

# Bishop John Wilkins 1614-1672

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Christleton, Chester, December 2003 By Frater Dr. D.C. Strachan, III<sup>o</sup>

## Introduction

The purpose of this paper is to extend the excellent introduction to Bishop John Wilkins provided by V.W. Frater Gordon Stavert in a paper (Ref.1) given to Bishop Wilkins College No. 58 during a meeting attended by Most Worthy Frater Robert.E.Rowland, J.P., IX<sup>o</sup>, Supreme Magus, and Rt.Worthy Frater Professor Peter C.G.Isaac, IX<sup>o</sup>, Junior Substitute Magus, on the 2<sup>nd</sup> May 1996. The current paper presents a portrait of the man & his work before, during and after the Restoration period when he played such an important role in the English Enlightenment. His objectives and motivations will be examined together with his achievements and legacy. To facilitate this the historical timeline and key events will be summarised briefly. Particular emphasis will be placed on his intellectual achievements in science, technology, theology and philosophy and not least in his political contribution to the recovery of England (and the Church of England in particular) after its destructive civil war.

## Historical Timeline

John Wilkins was born around 1614 at his maternal grandfather John Dod's house in Fawsley near Daventry, Northants. The Rev. Dod was a learned and tolerant dissenter, renowned for his sermons on the ten commandments, who imparted an understanding of Puritan thought to his grandson. Wilkin's father Walter was an Oxford goldsmith, quoted by John Aubrey (Ref. 2) as "a very ingenious man with a very mechanical head..... and very much for trying experiments". From the age of 9, Wilkins attended a small Oxford grammar school where he received a good education in Greek, Latin and Hebrew before, at age 13, gaining a matriculated entry into New Inn Hall Oxford in 1627, transferring to Magdalen Hall in October of the same year. At Magdalen his tutor was the learned John Tombs, the leading scholar of the English Anabaptists. Wilkins appreciated his distinguished teacher, and respect for his abilities and character helped him understand his opinions. Wilkins graduated in 1631, when he was 17, supporting himself subsequently by teaching pupils, before being ordained into the Church of England in 1637. His grandfather Dod, though a dissenter, had not left the Church of England, and Tombs, in spite of his opinions, did not proselytize others who sincerely held differing opinions. Most importantly, therefore, Wilkins had been brought up to remain within the organization, even though he might profoundly question certain of its principles.

Wilkins became a curate in his home village of Fawsley in 1637. Following advice from friends and contacts, he sought the support of a powerful sponsor with valuable benefices in his gift. He was given an introduction to Lord Saye and Sele who appointed him his chaplain. This was a most judicious appointment for Wilkins as Saye was one of the leaders of the Parliamentary opposition to the Stuarts and the reigning King Charles I. Lord Saye's house was at Broughton in Oxfordshire and Wilkins was to be based there for some five years until he was around 32 years of age in 1646. There he met the leading personalities of the Parliamentarians, who came there to plan and devise tactics, so becoming conversant with the political situation. Besides learning politics he acquired the manners of the ruling elite and the art of diplomacy. He was opposed to that wing of Parliament which felt civil war justified but when it erupted in 1642, he adjusted to the situation going to London, where he initially became chaplain to Lord Berkeley who became a leading Royalist and was a keen amateur scientist unlike Lord Saye. More importantly he soon became chaplain to Charles Louis, the Prince Elector Palatine, who was a troublesome nephew of Charles I, and elder brother of Prince Rupert. The Prince's father the Elector Palatine Frederick V and his mother Elizabeth, daughter of James I of England, had been expelled from their court in Heidleberg following the outbreak of the Counter Reformation and the start of the Thirty Years War in 1620. Frederick and Elizabeth had presided over the 'Rosicrucian Enlightenment' in Heidleberg described so memorably in Dame Frances Yates book of the same name (Ref. 3).

The Elector, a keen natural philosopher, seems to have sought out Wilkins for his scientific reputation. Charles Louis was a hard working man who sought support for the return of the lands his family had lost to the Catholic Hapsburgs during the Thirty Years war. This appealed particularly to leading protestant politicians who were critical of Charles I, whose father James I had scrupulously avoided taking sides in the war (Ref. 3). These machinations helped to drive a wedge between the Elector and his uncle. He was displeased (Ref. 4) with the increasing divisions within parliament and in 1642 left for the Netherlands for two years. He returned when parliament voted him a generous pension and accommodation and some even saw him as a possible replacement for the King. (Ironically James II, the son of Charles I and brother of Charles II, was to be replaced by William of Orange in such a fashion some years later in 1688.) Although involved in politics to some extent the Elector dedicated much of his time and patronage to his intellectual pursuits.

Wilkins accompanied the Elector on his visits to the court which would have greatly widened his circle of contacts and sharpened his latent political skills. During this period they met the strongly Anglican and Royalist Dean Wren of Windsor who was also a keen scientist and whose son Christopher he would later encourage greatly at Oxford and introduce to the Elector. By 1646 the Elector had ceased to be considered as a possible candidate for the English throne, and from 1646 to 1648, as the Thirty Years War came to an end, he was increasingly involved with Palatinate politics. Shortly before his uncle Charles I was executed in 1649, Charles Louis was

recognized as Elector Palatine. Early in 1649 he renounced the parliamentary cause, denounced the Commonwealth government which he considered responsible for his uncle's death, and ended his English exile.

In 1648 Wilkins became Warden of Wadham College, Oxford where he turned Wadham into the epicentre of British science and learning prior to his move to become Master of Trinity College, Cambridge in 1659 the year before the Restoration. As head of one of the most flourishing colleges of Interregnum Oxford, Wilkins was often involved in university-wide politics. On some occasions, for example during the educational conflict that broke out in 1653, his influence extended beyond the academic community. But his towering achievement of these years was the fostering of a major scientific movement at Oxford. The small beginnings of the 1645 group in London, in which he was active, led to the much more active and substantial Oxford group based at Wadham. This eventually led, following his return to London after the Restoration, to the Royal Society. In 1656 Wilkins married Robina French, the widow of an Oxford colleague, Peter French, and youngest sister of the Protector, Richard Cromwell, who had succeeded his father Oliver. Protector Richard regarded Wilkins highly and was probably instrumental in Wilkins being offered and accepting the 'plum' job at Cambridge University, the Mastership of Trinity College. This was supported by the fellows of the college who indeed formally petitioned parliament for his appointment and indeed were to resist his early removal following the restoration of Charles II the following year. This was a result of a prior legal claim to the post which the king was obliged to allow and led to Wilkins return to London, clerical preferment and the founding of the Royal Society.

Within a few months of the King's return, Wilkins was appointed Dean of Ripon despite anti-puritan sentiment from the returning royalists, in particular the (quasi-catholic) followers of Archbishop Laud. Around the same time he became a prebendary of York Cathedral, a preferment of the Crown despite his closeness to Richard Cromwell and being Oliver Cromwell's brother-in-law. A remarkable demonstration of the high regard in which he was held across the political and ecclesiastical divides of the time. Despite the northern appointments he took up residence in London and soon began attending the scientific meetings at Gresham College. He also accepted a preaching position at the highly influential Gray's Inn and was a popular preacher in the city listened to amongst many others by Samuel Pepys (Ref. 5). Whilst accepting his appointments he studiously avoided the ecclesiastical infighting prevalent at the time across the religious spectrum preferring to give a tolerant conforming example which he felt the nation required after the upheavals of the civil war. Further church appointments were to follow, his former patron Lord Berkeley presenting him with the vicarage of Cranford a mere thirteen miles from London before he became the Vicar of St. Lawrence Jewry one of the most prominent parishes in London.

On November the 28<sup>th</sup>, 1660 Wilkins and others met at Gresham College after a lecture by Christopher Wren, the Professor of Astronomy, to discuss founding a 'Colledge for the promoting of Physico-Mathematicall-Experimentall Learning' and to regularise their meetings to follow developments in Europe. They were keen (as were many others) to solicit state support and Wilkins encouraged Sir Paul Neile and Sir Robert Moray to approach the King, himself a keen amateur scientist, who proved most receptive. By December the 5<sup>th</sup> Moray (a celebrated military engineer, Royalist statesman and freemason) brought word of the King's approval and a constitution and experimental programme were drawn up. The institution was a great success and in the summer of 1662 officially became the Royal Society with Wilkins becoming one of the founding secretaries and Vice-president the following year. As ever Wilkins was a great stimulator of new people and ideas across what would now be a vast number of separate disciplines. In the Great Plague year of 1665 he was to be found staying in the country with his close friends Robert Hooke and Sir William Petty designing mechanical systems for ships and road vehicles, steam systems, thermodynamics etc. On their return to London they subsequently exerted much effort with their Royal Society colleagues in trying to determine the causes of the plague and how to prevent a re-occurrence.

The Great Fire of London in 1666 caused Wilkins financial hardship as much of his clerical funding literally turned to ashes. Nevertheless he was increasingly involved in church politics and administration and in 1668 became Bishop of Chester. Throughout this period and indeed until his death in 1672 he remained active in Royal Society affairs and actively involved in experimental studies in Chester and elsewhere.

## **Wilkins the Natural Philosopher**

In the years between his departure from Oxford and his return as Warden of Wadham College, Wilkins published several books on religious matters and four on popular science. Because his major goal was the broad dissemination of scientific knowledge and method, he attempted not only to convey information but also to persuade his readers to pursue scientific studies. To a very great degree he felt it his primary duty to overcome such obstacles to the acceptance of the new scientific views as excessive reliance on traditional authorities and religious hostility to scientific findings. The relationship between religion and science, particularly scripture and science, was for Wilkins the most essential problem requiring solution if science was to progress and religion to flourish.

All of Wilkins scientific works are informed by the desire to spread scientific information to those who would not ordinarily come upon it or who were themselves incapable of scientific discourse. In *The discovery of a new world* (1638) and *A discourse concerning a new planet* (1640), he sought to convey to the general public the findings of the new astronomy. *Mathematical Magic* (1648) described the basic principles of mechanics and their application for a similar audience. *Mercury or the secretive and Swift Messenger*

(1641) discuss the problems of language, ciphers, cryptography and communication and is particularly relevant for its treatment of scientific communication.

Wilkins particularly deplored the esoteric aura that frequently surrounded scientific knowledge. The ancient Pythagorean and Platonist mathematicians were especially reprehensible, for they had deprived later generations 'of many useful and excellent inventions' that could have been derived from mathematical principles. Wilkins work was important in undermining the concept of a closed, finite, hierarchically structured cosmos, and in suggesting that all components of the universe were of equal value. Although he did not completely eliminate qualitative concepts from astronomy, he helped break down the tradition that assigned a particular value to each astronomical body and phenomenon. The major step was to show that the Earth and the Moon, and even other celestial realms, were composed of the same substances and were subject to the same scientific laws.

Although Wilkins became deeply involved in university administration and even political controversy, his real achievement rested on his Wardenship at Wadham and his role in promoting science at Oxford. Under his leadership Wadham attained its greatest influence and prestige, and became one of the most populous colleges of the university. The reasons for Wadham's pre-eminence are not hard to find. Wilkins not only followed a policy of encouraging men of all persuasions to come there, but was able to attract important scientific scholars no matter what their religious and political beliefs. Seth Ward, the new Savilian Professor of Astronomy, and known Anglican and Royalist, came to live at Wadham. Christopher Wren, also a Royalist came in 1649, became a Fellow of All Souls in 1653, yet kept his rooms at Wadham. The mathematician Laurence Rooke, who would become Gresham Professor of Astronomy, left Cambridge similarly. The mathematician William Neile, son of Sir Paul Neile and grandson of the Archbishop of York also came. These names leave no doubt that Wilkins scientific reputation was partly responsible for the flourishing state of Wadham. But there were other factors as well. He maintained the traditional West Country ties of the college and added a large cluster of students from Northamptonshire. In politics the range at Wadham was great, not only were Royalists like Wren and Ward in residence, but also Parliamentarians, including the sons of Sir Francis Russell and General John Disbrowe, both allied by marriage with the Cromwell family like Wilkins himself.

Wilkins was probably responsible for bringing Robert Boyle, the father of modern chemistry, to Oxford as well, though Boyle did not come until 1655 or 1656. Boyle, like Evelyn, found Wilkins charming and his entertainments pleasant, and was impressed with his courtly speech and knowledge. Wilkins scientific interests were highly developed during his student years, and by the time he left the university he had fully absorbed the available writings of Copernicus, Kepler, Galileo and others. In mathematics and astronomy in particular, Oxford offered the most advanced instruction in the country. The Savilian professorships had, since their foundation, drawn the very best minds in this field particularly from the faculty of London's Gresham College. The constant interchange between the Gresham and Oxford faculties continued into the Interregnum and Restoration, with some Greshamites always willing to leave for the supposedly backward University. The tradition of first-rate scientific scholarship was further strengthened when John Wallis and Seth Ward came to fill the Savilian posts.

The biological sciences in Oxford were also being developed in Oxford at this time. During the Civil War, William Harvey (discoverer of the circulation of the blood) came to Oxford with Charles I. Harvey did not find university life antagonistic to scientific inquiries, and in 1645 accepted the Wardenship of Merton College where he found a congenial group who understood his experiments and even collaborated with him in his dissections. Outside of biology however there does not seem to have been a great deal of interest in experimental work prior to 1648. The 1650's began a period of unsurpassed importance in the teaching and investigation of anatomy at Oxford. A readership in anatomy been established in 1624, but William Petty was its first important occupant. Thomas Willis was another important physician experimenter in the Wadham Club. Willis, an Anglican, and the future Sedleian Professor of Natural Philosophy and physician to Charles II, carried out much of his experimental work on brain anatomy. Wilkins friends at Oxford also initiated the experiments on transfusions and injections which would become famous during the Restoration. The versatile Christopher Wren '*was the first Author of the Noble Anatomical Experiments of Injecting Liquors into the Veins of Animals*'. The idea of injections directly into the bloodstream came to Wren during a discussion with Wilkins and Boyle. After discussing the matter the three decided to try an experiment, which Wren performed before a group of observers. This vital area of study was later taken up and developed by the Royal Society.

The Oxford group was interested in the practical aspects of science as well as the theoretical, and worked on inventing and improving a tremendous variety of mechanical devices, ranging from dials and flying machines to transparent beehives. Wilkins and Hooke pursued flying experiments, and Hooke constructed a model which, with the help of weights and springs '*rised and sustain'd itself in the air*'. The club tried several flying experiments including the blowing of various objects over London Bridge. Other experiments involved perpetual motion, new ciphers, submarine navigation, and novel coaches. Wilkins and his group considered, among other things, surveying and mining techniques, improvements in etching and engraving, new methods of wood turning, weaving devices, and improved printing methods. The more practical and utilitarian attitudes of the Royal Society stemmed from the Oxford group and not least its leader John Wilkins.

The importance of using precise but simple language in both science and theology was one of Wilkin's great and lasting contributions to scientific literature as well as to sermons and theological tracts. The inflated styles so popular before the Restoration were swept away as the English Enlightenment developed. The style he developed in publishing the Philosophical Transactions of the Royal Society remains in essence that used throughout the world in scientific journals to this day. Wilkins most important and influential

publication was the *Essay towards a Real Character and a Philosophical Language* published under the auspices of the Royal Society in 1668. Following earlier work by Seth Ward it is one of the great landmarks of linguistics and taxonomy, setting out an analysis of the structure of alphabets and languages and their underlying principles; also how many subjects can be usefully classified in a logical, structured and systematic fashion. Wilkins helped his friend John Ray, the great botanist, in developing this approach into one of the first great plant classification systems in his later years. These pioneering efforts informed later developments in linguistics, statistics, taxonomy and the emergence of concepts such as probability, universal language and natural theology - what Hacking (Ref. 6) calls 'Royal Society theology'. In this important philosophical development, 'the way things are in the universe' was taken as an indication of a supreme being. One is then able to separate science and theology and so avoid the difficulties which arose in Astronomy, for example, with Galileo and the Catholic Church. This precision of analysis and wish for clarity and rationality in all matters also led Wilkins to a great mistrust of mysticism. In his *Ecclesiastes* (see below) he states that mystics "do in the opinion of many sober and judicious men, deliver only a kind of Cabelisticall or Chymicall, Rosecrucian Theologie, darkening wisdom with words, heaping together a farrago of obscure affected expressions and Wild allegories, containing little of substance in them but what is more plainly and intelligibly delivered by others."

## Wilkins the Churchman

Wilkins early scientific writings stand in counterpoint to his duties as a clergyman and religious commentator. His first religious work, *Ecclesiastes or, a Discourse Concerning the Gift of Preaching* (1646), was a handbook for aspiring preachers. It was followed by *A Discourse Concerning the Beauty of Providence* (1649), and a prayer manual entitled *A Discourse Concerning the Gift of Prayer* (1651) a companion volume to *Ecclesiastes*. All three works enjoyed a wide circulation and were reprinted several times.

An examination of Wilkins' writings and activities in this period place him somewhere in the spectrum between Laudian Anglicanism (the high church 'Catholic' wing led by former Archbishop of Canterbury William Laud) and extreme Puritanism. Wilkins was no Laudian, but then neither were most Anglicans, indeed his poor post Restoration relations with High Church bishops and his later views confirm this supposition. In the 1630's and 1640's, many men opposed Laud without aspiring to the fundamental change in the Church of England generally associated with Puritanism. At the same time some Englishmen who in their own day were considered Anglicans accepted the successive interregnum establishments and signed the Covenant and Engagement. Between the extreme forms of Anglicanism and Puritanism lies a broad middle ground in which it is difficult to clearly differentiate between moderate Puritan and moderate Anglican. Wilkins was willing to accept any religious establishment that did not violate the fundamentals of Christianity, and he was particularly reticent about the form of church government he ultimately preferred. This was to be a foundation of Anglicanism as a 'Broad Church' a stance it maintains to this day despite attempts to narrow the acceptable doctrinal range.

Wilkins has been called a Calvinist although he never considered himself one. Certain Calvinist doctrines in a modified form of Covenant theology do appear in his early religious thought where Calvin's strict predestinarianism was softened. Although found primarily among Puritans such views were also espoused by some moderate Anglicans. Though generally reluctant to express an opinion on specific questions dividing the religious parties, Wilkins did take an explicit stand on the controversy over extemporaneous versus set forms of public prayer. Anglicans favoured set forms of public prayer, and the Presbyterians did not oppose this position; Independents and the sectaries generally favoured extemporaneous public prayer. Wilkins urged a middle course: set public prayers, and a mixture of formal and extemporaneous elements in private prayer.

Toleration was another divisive issue. Wilkins never openly favoured either the toleration desired by Independents or the rigid establishment and repression advocated by Presbyterians. At Oxford and later as Bishop of Chester he always strove to bring together those of disparate views, and it is clear that he eventually favoured a publicly established, comprehensive, and none repressive Church. Furthermore, Wilkins never discussed discipline, one of the hallmarks of Presbyterianism. Nor does he suggest, at least prior to the Restoration, that morality should be enforced by an ecclesiastical jurisdiction.

Wilkins favoured the elimination of Laudianism and a return to the simpler practices of the Elizabethan period, combined with weaker ecclesiastical courts. Similarly he lacked one of the prime qualities of the staunch Puritan, confidence that his views are correct. He frequently noted that men were naturally prone to error, and that impartiality was a rare quality among men. Although these misgivings did not lead Wilkins to scepticism, they do suggest why the fervour and zeal of the Puritan were alien to his nature. Wilkins and the other Latitudinarians suspected any allegiance based on claims of infallibility or authority. While Puritans avoided the formal claim of infallibility because of its Roman Catholic associations, they also were absolutely certain of their monopoly on religious truth. Tentativeness of judgment and unwillingness to find solutions based on authority, together with insistence that quiet discussion rather than violent argument or the clash of authorities was most likely to yield truth, were attitudes that Wilkins appears to have carried over from scientific investigation to religious thought. Wilkins was also distinguished from most Puritans by his greater emphasis on the moral aspect of religion and his increasing use of non-Christian moralists and philosophers particularly the Stoics.

Perhaps rather than trying to decide whether Wilkins was a moderate Anglican or a moderate Puritan during the interregnum years, it might be more useful simply to call him a moderate. This was certainly the pivotal aspect of his thought and action both before and after the Restoration. Tolerant Latitudinarianism, rather than Anglicanism or Puritanism, seems to be the key feature of his religious outlook. Although most of the evidence on this trend in his thought comes from his post Restoration writings and activities, there is a great deal to suggest it was well developed long before 1660. At Wadham he was tolerant of opinions he did not share, and willing to

encourage and cooperate with members of all parties. It is probable this tolerance of differing religious views goes back to his grandfather Dod and probably reflects a failure of his views to fit snugly into either the Puritan or the Anglican mould. He and others in this intermediate position may have been peculiarly sympathetic to reconciliation efforts, and especially sensitive to the fact that there was little to separate the moderates of the two sides. It is perhaps no accident that the religious backgrounds and commitments of so many Latitudinarians are not easily defined, and that many of them combined Puritan or semi-Puritan backgrounds with attitudes associated with Anglicanism. In the political sphere the doctrine led to an affirmation and acceptance of the status quo, and provided a rationalisation for the political inaction and passive adaptation to political change that Wilkins himself practised. Wilkins was a politically astute man who recognised that political facility or prudence was necessary in the rapidly changing times he lived in.

Wilkins *Ecclesiastes* and *Gift of Prayer* have been of particular interest to literary historians, for they are pivotal works in the change in prose and sermon style that took place at mid-century. Both were intended primarily to aid ministers and laymen organise their thoughts and thus communicate them more effectively. It was, of course, particularly important that the minister have mastered the art of preaching to instruct others, although academic preparation in languages, philosophy and divinity was also necessary. The art of preaching, Wilkins insisted, required knowledge, spiritual qualities infused from above, and the specific art of preaching, which could be acquired by human industry.

This brings us to one of the basic approaches of Wilkins and the Latitudinarians, the distinction between the essentials and the nonessentials of religion. They spent a great deal of time emphasising the essentials, although they refused to enumerate them for fear of causing still further quarrels. They focused on the tenets of natural theology, that is the existence of God, the immortality of the soul, the necessity of being religious, the concept of future rewards and punishments, and the necessity of living a virtuous life. Conversely they de-emphasised such nonessentials as ceremonies, obscure doctrines, vestments, and the forms of prayer. Wilkins insisted that salvation depended not on fine theological points, but on the weighty and substantial duties of righteousness and peace. If a point was much debated, it was not likely to be a crucial factor in the life of religion, for God made the fundamentals perfectly clear.

There were two reasons, Wilkins argued, why men should refuse 'to insist upon the utmost rigour of things' and 'comply with all gentle and prudent expedience that would heal and accommodate differences'. The first, and perhaps the most important, was the fallibility of human judgment. If men would only recognise the impotence of human faculties, the prejudices arising from interests that 'strangely bias a man's judgment against clear evidence', the obscurity and difficulty in all things, the fact that learned men have always differed and it was 'next to impossible' to 'agree in the same apprehension of things', they would realise that dogmatic statements were rarely as certain as those who made them thought. A man 'must believe what he can and not what he will'. If he were ready to change his mind when 'better information' became available, that was all one could reasonably ask. The second reason, to avoid dogmatism, was pragmatic rather than philosophical. Moderation provided security and refuge in an unpredictable world. The Latitudinarians were the object of considerable distrust, especially from leading figures in the church hierarchy. They were characterised as insincere, one hostile definition of a Latitudinarian was '*a Gentleman of a wide swallow*'.

## Conclusion

Looking across the centuries, we see John Wilkins as a remarkable and personable influencer and networker, to use the modern idiom. When dealing with his peers, but also his seniors and juniors, he had remarkable interpersonal skills which enabled him to succeed at a time of great division and indeed civil war. He engendered great trust and respect across the religious and political divides of the time and this enabled him to wield significant influence before, during and after the Civil War. He was open, rational and non-sectarian and was a capable and astute politician. A gifted leader and teacher he encouraged disparate talent, from common men to aristocrats, and this combined with his administrative zeal enabled him to establish British pre-eminence in the scientific revolution which he continued to guide for many years after the Restoration. Most particularly he proved to be the greatest leader British science has ever known, helping to establish science and engineering as respected areas of research and teaching in the universities. His lasting memorial is the Royal Society in whose creation he was the driving force supported by his powerful network of friends and supporters including King Charles II himself. His famed tolerance, diplomacy and intellect also helped to restore religious peace and helped establish a 'Broad Church' after the devastation of the Civil War. His great and lasting influence on John Tillotson, his son in law and future Archbishop of Canterbury, and others ensured that these ideals lived on when Wilkins died at the age of 58 in 1672.

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