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John Cooper and Problems in Masonic Research

We are fortunate to have scholars like John Cooper who are also Freemasons. The history of secret and ritualistic organizations has never received the attention that the subject deserves. Although their influence has been and continues to be considerable, they are viewed as having members who are enjoined to be tight-lipped about the activities. Despite the manifest differences between the branches of this fascinating group, their culture has a commonality whose consideration has been neglected, and the research problems they present for scholars have similarities.

Secrecy and ritualism often go together, although for many societies the secrecy is no longer as strong as it once was. However, ritual remains one of their major characteristics, making them distinct from a large number of other groups that may have a few ceremonies such as passing along the chair's gavel or investing new members with lapel pins but which are chiefly issue-oriented. Sometimes it is hard to demarcate between a ritualistic and issue-oriented movement. While the Grange, for example, is certainly an agricultural lobby, it has always had a strong ritualistic side. Rotary or the Lions would seem to be more on the service side, but we have all met members who were as enraptured by the Rotary Wheel as anyone ever was by the Masonic square and compass. All of this presents special challenges to understanding.

As Dr. Cooper points out, there can be a change in emphasis over the years. But for all the changes, few public or university libraries take seriously the collecting of material on the Masons, so the serious researcher must get permission to use Masonic archives and libraries. A number date from the nineteenth century and have large holdings. An idea of what they might contain is indicated by the classifications of the Library of the Supreme Council of the Scottish Rite in Washington, which dates back to 1888 and even then had more than eight thousand volumes. Categories include philosophy and symbolism, church and state, paraphernalia, glassware, benevolent and educational institutions, hospitals, cemeteries, architecture, poetry and drama, humor and satire, and women in Masonry. Paris is unique in having at least four major collections.

Another challenge is understanding the special language and usages that an organization such as the Masons invokes. The more ritualistic the society, the more arcane will be the terminology found in papers. As an example, a considerable problem for the researcher is the dating system used by different Masonic bodies. Ordinary Craft or blue lodge Masons who have taken the first three degrees of Entered Apprentice, Fellowcraft and Master Mason use the Anno Lucis system, adding 4000 years and giving the year as dated from the Creation. Thus a blue lodge Masonic document of 1995 would be 5995. Royal Arch Masons begin the calendar with the start of work on the Second Temple at Jerusalem in 530 B.C., so that this is the year 2525. Royal and Select Masters number the years from the completion of the original King Solomon's Temple in 1000 B.C., making this the year 2995. Masonic Knights Templar date documents from the founding of the Order in 1118 and hence this is 877. There are other pitfalls: On occasion the researcher will face documents that have been rendered into cipher or have had critical words removed. He or she will also encounter vast amounts of allegory and metaphor, so that without an advance immersion in the rituals the text will be unintelligible.

In sum, we need researchers who can tackle the special problems of what is a fascinating subject. We are lucky to have as many hard workers in the stacks as we do, and these papers are a notable contribution.

Paul Rich
President, Policy Studies Organization

Science and the Second Degree of Masonry

John L. Cooper III, Ph.D., President Institute for Masonic Studies

The subject of tonight's lecture is "Science and the Second Degree of Masonry." The Second Degree of Masonry, or the Fellow Craft Degree, is widely considered to be the "intellectual degree" of Ancient Craft Masonry. The Entered Apprentice Degree introduces us to the Craft, and it presents to us the elemental working tools of a Freemason, together with a simple, but profound, promise to keep the secrets of Freemasonry that will be entrusted to us. The symbols are concrete in nature: a twenty-four inch gauge, a common gavel, a rough and perfect ashlar, a mosaic pavement, a blazing star, and such primary substances as chalk, charcoal and clay, among others. Some symbols are historic in nature, such as the reference to the Tabernacle in the Wilderness as having been a model for King Solomon's Temple, and thus for a Masonic lodge. And some are allegorical in nature, such as the Form of a Lodge extending from east to west and from north to south. But the symbolism is rather straightforward.

When we enter into the symbolism of the Fellow Craft Degree, it is obvious that the nature of the symbolism has changed. It has now become an allegory rather than simply a set of symbols presented to the candidate. In some Masonic rituals, Freemasonry is referred to as "a system of morality, veiled in allegory and illustrated by symbol." A common dictionary definition of allegory is "the representation of abstract ideas by characters, figures, or events in narrative, dramatic, or pictorial form." As such, the candidate in the Fellow Craft Degree is introduced to the allegory of King Solomon's Temple in a unique way. Although the Entered Apprentice Degree uses the symbol of the Mosaic Pavement as a representation of human life, checkered with good and evil, it is essentially a static symbol. In the Second Degree of Masonry we are introduced to a dynamic symbol – actually an allegory – of King Solomon's Temple, whereby the candidate ascends a Winding Staircase and progresses through outer and inner doors to the Middle Chamber. These are not simple symbols, but rather an allegory that will be explored in this paper.

The title of this paper is "Science and the Second Degree of Masonry." Science, today, implies a body of knowledge that is based on observation and experiment. Again, the common dictionary definition of science is "the observation, identification, description, experimental investigation, and theoretical explanation of phenomena." All of contemporary science is based upon observation – that which can be physically seen, even though we use instruments to enhance the senses. Until the invention of the telescope, it was not possible to see the universe in any meaningful way, and until the invention of the microscope, it was not possible to observe the minute forms of nature that lie below the threshold of our ordinary sight. Even the most elementary understanding today of astronomy, biology, and physics, leads us to understand that there is much beyond the ordinary powers of observation which enhancement and augmentation can bring about. The Hubble telescope has enabled us to gain knowledge of the universe that would have been unimaginable to Copernicus, and the electron microscope has enabled us to "see" a world that none knew existed before its invention.

Science also relies on the organization of what is observed in a systematic fashion. Hypotheses are made, and then subjected to confirmation. We are all familiar, perhaps, with the practice of proving the null hypothesis. The scientific method progresses according to established rules of

logic, and scientific inquiry is the process of disproving an idea – a hypothesis – rather than “proving” it. Truth is thus a temporary and moving target, subject to subsequent examination and confirmation. A theory is – again, according to the common dictionary definition – “a set of statements of principles devised to explain a group of facts or phenomena, especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena.” That which is not testable by the use of observation or experiment is therefore, by definition, not scientific.

We also make a distinction between the natural sciences and the social sciences. Returning again to a dictionary definition, natural sciences are those that collectively “are involved in the study of the physical world and its phenomena, including biology, physics, chemistry, and geology, but excluding social sciences, abstract or theoretical sciences, such as mathematics, and applied sciences.” The “Staircase Lecture” of the Fellow Craft Degree introduces us to the last named subject, that of an “applied science”, by identifying “Operative Masonry” with “Architecture.” Listen to the words of the monitorial part of our lecture:

By Operative Masonry we allude to a proper application of the useful rules of architecture, whence a structure will derive figure, strength, and beauty, and from which will result a due proportion and just correspondence in all its parts. It furnishes us with dwellings and convenient shelters from the vicissitudes and inclemencies of the seasons; and, while it displays the effects of human wisdom, as well in the choice as in the arrangement of the several materials of which an edifice is composed, it demonstrates that a fund of science and industry is implanted in man for the best, most salutary and most beneficent purposes.

The lecture states that there is an innate quality within a human being that causes us to create structures in our world. In the context quoted, these structures are actually buildings, for we are told that the exercise of this faculty causes the construction of “dwellings and convenient shelters from the vicissitudes and inclemencies of the seasons....” However, the reference is not to a particular physical building, but rather to an abstract concept of a “dwelling” or an “edifice.”

This introduction to the Lecture of the Fellow Craft Degree is actually the beginning of the allegorical instruction regarding King Solomon’s Temple which will follow. It is easy to miss this allegory because our mind tends to concentrate on the supposed purpose of the use of the “applied science” of architecture, or “Operative Masonry,” rather than the concept behind it. What is really being described is a *paradigm*. The word “paradigm” comes from the Greek word, *parádeigma*, meaning a “pattern.” A *paradigm* is something that enables us to make sense of a series of phenomena that are observed. In the Lecture of the Fellow Craft Degree, the *pattern* of the observed phenomena that structures have “figure, strength and beauty,” to quote from the ritual, leads us to understand that the creation of structures that have this must spring from some source – and in this case, the source is the human mind. We will see, later, how important this idea is to an understanding of the allegory to be explained later in the Lecture of the Fellow Craft Degree.

Before proceeding further, however, it is important to understand another term related to our understanding of a paradigm or a “pattern” which is observed. In 1962 Thomas Samuel Kuhn, an American physicist, originated the term *paradigm shift* to describe the way in which a model of

scientific explanation evolves. If a paradigm is a pattern or model, and if it is later discarded and a different pattern or model replaces it, Kuhn calls this process a “paradigm shift.” An example of this is the Ptolemaic system of the universe in which the earth is at the center of the solar system, which was replaced by the heliocentric system of Copernicus. It should be noted in passing that the Entered Apprentice Degree apparently still has a Ptolemaic system in mind because we are shown the symbol of Jacob’s Ladder, “reaching from earth to heaven,” and no comment is made about the impossibility of this having occurred. Of course this is a reference to a story from Genesis concerning the Patriarch, Jacob, but nonetheless, we accept this symbol without much noticing that it belongs to an astronomical paradigm that few, if any, would accept today as a valid scientific statement of fact.

In his book, *The Structure of Scientific Revolutions*, Kuhn is trying to understand why our patterns or models – our *paradigms* – change or shift over time. For example, he says:

Normal science does not aim at novelties of fact or theory and, when successful, finds none. New and unsuspected phenomena are, however, repeatedly uncovered by scientific research, and radical new theories have again and again been invented by scientists. History even suggests that the scientific enterprise has developed a uniquely powerful technique for producing surprises of this sort. If this characteristic of science is to be reconciled with what has already been said, then research under a paradigm must be a particularly effective way of inducing paradigm change. (Kuhn, p. 52)

The point of all this is that true scientific paradigms cannot be dogmatic. They must function to describe the internal consistency of the phenomena being studied, and subject it to testable hypotheses. They must also continue to focus on the anomalies produced by the paradigm because it is these anomalies that future breakthroughs may occur – even breakthroughs that may eventually destroy the paradigm itself. The Ptolemaic paradigm of the universe was not replaced so much by the fact that it was wrong – it accounted for observations at the time rather perfectly – but by the fact that anomalies observed eventually caused the entire paradigm to *shift* to a new one. It is this openness to change that is essential to the use of a paradigm, and it is this unique openness to the possibility of change in an understanding of truth that is the real nature of scientific inquiry.

It is important to keep this in mind when we return to the Fellow Craft Degree. At the conclusion of the degree, the Master delivers a lecture on a paradigm of the universe, and asks the candidate to join him in symbolically demonstrating the consequences of the discovery of this paradigm. I refer here to the following from our monitorial work:

By Geometry we may curiously trace nature through her various windings to her most concealed recesses. By it we discover the power, wisdom and goodness of the Great Artificer of the Universe, and view with delight the proportions which connect this vast machine. By it we discover how the planets move in their respective orbits, and demonstrate their various revolutions. By it we account for

the return of seasons, and the variety of scenes which each season displays to the discerning eye. Numberless worlds are around us, all framed by the same Divine Artist, which roll through the vast expanse, and are all conducted by the same unerring law of nature.

A survey of nature, and the observation of her beautiful proportions, first determined man to imitate the Divine plan, and to study symmetry and order. This gave rise to societies and birth to every useful art. The architect began to design; and the plans which he laid down, being improved by time and experience, have produced works which are the admiration of every age.

At this point in the ceremony, the candidate has already been introduced to the seven Liberal Arts and Sciences – grammar, rhetoric, logic, arithmetic, geometry, music, and astronomy. This set, or classification, of knowledge, once comprised the whole of our understanding of the world. It is introduced in the lecture not because Freemasons believe that it still encompasses all knowledge, but as a symbol of the completeness of knowledge which is important to an integrated mind. The vast quantity of knowledge today has made it the realm of the specialist, and it is perhaps easy to forget that there was a time when the truly educated man was expected to understand something about all fields of knowledge, as well as how they were interrelated. That may be an impossibility today, but there is much to be said for a broad education which gives a man an understanding of the important principles of many fields of knowledge, if not the details now confined to the specialist.

The Master calls the new Fellow Craft's attention to what Freemasons state to be the most important of these seven branches of knowledge – geometry. The candidate has already received an explanation of geometry, or at least an abbreviated explanation, by the Senior Deacon. Now the Master explains why geometry is considered by Freemasons to be the most important of the sciences. The observations that the Master makes are two:

- The observable world is the result of the operation of the “unerring law of nature,” and
- The laws of nature are the result of the “power, wisdom, and goodness of the Great Artificer of the Universe.”

The symbolic consequences of this assertion is that all Masons, from the youngest Entered Apprentice in the northeast corner of the lodge to the Worshipful Master in the East, should acknowledge this in an esoteric fashion revealed to the Fellow Craft at this important juncture.

At this point it is important to realize that this section of the lecture is a *paradigm*, and not a dogmatic assertion. By making this portion of the lecture of the Fellow Craft Degree into a statement of fact rather than a paradigm that leads us to further investigation is to miss the point. After all, we have already made our point about the existence of God for the candidate. At the beginning of his Masonic journey we asked him in whom he put his trust, and then, in the lecture that followed, we told him that “no atheist can ever be made a Mason.” The purpose of the lecture about geometry in the Fellow Craft Degree is not to deliver a dogmatic statement about the nature of the universe to the Fellow Craft, but rather to present him with a *paradigm* for him

to explore. You will remember that I said earlier that Thomas Kuhn observed that the purpose of a paradigm is to bring order to a set of facts, and to encourage the testing of the paradigm in order to demonstrate the null hypothesis – to discard what does not work for the paradigm, and also to open the door to new discoveries as anomalies which do not fit the paradigm are pursued. And he told us that this is the genius of the scientific enterprise. It imposes order on our thought processes and enables us to test what we believe to be true, without suppressing the possibility that the paradigm might eventually be replaced by a better paradigm. In a like fashion, Freemasonry does not present the candidate with a set of beliefs, or dogmas, which must be uncritically accepted, but instead encourages him to passionately pursue the search for truth. To make the statement that “numberless worlds are around us, which roll through the vast expanse, and are all conducted by the same unerring law of nature,” is not so much statement of fact as it is a statement of a hypothesis associated with a particular paradigm of how the universe operates. We are not asking the Fellow Craft to accept a particular concept of astronomy; we are presenting him with a starting point for his own investigation of the universe.

To illustrate this better, we need to know a bit more about where the Fellow Craft Degree came from, and something about its probable author. We also need to know something of the towering figure of Eighteenth Century science – Sir Isaac Newton. Newton was born in 1643, and died in 1727. So far as we know he was not a Freemason, but he had tremendous influence on Freemasonry as it evolved from a simple stonemasons guild into the modern fraternity that we know today. His *Mathematical Principles of Natural Philosophy*, published in 1687, is one of the most important scientific books ever written.

Just as the Commonwealth was coming to a close, and Charles II was returning to London to take the throne in 1661, a group of some twelve scientists who had been meeting from time to time in London, and who had called themselves “The Invisible College,” requested and received a charter from the King as “The Royal Society of London for Improving Natural Knowledge,” known more simply in history as “The Royal Society.” The purpose of the society was to encourage the investigation of knowledge, and more especially the “new science” as promoted by Sir Francis Bacon in his book *New Atlantis*, first published in 1624. The Royal Society is still in existence today, and acts as a scientific advisor to the British government. Many of its early members have been identified as Freemasons, or were closely associated with those that we know to have been Freemasons. Sir Christopher Wren, the great architect, is one. Recent research has confirmed that he was a member of the lodge that met at the Goose and Gridiron in St. Paul’s Churchyard – now the Lodge of Antiquity No. 2 on the register of the United Grand Lodge of England. Sir Isaac Newton was president of the Royal Society from 1703 until his death in 1727.

One of the founders of the first Grand Lodge in 1717 was Dr. John Theophilus Desaguliers, a respected member of the Royal Society, and a close friend of Sir Isaac Newton. A priest of the Church of England, Desaguliers was also a rationalist, and curator of experiments for the Royal Society. He was born in 1683 in France, the son of Huguenot parents, who fled France after the revocation of the Edict of Nantes by Louis XIV in 1685. The revocation of the Edict of Nantes imposed harsh penalties on Protestants, such as the Desaguliers family. Parents could leave the country, but they could not take their children with them, who were to remain in France and be raised as Catholics. John’s father smuggled him out of the country in a barrel – certainly a

traumatic experience for a young boy. John apparently never forgot this episode in his life, and Freemasonry, with its attendant toleration of men of all religious faiths, was particularly attractive to him. He was the third Grand Master of the Grand Lodge of England, having been installed as such in 1719.

We do not know how the Fellow Craft Degree came into existence, but there is a strong belief amongst some Masonic students that it was the creation of Dr. Desaguliers. If so, then its content reflects his interest in science and the pursuit of knowledge. Dr. Margaret Jacob has documented the close association of Freemasonry with the development of the scientific spirit during this time period, and so it is no surprise that Desaguliers should have been able to import the philosophy so closely associated with the Royal Society into the Second Degree of Freemasonry.

Our evidence for the content of the Fellow Craft Degree in the earliest times is, of course, the various Masonic exposures, which began to appear around 1696, and became more common after the formation of the Grand Lodge in 1717. From those sources we know that some of the content which eventually ended up in the Second Degree may have been present in the earlier Admission Ceremony. Material that later found its way into the Fellow Craft Degree, and even the Master Mason Degree, is found, jumbled together, in the earlier exposés. For example, in *A Mason's Examination*, published in April, 1723, we find the following:

A Fellow I was sworn most rare,
And know the Astler, Diamond, and Square:
I know the Master's Part full well,
As honest *Maughbin* will you tell.

If a Master-Mason you would be,
Observe you well the *Rule of Three*;
And what you want in Masonry,
Thy *Mark* and *Maughbin* makes thee free.

With the possible exception of the *Wilkinson Manuscript*, which has been attributed to the late 1720's, the first mention of the "Letter G" as a part of our ritual is Prichard's *Masonry Dissected*, published in 1730. This is the first exposé to have the three degrees of Masonry, and thus many students are of the opinion that this represents the development of the ritual during the second and third decades of the 18th century. The "Letter G" is associated here with both "Geometry" and "God", and while we know that Geometry was considered the most important of the Liberal Arts and Sciences in the old Gothic Constitutions, it is only when we come to the 1730 exposure that we find that "Geometry" and "God" are set forth as essentially meaning the same thing. I do not believe that this is an accident. A fertile mind, such as that of Desaguliers, was quite capable of taking the subject of "Geometry" from the old manuscript "constitutions" which had originally been read at the making of a Mason before the advent of the Grand Lodge era, and adding to it the concept of "God" considered as the "Grand Geometrician of the Universe." Here is what *Masonry Dissected* says:

Q. Are you a Fellow-Craft? A. I am.

Q. Why was you made a Fellow-Craft? A. For the sake of the Letter G.

Q. What does that G denote? A. Geometry, or the fifth Science.

.....

Q. When you came into the middle [chamber], what did you see?

A. The Resemblance of the Letter G

Q. What doth that G denote? A. One that's greater than you.

Q. Who's greater than I, that am a Free and Accepted Mason,
The Master of a Lodge?

A. The Grand Architect and Contriver of the Universe, or He that was taken up to
the top of the Pinnacle of the Holy Temple.

A. Can you repeat the Letter G? A. I'll do my Endeavour.

The Repeating of the Letter G

In the midst of *Solomon's* Temple there stands a G,
A Letter fair for all to read and see,
But few there be that understands
What means that Letter G.

My Friend, if you pretend to be
Of this Fraternity,
You can forthwith and rightly tell
What means that Letter G.

By Sciences are brought to Light
Bodies of various Kinds,
Which do appear to perfect Sight;
But none but Males shall know my Mind.

The Right shall [Response] If Worshipful.

Both Right and Worshipful I am,
To Hail you I have Command,
That you do forthwith let me know,
As I you may understand.

By Letters Four and Science Five
This G aright doth stand,
In a due Art and Proportion,
You have you Answer, Friend.

My Friend, you answer well,
If Right and Free Principles you discover,
I'll change your Name from Friend,
And henceforth call you Brother.

The Sciences are well compos'd

Of noble Structure's Verse,
A Point, a Line, and an Outside;
But a Solid is the last.

It must be remembered that what *Masonry Dissected* is “exposing” is the lectures that follow each degree, which, in those days, were in “question and answer” format, or what we call a “catechism.” It does not purport to give the “working”, i.e., the conferral of the degree. However, it is entirely possible that this excerpt, which is in the form of a poem, is actually what was said to the candidate when he was presented with the “Letter G” during the ceremony of being made a Fellow Craft Mason. Note that there are echoes here of an earlier placement in the more simple “Admission Ceremony,” or at least an echo of the early practice of “initiating and passing” on the same night. The candidate’s name is changed from “friend” to “brother” at this point – something that we would have expected to be in the Entered Apprentice Degree and not in the Fellow Craft Degree.

There is nothing in Prichard to indicate that the Winding Staircase of King Solomon’s Temple was a part of the ceremony at this stage, although it could have been. The reference to the Seven Liberal Arts and Sciences in the excerpt certainly leaves this as an open question. The Lecture of the Fellow Craft Degree represents a transition between the traditional “question and answer” form of the lecture and the later narrative lectures with which we are familiar. In our present work, the Senior Deacon gives the first part of the lecture, and it is a lecture that is given “in transit.” The candidate is conducted on a symbolic journey through a part of King Solomon’s Temple, up a Winding Staircase, and into the Middle Chamber where he receives further instruction from the Master in a narrative lecture. The most important part of that lecture is an explanation of the significance of Geometry, and its association with an understanding of God. I have previously quoted part of the monitorial part of the lecture, but here I will quote it in full. It may be that this “speech” on the part of the Master represents the essentials of what the candidate was told about Geometry and its importance through what was originally an extemporaneous commentary:

By Geometry we may curiously trace nature through her various windings to her most concealed recesses. By it we discover the power, wisdom and goodness of the Great Artificer of the Universe, and view with delight the proportions which connect this vast machine. By it we discover how the planets move in their respective orbits, and demonstrate their various revolutions. By it we account for the return of seasons, and the variety of scenes which each season displays to the discerning eye. Numberless worlds are around us, all framed by the same Divine Artist, which roll through the vast expanse, and are all conducted by the same unerring law of nature.

A survey of nature, and the observation of her beautiful proportions, first determined man to imitate the Divine plan, and to study symmetry and order. This gave rise to societies and birth to every useful art. The architect began to design; and the plans which he laid down, being improved by time and experience, have produced works which are the admiration of every age.

The lapse of time, the ruthless hand of ignorance, and the devastations of war, have laid waste and destroyed many valuable monuments of antiquity on which the utmost exertions of human genius were employed. Even the Temple of Solomon, so spacious and magnificent, and constructed by so many celebrated artists, escaped not the unsparing ravages of barbarous force. Freemasonry, notwithstanding, has still survived. The attentive ear receives the sound from the instructive tongue, and the mysteries of Masonry are safely lodged in the repository of faithful breasts. Tools and implements of architecture most expressive are selected by the Fraternity to imprint upon the memory wise and serious truths; and thus, through the succession of ages, are transmitted unimpaired the most excellent tenets of our Institution.

Preston did not invent his material, but rather edited material that he found already in use. The substance of this lecture may well have been that which was developed in the 1720s by Desaguliers for the new Fellow Craft Degree. As pointed out earlier, it represents a Newtonian view of the universe, and is an appropriate expansion of the lecture on the “Letter G.” We do not know if the material that Preston developed for his *Illustrations of Masonry* was present in 1720, but there is a likelihood that it was. Given the conservative nature of Masonic ritual, it seems unlikely that such a major development could have occurred after 1730. What we know of the history of Grand Lodge after 1730 would indicate that most innovation in the ritual had come to an end by that date, and that the Grand Lodge was increasingly preoccupied with internal quarrels, and with attempts by imposters to break into lodges through the use of the “exposures.” Sometime in the 1730s they switched the passwords of the first and second degrees to catch out imposters, and this action was one of the causes of the eventual creation of the Ancients’ Grand Lodge. In addition, social distinctions began to become more important in lodges under the premier Grand Lodge, and Irish Masons in London, for example, apparently were excluded. Again, this was one of the motives for the formation of the Grand Lodge of England According to the Old Institutions (the “Ancients”) in 1751. Finally, it seems as if the “Moderns,” as the original Grand Lodge came to be termed, were more interested in eating and drinking than they were in practicing Masonry. If the lecture on the “Letter G” had come into existence after 1730 it seems likely that this would have been one of the charges of changing the ritual leveled by the Ancients against the Moderns. That it was not seems to indicate that it happened in the formative period of speculative Freemasonry, the period when Desaguliers was active in Grand Lodge.

In the beginning of this paper I pointed out the importance of the concept of a paradigm to science. I would suggest that the creation of a separate Fellow Craft Degree in the 1720s gave our Masonic ancestors an unparalleled opportunity to use the paradigm of Newtonian science to expand our understanding of Freemasonry. Although the members of the Royal Society would not have understood the term “paradigm,” I think that they would have understood the concept. The Newtonian system was a *model* or *pattern* of thinking that brought observable phenomena into relation to one another so that the implications could be explored. The whole concept of the Newtonian system is that it is open-ended. It is not the end of the discussion, but the beginning. So I believe it is with Freemasonry.

Freemasonry is neither a closed system of thinking, nor a body of knowledge that must be accepted by its members as absolute truth, or dogma. Far from it. It is an attempt to translate into the social sphere what the Royal Society was attempting to translate into the sphere of natural philosophy – what today we call Science. Just as the scientific mindset is a process of accommodating the search for truth to rigorous examination and experimentation, so Freemasonry encourages its followers to do that in the social sphere – and even the political sphere. It is no accident, in my opinion, that some of the most enlightened thinkers have always been attracted to Freemasonry. The noble experiment that became the United States of America is a case in point. We know that Freemasons were not only involved in the creation of the American republic, but that the philosophy and teachings of Freemasonry were present at its birth. The essence of Freemasonry is congruent with scientific thinking, and the Second Degree of Masonry brings this to our attention in a way that makes an indelible imprint on our minds. We close the Fellow Craft Degree with a statement of that fact, and with that same statement, I will close this paper:

Masonry is a progressive moral science divided into different degrees; and, as its principles and mystic ceremonies are regularly developed and illustrated, it is intended and hoped that they will make a deep and lasting impression upon your mind.