt myself to be born anew, and to enter through open gates into paradise itself." Only faith in God's mercy, according to Luther, can effect the saving righteousness of God in man. "Works," the term which Luther used to designate both formal, ecclesiastically authorized liturgy and the more general sense of "doing good," became infinitely less important to him than faith.

The doctrine of justification, taking shape in Luther's thought between 1515 and 1519, drew him into further theological speculation as well as into certain positions of practical ecclesiastical life. The most famous of these is the controversy over indulgences. In 1513 a great effort to dispense indulgences was proclaimed throughout Germany. In spite of the careful theological reservations surrounding them, indulgences appeared to the preachers who sold them and to the public who bought them as a means of escaping punishment in the afterlife for a sum of money. In 1517 Luther posted the 95 Theses for an academic debate on indulgences on the door of the castle church at Wittenberg. Both the place and the event were customary events in an academic year, and they might have gone unnoticed had not someone translated Luther's Latin theses into German and printed them, thus giving them widespread fame and calling them to the attention of both theologians and the public.

News of Dr. Luther's theses spread, and in 1518 Luther was called before Cardinal Cajetan, the papal legate at Augsburg, to renounce his theses. Refusing to do so, Luther returned to Wittenberg, where, in the next year, he agreed to a debate with the theologian Johann Eck. The debate, originally scheduled to be held between Eck and Luther's colleague Karlstadt, soon became a struggle between Eck and Luther in which Luther was driven by his opponent to taking even more radical theological positions, thus laying himself open to the charge of heresy. By 1521 Eck secured a papal bull (decree) condemning Luther, and Luther was summoned to the Imperial Diet at Worms in 1521 to answer the charges against him.

Diet of Worms

A student of Luther's described his teacher at this period: "He was a man of middle stature, with a voice which combined sharpness and softness: it was soft in tone, sharp in the enunciation of syllables, words, and sentences. He spoke neither too quickly nor too slowly, but at an even pace, without hesitation, and very clearly…. If even the fiercest enemies of the Gospel had been among his hearers, they would have confessed from the force of what they heard, that they had witnessed, not a man, but a spirit."

Luther throughout his life always revealed a great common sense, and he always retained his humorous understanding of practical life. He reflected an awareness of both the material and spiritual worlds, and his flights of poetic theology went hand in hand with the occasional coarseness of his polemics. His wit and thought were spontaneous, his interest in people of all sorts genuine and intense, his power of inspiring affection in his students and colleagues never failing. He was always remarkably frank, and although he became first the center of the Reform movement and later one of many controversial figures in it, he retained a sense of self-criticism, attributing his impact to God. He said, in a characteristic passage: "Take me, for example. I opposed indulgences and all papists, but never by force. I simply taught, preached, wrote God's Word: otherwise I did nothing. And then, while I slept or drank Wittenberg beer with my Philip of Amsdorf the Word so greatly weakened the papacy that never a prince or emperor did such damage to it. I did nothing: the Word did it all. Had I wanted to start troubl…. I could have started such a little game at Worms that even the emperor wouldn't have been safe. But what would it have been? A mug's game. I did nothing: I left it to the Word."

Great personal attraction, absolute dedication to his theological principles, kindness and loyalty to his friends, and an acute understanding of his own human weakness - these were the characteristics of Luther when he came face to face with the power of the papacy and empire at Worms in 1521. He was led to a room in which his collected writings were piled on a table and ordered to repudiate them. He asked for time to consider and

returned the next day and answered: "Unless I am proved wrong by the testimony of Scripture or by evident reason I am bound in conscience and held fast to the Word of God. Therefore I cannot and will not retract anything, for it is neither safe nor salutary to act against one's conscience. God help me. Amen." Luther left Worms and was taken, for his own safety, to the castle of Wartburg, where he spent some months in seclusion, beginning his great translation of the Bible into German and writing numerous tracts.

Return to Wittenberg

In 1522 Luther returned to Wittenberg, where he succeeded in cooling the radical reforming efforts of his colleague Karlstadt and continued the incessant writing which would fill the rest of his life. In 1520 he had written three of his most famous tracts: To The Christian Nobility of the German Nation, which enunciates a social program of religious reform; On the Babylonian Captivity of the Church, on Sacraments, the Mass, and papal power; and Of the Liberty of a Christian Man, a treatise on faith and on the inner liberty which faith affords those who possess it.

The Lutheran Bible, which was "a vehicle of proletarian education" as well as a monument in the spiritual history of Europe, not only gave Luther's name and views wider currency but revealed the translator as a great master of German prose, an evaluation which Luther's other writings justify.

Besides these works, Luther had other matters at hand. His name was used now by many people, including many with whom he disagreed. The Reformation had touched society and its institutions as well as religion, and Luther was drawn into conflicts, such as the Peasants' Rebellion of 1524-1525 and the affairs of the German princes, which drew from him new ideas on the necessary social and political order of Christian Germany. Luther's violent antipeasant writings from this period have often been criticized. His fears of the dangerous role of extreme reformers like Karlstadt and Thomas Münzer, however, were greater than his hope for social reform through revolution. Luther came to rely heavily upon the princes to carry out his program of reform. In 1525 Luther married Katherine von Bora, a nun who had left her convent. From that date until his death, Luther's family life became not only a model of the Christian home but a source of psychological support to him.

Luther's theological writings continued to flow steadily. Often they were written in response to his critics or in the intense heat of debate with Protestant rivals. Among those great works not brought about by conflict should be numbered the Great Catechism and the Small Catechism of 1529 and his collection of sermons and hymns, many of the latter, like Ein Feste Burg, still sung today.

Debates with Theologians

In 1524-1525 Luther entered into a discussion of free will with the great Erasmus. Luther's On the Will in Bondage (1525) remained his definitive statement on the question. In 1528 Luther turned to the question of Christ's presence in the Eucharist in his Confession concerning the Lord's Supper, which attracted the hostility of a number of reformers, notably Ulrich Zwingli. In 1529 Luther's ally Melancthon arranged a discussion between the two, and the Marburg Colloquy, as the debate is known, helped to close one of the early breaches in Protestant agreement.

In 1530, when Charles V was once again able to turn to the problems of the Reformation in Germany, Luther supervised, although he did not entirely agree with, the writing of Melancthon's Augsburg Confession, one of the foundations of later Protestant thought. From 1530 on Luther spent as much time arguing with other Reformation leaders on matters of theology as with his Catholic opponents.

Luther's disputes with other theologians were carried out with the same intensity he applied to his other work: he longed for Christian unity, but he could not accept the theological positions which many others had advanced. He was also fearful of the question of a general council in the Church. In 1539 he wrote his On

Councils and Churches and witnessed in the following years the failure of German attempts to heal the wounds of Christianity. On the eve of his death he watched with great concern the calling of the Council of Trent, the Catholic response to the Reformation.

In the 1540s Luther was stricken with diseases a number of times, drawing great comfort from his family and from the lyrical, plain devotional exercises which he had written for children. In 1546 he was called from a sickbed to settle the disputes of two German noblemen. On the return trip he fell sick and died at Eisleben, the town of his birth, on Feb. 18, 1546.

John Calvin (1509 - 1564)

Name at birth: Jean Cauvin

Few theologians have had more influence on Western Christian thought and culture than John Calvin, one of the fathers of the Reformed branch of Protestant Christianity. Born to a Roman Catholic family of means, Calvin was schooled in Latin, Hebrew, Greek, philosophy, and law in Paris, Orleans and Bourges. Around 1533 he had what he later described as "conversion," and by 1534 religion had become foremost in his writing and work. He sympathized with the Protestant sentiments sweeping Europe since Martin Luther's appearance on the scene. In Basel in 1536 Calvin published Institutes of the Christian Religion, a six-chapter catechism that grew to 80 chapters by its final edition in 1559. It is widely regarded as the clearest, most systematic treatise of the Reformation. Calvin's is the most famous presentation of the much debated doctrine of predestination: that God decided, before creating the world, who will and will not be saved. After years as a minister, writer and leader in Geneva and then Strassburg, Calvin returned to Geneva and resumed efforts to make the city a model Christian community, in part through tight restrictions on individual and social behavior and by the scrutiny (and punishment) of citizens by church and civil authorities. Thus Calvin's name is often connected with grim moral austerity and denial of pleasure, though this is probably an unfair oversimplification of his theology. Calvin's influence lives on in the doctrines and worship of many modern-day Reformed and Protestant denominations.

Calvin married Idelette de Bure in 1540; she died in 1549. Their only child, Jacques (1542), died as an infant... In 1559 Calvin founded what is now the University of Geneva... A prolific writer, Calvin differed from Luther on key theological points, including the nature of the Lord's Supper. The two were a generation apart and never met... Some scholars attribute capitalism to Calvinism's influence. Among the first was Max Weber in The Protestant Ethic and the Spirit of Capitalism (1904).

Biography: John Calvin

The French Protestant reformer John Calvin (1509-1564) is best known for his doctrine of predestination and his theocratic view of the state.

John Calvin was born at Noyon in Picardy on July 10, 1509. He was the second son of Gérard Cauvin, who was secretary to the bishop of Noyon and fiscal procurator for the province. The family name was spelled several ways, but John showed preference while still a young man for "Calvin."

An ecclesiastical career was chosen for John, and at the age of 12, through his father's influence, he received a small benefice, a chaplaincy in the Cathedral of Noyon. Two years later, in August 1523, he went to Paris in the company of the noble Hangest family. He entered the Collègedela Marche at the University of Paris, where he soon became highly skilled in Latin. Subsequently he attended the Collège de Montaigu, where the humanist Erasmus had studied before him and where the Catholic reformer Ignatius of Loyola would study after him. Calvin remained in the profoundly ecclesiastical environment of this college until 1528. Then at the behest of his father he moved to Orléans to study law. He devoted himself assiduously to this field, drawing from it the clarity, logic, and precision that would later be the distinguishing marks of his theology.

In 1531, armed with his bachelor of laws degree, Calvin returned to Paris and took up the study of classical literature. At this time Martin Luther's ideas concerning salvation by faith alone were circulating in the city, and Calvin was affected by the new Protestant notions and by pleas for Church reform. He became a friend of Nicholas Cop, who, upon becoming rector of the university in 1533, made an inaugural speech which immediately branded him as a heretic. Calvin suffered the penalties of guilt by association and would certainly have been arrested had he not been warned to flee. In January 1534 he hastily left Paris and went to Angoulême, where he began work on his theological masterpiece, the Institutes of the Christian Religion.

Several turbulent months later, after a secret journey and two brief periods of arrest, Calvin was forced to flee from France when King Francis I instituted a general persecution of heretics. In December 1534 he found his way to Basel, where Cop had gone before him.

Calvin's Theology

Sometime during his last 3 years in France, Calvin experienced what he called his sudden conversion and mentally parted company with Rome. He proceeded to develop his theological position and in 1536 to expound it in the most severe, logical, and terrifying book of all Protestantism, the Institutes of the Christian Religion. Calvin followed this first Latin edition with an enlarged version in 1539 and a French translation in 1540, a book that has been called a masterpiece of French prose. The reformer continued to revise and develop the Institutes until his death.

Its theme is the majesty of God. There is an unbridgeable chasm between man and his maker. Man is thoroughly corrupt, so base that it is unthinkable that he could lift a finger to participate in his own salvation. God is glorious and magnificent beyond man's highest capacity to comprehend; He is both omnipotent and omniscient, and He has, merely by His knowing, foreordained all things that ever will come to pass. Man is helpless in the face of God's will. He is predestined either to eternal glory or eternal damnation, and he can do nothing, even if he is the best of saints in his fellow's eyes, to alter the intention of God. To suggest that he could would be to imply that the Creator did not fore-know precisely and thus diminish His majesty. To Calvin there could be no greater sacrilege. This doctrine of predestination did not originate with Calvin, but no one ever expressed it more clearly and uncompromisingly. He did not flinch from the terrible consequences of God's omniscience.

To those few whom God has chosen to save, He has granted the precious gift of faith, which is undeserved. All are unworthy of salvation, and most are damned because God's justice demands it. But God is infinitely merciful as well as just, and it is this mercy, freely given, that opens the door to heaven for the elect.

Calvin knew that this doctrine was terrifying, that it seemed to make God hateful and arbitrary, but he submitted that human reason is too feeble to scrutinize or judge the will of God. The Creator's decision on who shall be damned is immutable. No purgatory exists to cleanse man of his sins and prepare him for heaven. Yet Calvin counsels prayer, even though it will not change God's will, because prayer too is decreed and men must worship even though they may be among the damned. The prayer should be simple, and all elaborate ceremony should be rejected. The Catholic Mass is sacrilegious, because the priest claims that in it he changes the bread and wine into the body and blood of Christ. Calvin held that Christ is present whenever believers gather prayer-fully, but in spirit only and not because of any act undertaken by priests, who have no special powers and are in no way different from other Christians. There are only two Sacraments: Baptism and the Lord's Supper. Like Luther, Calvin rejects all other "sacraments" as not based on Holy Scripture.

Calvin makes a distinction between the visible Church and the true Church. The former is composed of those who participate in the Sacraments and profess their faith in Christ; the latter, invisible and unknown to all save God, is the community of the elect - dead, living, and yet unborn. One must belong to the visible Church in order to be saved, but belonging to it is no guarantee of salvation. Church and state are both ordained by

God. The task of the former is to teach and prescribe faith and morals, while the latter preserves order and enforces the laws set forth by the Church. There is no separation of Church and state. Both must work in harmony to preserve the word of God, and to this end the state is enjoined to use force if necessary to suppress false teachings, such as Catholicism, Anabaptism, or Lutheranism.

That these ideas, particularly with their cornerstone of predestination, soon conquered much of the Christian world is baffling at first examination. But Calvin's followers were encouraged by hope of election rather than enervated by fear of damnation. It seems to be an essential part of human nature to see oneself as just, and Calvin himself, while he firmly maintained that no one is certain of salvation, always acted with confidence and trust in his own election.

Geneva Reformer

While publication of the Institutes was in progress, Calvin made preparations to leave his homeland permanently. He returned briefly to France early in 1536 to settle personal business, then set out for Strasbourg. Because of the war between France and the Holy Roman Empire, he was forced to take a circuitous route which brought him to Geneva. He intended to continue on to Strasbourg but was persuaded to remain by Guillaume Farel, who had begun a Protestant movement in Geneva. Except for one brief interruption he spent the remaining years of his life in Geneva, spreading the word of God as he understood it and creating a theocratic state unique in the annals of Christendom.

In 1537 Calvin was elected to the preaching office by the city fathers, who had thrown off obedience to Rome along with their old political ruler, the Duke of Savoy. A council, now operating as the government, issued decrees in July 1537 against all manifestations of Catholicism as well as all forms of immorality. Rosaries and relics were banished along with adulterers. Gamblers were punished and so were people who wore improper, that is, luxurious, clothing. The austere hand of Calvin was behind these regulations.

The new rules were too severe for many citizens, and in February 1538 a combination of Libertines (freedom lovers) and suppressed Catholics captured a majority of the council. This body then banished Calvin and Farel; Calvin went to Strasbourg and Farel to Neuchâtel, where he remained for the rest of his life.

At Strasbourg, Calvin ministered to a small congregation of French Protestants and in 1540 married Idelette de Bure. She bore him one child, who died in infancy, and she herself died in 1549. While Calvin was establishing himself at Strasbourg, things were going badly for the new Protestantism in Geneva. Strong pressure was being exerted on the council from within and without the city to return to Catholicism. Fearing that they might be removed from office and disgusted with the trend toward flagrant immorality among the citizenry, the councilors revoked the ban on Calvin on May 1, 1541. A deputation was sent immediately to Strasbourg to persuade the reformer to return, and he did so reluctantly, on Sept. 13, 1541, after being promised total cooperation in restoring discipline.

Rule of God

The law of a Christian state, according to Calvin, is the Bible. The task of the clergy is to interpret and teach that law, while the task of the state is to enforce it. Under this principle, while the clergy, including Calvin, were not civil magistrates, they held enormous authority over the government and all aspects of civil as well as religious life.

Immediately on his return to Geneva, Calvin set about organizing the Reformed Church. On Jan. 2, 1542, the city council ratified the Ordonnances ecclésiastiques, the new regulations governing the Church, formulated by a committee led by Calvin. The Ordonnances divided the ministry into four categories: pastors, teachers, lay elders, and deacons. The pastors governed the Church and trained aspirants to the ministry. No one could preach henceforth in Geneva without permission of the pastors.

The conduct of all citizens was examined and regulated by a consistory of 5 pastors and 12 lay elders elected by the council. The consistory had the right to visit every family annually and search its home; to summon any citizen before it; to excommunicate, which meant virtually automatic banishment from the city by the council; to force attendance at weekly sermons; to prohibit gambling, drunkenness, dancing, profane songs, and immodest dress; and to forbid all forms of the theater. The colors of clothing, hair styles, and amounts of food permissible at the table were regulated. It was forbidden to name children after saints, and it was a criminal offense to speak ill of Calvin or the rest of the clergy. The press was severely censored, with writings judged to be immoral and books devoted to Catholicism or other false teaching forbidden. Punishment for first offenses was usually a fine and for repetition of minor crimes, banishment. Fornication was punishable by exile, and adultery, blasphemy, and idolatry by death. Education, which Calvin regarded as inseparable from religion, was very carefully regulated, and new schools were established. Charity was placed under municipal administration to eliminate begging. Thus the whole life of Geneva was placed under a rigid discipline and a single Church from which no deviation was permitted.

The consistory and the city council worked hand in hand in enforcing the laws, but the moving spirit of all was Calvin, who acted as a virtual dictator from 1541 until his death. Calvin did not look the part of a dictator. He was a small, thin, and fragile man with an unsmiling ruthless austerity in his face. He was pale under a black beard and a high forehead. A poet would perhaps see these physical details as signs of enormous, orderly intellect and of little human warmth or appetite - a being all mind and spirit with almost no body at all. There were some ugly moments in theocratic Geneva. During these years 58 people were executed and 76 banished in order to preserve morals and discipline. Like most men of his century, the reformer was convinced that believing wrongly about God was so heinous a crime that not even death could expiate it.

Last Years

The last years of Calvin's life were spent in elaborating Geneva's laws, writing controversial works against spiritual enemies, and laboring prodigiously on the theology of the Institutes. Geneva became a model of discipline, order and cleanliness, the admiration of all who visited there.

Men trained to the ministry by Calvin carried his doctrines to every corner of Europe. The reformer lived to see his followers growing in numbers in the Netherlands, Scotland, Germany, and even France, the homeland he had been forced to leave. The impetus he gave to austerity, frugality, and hard, uncomplaining work may have had some influence in forming a capitalist mentality devoted to the acquisition but not the enjoyment of wealth. In any case his teachings have been carried to the present day and live on in the churches which descended from him, modified from their early severity by time but still vigorous in some of the more puritan aspects of modern life.

On 27 May 1564, after a long illness Calvin died.