

Freemasonry and the Royal Society: 2 Pillars of the Enlightenment in 17th Century England.

**Andrew G. Shepherd, Barron Barnett Lodge 146, United Grand Lodge of
Queensland.**

Introduction.

This paper was conceived and developed during the time spent at home because of the 2020 pandemic. The inability to attend face-to-face masonic lodge meetings, instigated a desire to understand masonic and non-masonic sources on both the Premier Grand Lodge of England (founded 24/06/1717) as well as the Royal Society (founded 28/11/1660). As an active and enthusiastic member of both these societies, my research focused on addressing the following questions: how influential were the two institutions on each other and on British society? What contributions, if any, did they make towards the progress and development of science? During this work I attempted, above all, to remain impartial in my interpretation of political and historical references. In this journey I am grateful to the members of Barron Barnett 146 Lodge of Research in Brisbane, Queensland, for their support and friendly feedback. Overall, the foundation principles of both the Premier Grand Lodge of England and the Royal Society provide learnings which can and should be applied in our current times, namely the use of science and morality for the service and betterment of humanity.

Background.

The British Isles had a predominantly rural population in the early 17th century with London and Bristol being the largest cities. To say that life was difficult at that time is, without doubt, a major understatement when compared to our modern 21st century standards. Unsanitary conditions prevailed throughout, with several reported cases of endemic diseases. The plague for instance, was responsible for over 30 thousand deaths in 1603, 35 thousand deaths in 1625 and 10 thousand in 1636 in London alone (which had a total population of 200 thousand at the start of the century). Despite a relatively high total fertility rate in England of 4.70 children per woman), life expectancy was no more than 38.5 years (1603 figures). The period was also marked by noticeable societal unrest and government censorship in many instances, resulting in organized resistance against absolutism. Religious intolerance and persecution could be seen on many fronts towards many minority groups. Ignorance and superstition prevailed amongst large portions of the population. Between 1560 and 1707, approximately three to four thousand were accused and executed in Scotland for the charges of witchcraft. This was also a time of discovery and conquest with the colonization of North America (1607-1610). Conversely, the 30 years' war (1618-1648) can be said to have been the first international conflict in Europe resulting in 4.5 to 8 million dead. The English civil war (1642-1651) was equally devastating, with over 200 thousand dead. Yet, despite all these calamities, it was in this environment that both esoteric and scientific thinking expanded, hand in hand. Over the course of the next 150 years, major urban and societal developments occurred. Of note is the relative increase in the urban population of England versus the rest of Europe. Britain was, furthermore, propelled to the world stage as the first global superpower. To understand the role of Freemasonry and the Royal Society on scientific understanding and the industrial revolution, a historical timeline of monarchs requires illustration, as it no doubt was a major influence.

The Stuart Monarchs.

James Stuart (VI Scotland, I England) was the son of Mary Queen of Scots. He became king of Scotland in 1567 and of England in 1603, following the death of Elizabeth I. He ruled until 1625 in what is considered a relative peaceful period but with some hints of absolutism. James I sought to unite the country under a single religion, laws, and taxation. This was to remain somewhat utopic for most of his reign. From a religious point of view Britain was very diverse. England consisted of Anglican, Puritans (conservative Protestants) and a small minority of Catholics. Scotland was made of largely Presbyterians with a large Catholic

minority. Ireland, on the other hand, was largely Catholic, with a very small Anglican minority. Religious tensions became more exacerbated following the gunpowder plot of 1605, which led to anti-Catholic laws. James I is credited however with the single most influential work of English literature, the King James Bible of 1611. During this time, England somehow expanded commerce and the trade of wool (following peace with Spain) in other parts of Europe. Today, it is widely acknowledged nevertheless, that James' reign was poorly financed. His indecisive management of taxation, in addition to the lack of clarity over England's position in the Thirty Year's War (e.g., diplomacy versus active involvement) resulted in a division amongst the ruling elite. This also ultimately culminated in a constitution crisis and closure of the parliament for a large portion of James I's reign. These challenges expanded into the reign of Charles I, his son. During this research, Charles Stuart has been portrayed in many sources as a man of contrasts. For instance, he was a devout Anglican, yet married the Catholic daughter of the King of France, but did not abolish the laws persecuting Catholics. He was a patron of the arts but capable of acts of sheer brutality. His policies/failures during the 30 years' war increased public debt which led to several unpopular measures, namely, 'ship money'. This money was normally only raised during war and in coastal regions. Charles I also imposed 'monopoly taxes', of which the most notorious concerned soap manufacture. The act of revocation, or the return of all royal presents since 1540, and associated rent, increased the mistrust in his ability to govern the country. Perhaps his single biggest mistake was the belief that Britain with all its sociological and cultural differences could be united under Anglicanism. The 1637 imposition of the Book of Common Prayer disenchanted many in Scotland, resulting in the Bishops War. This was followed by the formation of the National Covenant and the defeat of the King's forces. Other challenges came from diverse groups such as Puritans, Arminians, as well as a Catholic uprising in Ireland. In this manner, a series of open clashes with Parliament over funding, ended with the arrest of members of Parliament. Parliament itself was dissolved in 1626 and 1629 which then followed a period of 11 years where the King ruled alone. 1640 marked the beginning of the end, with the Short/Long Parliament summoned but later dissolved. A long list of grievances and calls for reform were requested. The King's authority collapsed when he decided to physically enter Parliament to arrest its members. This was the first time a monarch entered Parliament uninvited for hundreds of years. These political clashes led to the start of the English Civil War.

Civil War and Interegnum.

The Civil War in England was an event that in many cases brought brother against brother and divided the nation. The King had had more supporters in the North and within the country gentry, but the capital London was for the most part in support of the parliament. The brutal nature of this war included heavy use of gunpowder (cannon and muskets) but also pike, cavalry and siege engines. The royalist forces initially thought that there would be popular backing for this cause and that the campaign would soon be finished. Indeed, many in the population believed the King was the victim of evil advisors. However, only around 40% of the Parliament joined the royalist forces. Sources researched for this work suggest that Charles Stuart was unable, unwilling and incompetent in creating a compromise or in continuing peace in England. His belief in the divine right of monarchy to rule impeded any serious attempts at negotiation. Towards the end of the conflict, public opinion swayed towards parliamentarians or the 'roundheads', as they came to be known. They were better organized, trained, equipped. The so-called "new model army" was created in 1645, which resulted in the professionalization of the enlisted personnel. The King eventually surrendered to the Scots in 1646, who handed him over to Parliament. Further politization of the army was followed by the King's escape and further clashes with Scottish troops in 1648. The King was accused of treason and imprisoned once more. A long trial followed, until his execution in 1649, but was not sufficient to end the Civil War which persisted until 1651. Oliver Cromwell was a general and troop commander on the side of the parliamentarians. He was a natural military tactician, a man of God, but also a personality difficult to fully describe accurately. Following the death of the King, he established the protectorate and the republican experience with the Commonwealth of England. This period was also marked by several military conflicts. The 1649 Irish Campaign, and massacres which took place, ensured that they are still remembered to this day. There was aggressive expansion of the Navy and control of the American colonies which had previously been in royalist hands. War with the Dutch Republic occurred during 1652 to 1654 over control of trade routes. After 1653 Cromwell became a *de facto* dictator or Lord Protector supported by council of state and parliament elected every 3 years. However, this was short lived and in 1655 parliament was dismissed with direct military rule. The need to maintain an army led to increase in taxation and accompanied by many other unpopular measures of religious and moral nature. Further conflict continued, following the war with Spain (1654 to 1660). Cromwell died in

1658 and was succeeded by his son Richard. However, the latter was unable to continue government and resigned in 1659, ending the protectorate. This lack of clear leadership in England led to Parliament inviting Charles II (Charles I son) to return to the crown. There was promise of religious toleration and amnesty and parliament would become the main authority in determining national policies. The republic came to an end and the basic infrastructure of land holding reverted to its status at 1640. Unfortunately, violence and war did not cease after the restoration (e.g., Glorious Revolution in 1688).

This period, from *circa* 1603 to 1660, was one of instability, economically, politically, and militarily and was the backcloth for the development of the two societies, the focus of this paper.

The invisible College.

The years that preceded and followed the Civil War were also the period of the birth of scientific thought. Given the detailed complex historical description, this section also requires further timelines. Francis Bacon (1561-1626) can probably be credited as the most influential philosopher of this time. Prior to Bacon, intellectual traditional was dominated by that of Greek philosophers and scholastic systems of thinking. In his work *New Organon*, Bacon advocates a separation of religion, from science and its empirical testing. Experience and scientific experiments were suggested to replace the supernatural. Christian ethics was proposed to entail the use of knowledge in the service of charity and the betterment of mankind. Bacon's other influential work was *New Atlantis*. In this story, a vessel lands on an unknown island where a certain King Solomon rules. In this utopian society (Bensalem) research is conducted according to the principles above at a place named "Solomons House". The ideas of Bacon and other schools of thought, including those of Descartes and Galileo, inspired a group of men in England to get together to discuss the new philosophy and science during the time now called the Age of Reason. The invisible college was formed, as referenced in letters by Robert Boyle dated between 1646 to 1647. Possible members included: John Wallis, John Goddard, Samuel Foster and Boyle himself. Wallis, Goddard and Boyle were to become future members of the Royal Society. The meetings of the college invited practical applications of various subjects. Boyle became famous for his work in chemistry/ properties of gases. These meetings took place in Gresham College London as well as in Oxford. Gresham would become the site of the Royal Society meetings from 1660

until 1666, during the Great Fire of London. Gresham was founded in 1579 by a bequest of Sir Thomas Gresham who laid down the subjects to be taught: divinity, medicine, geometry, astronomy, rhetoric, and music. Gresham was also appointed in 1567 as general warden of masons. It should be noted that during the times of the meetings of the college, the civil war was in full swing. This is a reason why the gatherings had to be performed in secret. Hence there were no politics or religion discussed. Some scholars claim that this group was fostering conspiracies to bring back the monarchy. The meetings included parliamentarians and therefore there are scholarly opinions to the contrary. Meetings were suspended after the death of Richard Cromwell in 1659.

Similar scientific meetings occurred in other European countries and of note is the influence of the French school at the Montmor Academy of 1657, (a Stuart enclave in France). It could be argued that the Invisible College was an attempt to build the figurative House of Solomon, as described by Bacon.

Craft activity.

It is argued that the discussions of the Invisible College were the first tangible links with the true principles of Freemasonry's ritual and teachings during their time. Nevertheless, there are very limited known sources of Freemasonry activity in the 17th century. One of the main reasons for this is credited to be the Great Fire of 1666 in London. Evidence has survived however, of one of the members of the craft and his name was Elias Ashmole. Initiated in 1646, in Warrington, Ashmole was a royalist, mathematician, lawyer, antiquary, collector, auditor of the Excise (after the Restoration) and Herald of Windsor (by Royal appointment). There is a record of him attending a lodge meeting in 1682. He was interested in alchemy and Rosicrucianism and published several influential works such as *Fasciculus Chemicus* (1650), *Theatrum Chemicum Britannicum* (1652) and *The Way to Bliss* (1658). His collections can now be found in the Ashmolean Museum in Oxford donated in 1683. Ashmole also became a member of the Royal Society in 1661 but by all accounts was not very active. It is very difficult therefore, to ascertain whether Ashmole represents the typical craft membership of his time. However, he does exemplify the gentleman scientist of his generation. On the other hand, from a craft point of view is he a famous freemason or famous because he was one of the first freemasons?

The Royal Society.

1660 marks the official date of a council of 12 members attending a meeting aimed at the formation of the Royal Society. At a second meeting, Sir Robert Moray announced the King's approval of the gathering. The Royal Society of London for Improving Natural Knowledge received its charter from King Charles II in 1662. It is the oldest national scientific institute in the world. Lord Brouncker was its first president. Table 1 presents details of the foundation members.

Table 1. Founding members of the Royal Society.

Foundation Member	Background	Political Views
William Brouncker, 2 nd Viscount Brouncker	Mathematician	Royalist
Alexander Bruce, 2 nd Earl of Kincardine	Benefactor	Royalist
Sir Paul Neile	Optics pioneer	Royalist
William Neile	Amateur scientist	Royalist
John Wilkins	Brother in law to Oliver Cromwell, former master of Trinity College	Parlamentarian
Robert Boyle	Chemist pioneer	Parlamentarian
Jonathan Goddard	Physician and professor	Parlamentarian
William Petty	Statistics pioner	Parlamentarian
Lawrence Rooke	Geometry professor	Parlamentarian
Sir Christopher Wren	Gresham Professor of Astronomy, prominent architect	Parlamentarian
Abraham Hill	Benefactor	Neutral
Sir Robert Moray	Military man, initiated 1641 in Edinburgh	Neutral

The reputation of the Royal Society increased with the presidency of Sir Isaac Newton, from 1703 until his death in 1727. Newton was a major figure of the Age of Enlightenment, both a

mathematician and a physician. In his work *Philosophiae Naturalis Principia Mathematica* (1687), he postulated that the universe moves according to law-governed mechanical principles, such as the Theory of Gravity (including the motion of planets and the moon). In his later work, *Opticks*, (1704) he discussed optics, science, religion, and morals. Science was a demonstration of God's omnipotence and wisdom according to Newton. However, there is no conclusive proof of Newton ever being initiated into freemasonry. Newton did have a strong interest in the esoteric and alchemy and in his work he also highlights the masonic allegory of

light and its meaning.

Desaguliers and the Premier Grand Lodge.

John Desaguliers was a clergyman, engineer, and freemason. He came from a family of Huguenot refugees, who settled in England. He was nominated Royal Society curator of experiments in 1712. He was the first man to demonstrate the existence of the atom. Desaguliers was a member of the Lodge of Antiquity, which met at the Gosse and Gridiron tavern in London. This lodge joined with others to form the Premier Grand Lodge of England in 1717. He also became the Third Grand Master in 1719, Deputy GM in 1722 and 1726 was instrumental in the craft e.g., the period in which the third degree was introduced into the Premier Grand Lodge. Desaguliers is remembered by co-working with James Anderson to draw the Constitutions of Freemason in 1723. He initiated the later Holy Roman Emperor and the Prince of Wales. As a member of both freemasonry and the Royal Society, Desaguliers exemplifies the cross pollination of esoteric and scientific thought still prevalent in the first decades of the 18th century. In 1751 a new Grand Lodge was created (Ancients). They were in opposition to the Premier Lodge (Moderns). However, 1813 saw the reconciliation of these lodges into one organization the United Grand Lodge of England (UGLE). Today the UGLE has over 200 thousand members in over 6800 lodges. Freemasonry progressively turned into a vehicle for liberal thinking, disseminating concepts of freedom in Europe and across the Atlantic. There is no doubt that the craft overall enabled the ideals of enlightenment propagated by British, as well as American and French lodges.

Discussion.

Initially the Royal Society aims were the pursuit of scientific knowledge and political and religion discussions were banished from its meetings. With the advent of the Royal Society, many myths and superstitions started to be openly challenged e.g., belief in witches, sea monsters and demons, among others. In today's money, the membership fee was the equivalent of 500 British Pounds and the weekly fee of 50 British Pounds. At that time, this amount was certainly far from affordable to the average person.

The first members of the Royal Society may also be the last “sorcerers”. Ashmole was a Rosicrucian and a practicing astrologist. Newton studied and wrote about alchemy. Hooke carried out magical experiments on spiders’ webs and unicorns’ horns. Eventually, The Royal Society became an open organization subject to the votes of its members. There was no mention of any form of initiation and or degrees. By-laws indicated that new members were taken in by the president and saluted by the other members of the Royal Society. Other societies soon followed in continental Europe with the same format. Some authors claim that the Royal Society and the craft started to drift apart, due to the existence of two rival grand lodges in England. In 1847 it was decided that fellows of the Royal Society would be elected solely on their scientific work. Potentially a final parting of ways with the craft? The Royal Society motto is *Nullius in verba* which is Latin for “take nobody's word for it”. Since 1665 it has published its Philosophical Transactions and started the peer review process. It is further governed by a council of 21 members and has a president at its head. As of 2016 there were 1600 fellows of which 52 are admitted each year. During the pandemic the Royal Society has been advocating science and the need for vaccination. Its supports research by donating over 42 million British Pounds for science fellowships. In 2010, UGLE published a list of members who, between 1660 and 2007, were also members of the Royal Society. Some of these names are listed in Table 2 as examples of important names in science, engineering, and technology.

Table 2. Example of dual members of Freemasonry and the Royal Society.

Member	Background	Date into Freemasonry	Date as Fellow of the Royal Society
James Watt	Father of the double acting engine	1763	1785
Edward Jenner	Pioneer of vaccination	1802	1789
Colonel George Everest	Surveyor/geographer	1829	1827
Sir Alexander Fleming	Penicillin inventor Nobel Prize	1909	1943
Sir Edward Victor Appleton	Physicist Nobel Prize	1922	1927
Charles Samuel Myers	Experimental psychologist	1895	1935
William Halse Rivers	Anthropologist	1909	1908
Enrico Fermi	Nuclear physicist, Nobel Prize	1923	1950

This table exemplifies the wide ranging the cross fertilization of the freemasons' interests in sciences, engineering and medicine, among others, and the important role they played in the history of knowledge.

Conclusions.

The first part of the 17th century was an extremely difficult time to be living in Britain. Society was divided, intolerant suffered from sanitary challenges. It is thus remarkable that during such a brutal period, freethinking organizations such as Premier Grand Lodge and the Royal Society began. From the ashes of the civil war, famous figures rose up, including Elias Ashmole. It was through the healing of differences and the building of bridges (literal and philosophical) that Britain was propelled into a major democratic power at the end of the 17th century. It cannot be concluded with certainty that the craft was a determining influence on the formation of the Royal Society, due to the scarcity of evidence and historical writings from the period. The founding members of the Royal Society also sought to develop the ideas of Enlightenment during the 17th century. Many of these ideas also appear in the craft's current workings and rituals, including the pursuit of the liberal arts and sciences, as well as the hidden mysteries of nature. The clear intent to avoid debates on politics and religion is a point of commonality between the early Royal Society and the craft. This can also be explained based on the preceding political events: the Civil War, the Interregnum, and the

Restoration. The Royal Society has been home to some of the most important names in science, technology, and engineering. The craft is somewhat averse to innovations – what about the views on technology in our lodges? Whilst there has been links with the Royal Society and freemasons, these organizations differed in the way they promoted advancement: open sources versus knowledge passed on by initiation or in secret. The craft (and appended orders) has several esoteric and allegorical symbolism that has persisted since the 17th century in our rituals and inner working which are unique. It is up to us, as 21st century freemasons, to keep these traditions alive but also to support science and scientific methods, so that we may all live in a society which is free in the entire sense of the word. In the words of brother D. Holt, sometimes we forget that freemason means free = free thinker, mason = builder. A free thinker utilizing our logic and reason to build our life temple. So, are we truly connected with the liberal arts and sciences that we were requested to study? Lastly, what can freemasonry do to attract the pillars of our society to join us today, as in the 17th century, which attracted men of the caliber of Elias Ashmole (from Bro T. Cousins). Through examining our past craft history, learning, and developing can we still show our relevance today in a dynamic world to the younger generations? I would like to think the answer is yes to this question. We still have something very “special” to offer.

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