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JOHN RAY (1627–1705) AND THE ACT OF UNIFORMITY 1662

by

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SUMMARY

John Ray was one of the most influential British natural philosophers of the 17th century. His model of natural history served as an organizing principle for the philosophic understanding of living nature and his works on natural theology were seminal. Many modern historians have placed Ray within the Puritan tradition, primarily based on Ray's choice, as an ordained Anglican priest, to leave his fellowship at Cambridge rather than subscribe to the Act of Uniformity in 1662. However, Ray left no explicit evidence of either his religious or political views during this period and his reasons for refusing to subscribe to the Act are not transparent. My analysis of his early Essex environment, his friends and associates at Cambridge University, his correspondence during the crucial years of 1660–62 and the strategies he pursued in his only contemporary published work, the *Catalogus Plantarum circa Cantabrigiam* (1660) provide no evidence to situate Ray within a Puritan framework and much evidence to suggest that Ray remained committed to Anglican and loyalist principles throughout his career.

INTRODUCTION

John Ray, Master of Arts,
Once Fellow of Trinity College in Cambridge,
Afterwards
A Member of the Royal Society in London;
And to both those learned bodies
An Illustrious Ornament.
…
What more did add to these bright gifts, we find
A pure untainted Piety of Mind.
England's best Church engross'd his zealous care,
A truth his dying accents did declare.

Translation of the Latin Inscription from Ray's Monument, Church of St Peter and Paul, Black Notley, Essex.[1]

The inscription on John Ray's tomb identified his alignment with three major institutions of late 17th-century England: The Royal Society, Trinity College Cambridge, and the Church of England. Of these, only Ray's attachment to the Church of England has ever been questioned, although to Ray's late 17th-century contemporaries, there was little doubt about his Anglican allegiance. Ray enjoyed the support of John Tillotson, F.R.S., Archbishop of Canterbury (1690–94), a contemporary of Ray's at Cambridge and an acquaintance of long standing, and to whom Ray dedicated his second work on natural theology, the *Miscellaneous discourses* (London, 1692). Many of Ray's friends and collaborators were also Anglican clergymen, several of whom subsequently became bishops, including John Wilkins, F.R.S., Richard Kidder and especially the botanically inclined Henry Compton, who was to organize the monument at Ray's tomb. Wilkins, Master of Trinity (1659–60) and later Canon of St Paul's (1668) and Bishop of Chester (1668–72), had been one of the founders of The Royal Society and its first secretary, had sponsored Ray's membership in the Society in 1667 and was acknowledged by Ray as a 'friend and patron'.[2] Kidder, who Ray described as 'my worthy friend', was a client of the royalist Earl of Essex and later of Daniel Finch, Earl of Nottingham; he became Bishop of Bath and Wells (1691) and the second Boyle Lecturer (1693).[3] Compton, consecutively Bishop of Oxford (1674) and Bishop of London (1675–1713), had been active at the court of Charles II, responsible for the education of the Duke of York's daughters (the future Queens Mary and Anne), and was a member of Anne's Privy Council when he organized Ray's monument.[4] In addition, Ray's literary executor was Dr William Derham, F.R.S., author of the popular Boyle Lecture *Physico-Theology* (1713), Chaplain to the Prince of Wales (the future George II) and Canon of Windsor in 1716. In 1718, Derham also published Ray's final confession, which professed 'that as I have lived, so I desire, and, by the Grace of God, resolve to dye in the Communion of the Catholick Church of Christ, and a true tho' unworthy Son of the Church by law establish'd in this kingdom'.[5]

Despite this evidence of Ray's position within moderate Anglican orthodoxy, mid-way through his career he had chosen not to subscribe to the Act of Uniformity (1662), one of the measures enacted by the Cavalier Parliament to secure the authority of the Restoration regime of Charles II. Ray's choice in this matter had several consequences: his fellowship at Trinity College, Cambridge, was forfeited and his future participation as a clergyman in the affairs of the Established Church was denied. A further consequence is that Ray's name was included among those who chose silence rather than conformity in Edmund Calamy's *An Abridgment of Mr. Baxter's History of his Life and Times. With an Account of many others of those Worthy Ministers who were Ejected after the Restauration of King Charles the Second. Their Apology for Themselves and their Adherents; containing the Grounds of their Nonconformity, and practice as to Stated and Occasional Communion with the Church of England. And a Continuation of their History, till the Year 1691* (London, 1702). The first document to cast doubt on Ray's Anglican affiliation, Calamy's *Abridgment* was designed to publicize the dissenting cause in favourable terms, and his subsequent accounts of the 'Great Ejection' attempted to establish Ray as one of the sufferers in

the nonconformist tradition.[6] In 1936, Robert Merton, endeavouring to understand the increased tempo of scientific activity in the 17th century, argued that the Puritan ethos was one of the contributing factors in that process, and he included a Puritanized Ray as one of the progenitors of the Scientific Revolution. This interpretation has been followed by such eminent historians as Christopher Hill and Charles Webster, and indeed, remains part of our framework for understanding Ray's place in the 17th century.[7] The persistence and attractiveness of the 'Puritan interpretation of history' as a contributor to modernity, in conjunction with a tradition to ennoble nonconformity, were also irresistible to Ray's principal biographer, Charles Raven.[8] Raven was cautiously ambiguous in discussing Ray's relationship with the Anglican Church. While admitting that Ray was 'never a Presbyterian or an Independent', Raven chose to imply that Ray was nevertheless 'temperamentally of the Puritans', that 'Ray had enough of the Puritan in him', that 'he had a large sympathy with Puritanism', and that 'he was always something of a Puritan'.[9]

The matter of Ray's religious identity has a bearing on how historians are able to explain his later pre-eminence as a spokesman for 'rational piety, sound philosophy, and solid instruction'[10] in the Anglican context. The period of reconstruction after 1660 was especially critical for the redefinition of social, political and religious attitudes in England. Specific issues concerning the reconstitution of acceptable knowledge became vitally important, in particular who had the legitimate moral authority to articulate beliefs and shape practice. Therefore, there was more at stake than merely to be seen to be defending a true or objective set of beliefs and practices. Rather, legitimacy also rested on the creditworthiness of the agent, not only socially and politically, but also in terms of religious orthodoxy.[11] In the context of the late 17th century, personal reputation was the currency of trust, for 'when we believe another man's Revelation, not from the reason of the thing reveal'd but from the Authority and good opinion of him to whom it was so revealed, then is the speaker or enthusiast the only object of our Faith, and the honour done in believing, is done to him only'.[12] Concern with natural history and natural philosophy was not uniquely limited to Ray and his circle, and thus the development of what constituted proper natural history was highly contingent.

Ray contributed to his reputation as the foremost natural historian in England with the publication of several seminal works in botany, including the *Catalogus Plantarum circa Cantabrigiam* (1660), the *Methodus plantarum nova brevitatis* (1682) and the first two volumes of his most important work, the *Historia plantarum* (1686 and 1688), in addition to editing Francis Willughby's *Ornithology* (Latin 1676 and English 1678) and *Historia Piscium* (1686); works which provided an enduring foundation for understanding living nature throughout the 18th century. While Ray continued to publish works of natural philosophy for a learned audience, he also achieved widespread recognition as a popular author, with the appearance of *The Wisdom of God manifested in the works of Creation* (1691, enl. and revised 1692, 1701 and 1704) and to a lesser extent the *Miscellaneous discourses concerning the dissolution and changes of the world* (1692, revised 1693). Both these works became seminal texts on natural theology, seen as legitimate expressions of religious piety and powerful models for

respectable Anglican activity.[13] These latter works situate Ray unambiguously within a moderate orthodox religious framework, and make it difficult to explain Ray's pre-eminence as a spokesman within the Anglican tradition if the subsequent historical judgement that 'he was always something of a Puritan' is correct.[14] Therefore, Ray's personal success in establishing the discipline of natural history and shaping the direction of 'proper' natural philosophy needs explaining within the context of late 17th-century politics and religion, and especially requires that the issue of Ray's Puritanism be re-examined.

The term 'Puritan' has undergone significant revision in recent years as historians attempt to define its meaning and delineate what it meant to be a Puritan, especially subsequent to the English civil wars of the 1640s. 'Puritan' fails to identify a cohesive group with similar aims and intentions either politically or doctrinally. Puritan and independent MPs were seldom agreed on any single course of political action, even after the royalists were expelled from the Long Parliament in 1640, or indeed even after Pride's Purge in 1648.[15] After the civil wars the lower orders of society became fragmented into many radical religious sects which rejected both Puritan doctrines as well as the Established Church.[16] The early 17th-century Church of England had also tolerated a wide spectrum of beliefs, with shades of Calvinism from extreme to moderate, and a similar array of contrasting beliefs known as Arminianism.[17] However, it is difficult to find unequivocal distinctions between the Calvinist and Arminian positions on practices, ceremonies or the liturgy.[18] Therefore, with respect to a specific set of beliefs, practices or values, historians have been unable to isolate with certainty those that identify the Puritan. However, in a strictly religious sense, the term has been broadly generalized to pertain to the 'hotter sort' of Protestants who were more zealous in their pursuit of the religious experience: Patrick Collinson's description of these godly Protestants as the 'virtuoso minority whose practice of religion was prodigious' has gained widespread currency.[19] One of the distinctive aspects of Puritan culture was a tendency to separate themselves from the 'reprobate' and voluntarily join together into communities of similar outlook and discipline. On the other hand, historians also accept that during the first half of the 17th century, contemporaries used the term 'puritan' to designate a primarily political force representing Calvinist opposition to the policies of James I and Charles I,[20] a crucial qualification when conformity to the Established Church was equivalent to political loyalty to the Crown. During the civil wars, the Puritan attack on the Established Church had been sustained and determined, but was also accompanied by a variety of opposition activities not directly connected with religion or the Church.[21] Recognizing this extra-religious dimension provides historians with a better understanding of the Puritan ethos as an 'ideology of opposition'.[22]

At the Restoration in 1660, Charles II had hoped for a comprehensive religious settlement and pursued a deliberately conciliatory policy towards Puritans in both church and state. Charles neither intended to impose a strict, conformist Anglicanism, nor made ecclesiastical or crown appointments which would bring about a uniformly conformist Anglican state. The Church of England, in conjunction with a strongly Anglican Parliament, however, supported a series of legal measures to disable the

participation of Puritans in society.[23] The Puritans, never a homogeneous group, became less visible as a force in society after 1660, not least because both contemporaries and historians have indiscriminately and interchangeably renamed them Presbyterians, sectaries, dissenters, nonconformists, occasional conformists and even papists, but also because many were content to acquiesce in the return of the monarchy and declare loyalty to the Crown. However, determined Puritan attitudes in religion and politics persisted in England.[24] The infamous Clarendon Code had only variable success in reimposing Anglican conformity of practice on the nation. Although a significant number of recalcitrant clergy refused to conform to the Anglican order, there were still numerous less-than-orthodox clergy who maintained their clerical positions.[25] Repeated attempts to remove dissenters from local governments and boroughs also suggests that Puritan groups were vigorous, persistent but also unwelcome, at least until Charles's remodelling of corporation charters in the 1680s. In the aftermath of the Glorious Revolution of 1688, the Church continued its campaign to assert and maintain its social and political power; even the politically expedient Toleration Act of 1689 was not accompanied by legal measures designed to enable dissenters to hold office or participate in national and local governance.[26]

Ray's Essex neighbourhood[27]

The Puritan minority in Essex may have approached 50% of the population prior to the Civil Wars. Part of the Eastern Association, Essex was also home to a number of Parliamentarian leaders, including Robert Rich, Earl of Warwick and commander of the forces of the Eastern Association, and Bulstrode Whitelock, Chairman of the Committee for prosecuting the Earl of Strafford and, in 1656, Speaker for the House of Commons. Essex was fortunate to experience little of the bloodshed of the First Civil War; nevertheless, many individuals and families subjected themselves to the pressures of conscience and the dilemma of choice by a declaration of loyalty to Charles I. This was both a personally expensive and potentially dangerous commitment: heavy fines and sequestrations were imposed on royalist gentry and approximately 40% of the clergy in Essex were deprived of their livings for their Anglican sympathies, including the rector at Ray's village of Black Notley, Joseph Plume.[28] Furthermore, some of the most bitter contests of the Second Civil War of 1648 occurred in Ray's vicinity of North Essex.[29] (See figure 1.)

At the Restoration, the area soon reasserted its Anglican character, including the reinstatement in 1660 of Joseph Plume as Rector of St Peter and Paul. The presentation in 1663 of Black Notley's interim minister, Edward Sparhawke, for preaching at nearby Cressing without reading the Prayer Book suggests the presence of anti-Puritan sentiment in the immediate area.[30] The fact that Sparhawke's audience on this occasion included individuals from seven or eight parishes also suggests that the opposition was widespread in the neighbourhood and well organized. This of course is not to claim that the area was in complete accord on religious matters: Ray's friend Richard Kidder, Rector at nearby Rayne (1664–74), later reported that some of his

MAP: Detail, John Speed's Map of the County of Essex, 1662

SOURCES

Matthews, A.G. *Walker revised, being a revision of John Walker's sufferings of the clergy during the Great Rebellion 1642–1660*, (Oxford, rpt. 1988)
Morant, P., *History and Antiquities of the County of Essex* (London, 1778)
Calendar of the Proceedings of the Committee for Compounding 1643–1660
Calendar of the Proceedings for the Advance of Money 1642–1656
Dictionary of national biography

FIGURE 1. John Speed's map of the County of Essex, 1662, showing the distribution of identified civil war royalists in Ray's neighbourhood.

parishioners were 'very censorious and given to separation, and great inveighers against the innocent rites and ceremonies of the Church'.[31] However, there is little evidence of sustained Puritan activity in the immediate vicinity of Ray's hamlet of Black Notley, an area approximately five miles in diameter.

Cambridge University

Prior to the civil wars, religious and political consensus did not exist at Cambridge University and the complexion of individual colleges exhibited the spectrum of opinion found broadly in 17th-century England. By the time Ray entered Cambridge in 1644, members of the Cambridge community had already experienced two years of insult, intimidation and imprisonment as their parliamentary masters attempted to assert control over what they considered to constitute the proper education and appropriate knowledge for future church clergy.[32] Ray was 17 years old when he began his studies at St Catherine's College and he spent the next 18 years involved in University affairs. It would have been impossible for him to remain unaware of the implications attached to individual actions and personal choices.

Ray's first choice was to leave the safe haven of St Catherine's College in 1646, where the Master and Vice-Chancellor of the University, Ralph Brownrigg, had been the only member of that college to be ejected for loyalty to the King. Ray's second choice was to enter Trinity College. While it is true that Trinity had suffered a disproportionate number of ejections in the previous two years, and the influx of new scholars to the college contributed to its reputation as a Presbyterian stronghold,[33] significant royalist and Anglican sentiment remained. In fact, there was enough royalist sentiment to convince Isaac Barrow to make Trinity his home in the same year and under the same tutor as Ray.[34] In June 1648, coincident with a renewal of hostilities by royalist forces, especially in the formerly peaceful Eastern Association counties (notably in Essex, the first skirmish was a raid on the Earl of Warwick's estate at Leigh's Park, near Braintree) the 'schollers of Trinity' engaged their Parliamentary opponents in a physical confrontation. As late as March 1653, reports continued that the outlawed Anglican Book of Common Prayer was being used in the Trinity Chapel.[35]

My research also shows that Ray's chosen friends and associates at Cambridge had impeccable Anglican credentials. James Duport, Ray's tutor at Trinity and a client of John Williams, Bishop of London, became known as the 'official royalist tutor'; during the course of the Civil War and interregnum, more than 180 sons of royalists were sent to Cambridge to study under his instruction.[36] Ray's friendships with two Trinity students of strongly royalist families, Peter Courthope and Timothy Burrell, are well known. These two Sussex families were already closely intermarried, and both the Burrells and Courthopes employed the same long-term strategy to survive the financially disastrous interregnum years, purchasing land from distressed royalists then arranging marriages with those same royalist families to secure the estates for the future. For instance, both Courthope's father and Burrell's father acquired land from the Campion family and jointly compounded for the estate after Sir William Campion was killed in the royalist cause during the siege of Colchester in 1648. Peter's daughter and Sir William's grandson later married. Courthope's father also purchased the estate at Danny from George Goring, one of the royalist leaders at Colchester. Timothy eventually married the daughter of Sir Henry Goring, brother of George. The name of Walter Burrell, Timothy's father, also appears on the list of persons nominated for the Order of the Royal Oak, a knighthood proposed at the Restoration and intended

to honour those whose long-term service and loyalty to the King had been conspicuous during the interregnum.[37]

The Cambridge associate most intimately connected with Ray was also related to the Courthopes and the Burrells: Francis Willughby's royalist pedigree was undisputed by contemporaries, including the Parliamentary leader at Nottingham, Colonel Ralph Hutchison. His father, Sir Francis Willughby, had been accused of being with the King at Coleshill in 1642, and of sending men, horses and arms to the King at Nottingham and to Spencer Compton, Earl of Northampton, father of Ray's future friend Henry Compton. After 1643, the Willughby estate at Wollaton, near Notttingham, was garrisoned by Parliamentary forces and the Committee for Compounding fined Sir Francis £700. Despite this financial hardship, estate records also show that significant funds were sent to the King.[38]

It would be tedious to enumerate all the individuals connected with Ray during his tenure at Cambridge. Of those I have identified as contributing to Ray's natural history activities during the 1660s and 1670s, the majority had attended Cambridge, and especially Trinity College; I have found no evidence of any Puritan or nonconformist sentiment between these individuals and much evidence to the contrary. Of Ray's own students from Trinity, eight became clergymen and conformed to the Anglican order after 1662. One student died, Edward Goring, son of Henry and brother of Timothy Burrell's fiancée. One student, Henry German (or Jermin), who did not graduate from Cambridge, may also have had royalist connections.[39] In fact, of all Ray's known associates during the interregnum, only his pupil Philip Skippon can with certainty be assigned parliamentary associations. Skippon was the fourth son of Major General Philip Skippon (d. 1659), a close associate of Oliver Cromwell. However, there is no evidence that Skippon was other than a loyal supporter of the Restoration regime; he also travelled throughout Europe with Willughby and Ray, was elected a Fellow of The Royal Society in 1667 and was knighted by Charles II in 1674.[40]

Finally, Ray's first published work, the *Catalogus Plantarum circa Cantabrigiam* (1660), an alphabetical listing of plants in and around Cambridge University, was researched, written and published during the interregnum. The *Catalogus* may properly be seen as sharing the general characteristics of other post-Civil-War literature as a way of giving shape and authority to the conduct of polemical argument.[41] In this work, Ray dated his concern with botany very precisely: nine years earlier when he had abandoned his university studies because of an illness of 'body and soul'.[42] As his audience would have been fully aware, this period exactly coincided with efforts of the parliamentary visitors to impose the Oath of Engagement on the Cambridge community, and the consequent ejection of non-subscribing Fellows. Ray did not take the Engagement, an avowal of allegiance to the parliamentary regime constituted without a King and a House of Lords; rather, he left the university and returned only after selective enforcement had been abandoned.[43] That Ray chose to acknowledge his gratitude and appreciation to two friends of respectable royalist background, Francis Willughby and Peter Courthope,[44] may also be read as a tacit acknowledgement of the idealized Anglican community with which Ray wished to be identified.

The Act of Uniformity

John Ray's posthumous reputation as a Puritan rests solely on his decision not to subscribe to the Act of Uniformity, a political measure which disqualified numerous clergy and scholars from future participation in the affairs of the Established Church. It is therefore important to understand the precise events that led Ray to this choice. These contingent circumstances are especially relevant since scholarly discussion about Ray tends to interpret his activities prior to 1662 as the anticipation of an intolerant Church settlement, a development which was unforeseen until well after the election of the Cavalier Parliament in March and April 1661.[45] After that date, a proposed Bill for Uniformity was under discussion, but the shape and implications of the final Act were uncertain even as late as May 1662.[46] However, it is clear from Ray's letters that he had been undecided about his future long before the effective date of the Act of Uniformity, St Bartholomew's Day, 24 August 1662. What also emerges from this early correspondence is a lack of evidence that his actions were motivated by a Puritan 'tender conscience' in religious matters, although Ray also chose not to reveal his precise reasons for leaving Cambridge in 1662.

The return of Charles II to England in 1660 represented not merely the restoration of the monarchy, but also the restoration of the Established Church, parliamentary government and a hierarchical social order. During the years 1660–1662, a series of measures designed to stabilize and maintain the authority of the new regime was enacted, including settlement of land claims, restraints on the press and what was intended to be an adequate financial settlement for the Crown. The period was also marked by an attempt on the part of the Crown to reconcile political divisions, and Charles balanced governance of the country between wartime loyalists and the old opponents.[47] Especially during 1660, Charles followed a similar strategy of religious reconciliation and was active in attempting to bring about a compromise settlement of the Church: clergymen of varying religious viewpoints were presented to livings in the gift of the Crown; and importantly, the divines nominated for bishoprics in 1660 were drawn from widely differing backgrounds and included Arminians, Calvinists, 'Low-Churchmen', Commonwealth conformists and exiles, as well as those with few connections to either side.[48]

In September 1660, only six months after the publication of Ray's *Catalogus Cantabrigiam*, Cambridge was also adjusting to the restoration of the monarchy by a similar restoration of individuals deprived of their appointments during the interregnum, in accordance with a Bill before Parliament for Confirming and Restoring Ministers. This measure was designed both to restore Anglican ministers who had been sequestrated under the parliamentary regime and had legal rights to their livings, as well as to confirm the status of those clergy appointed during the interregnum who nevertheless accepted the return of the King: several thousand men who had been appointed to livings during the Civil Wars and interregnum and who had acquiesced in the Restoration were confirmed in their titles when the Act was passed into law in December 1660.[49] At Trinity, John Wilkins was replaced by a new Master, Henry Fern, who had been promised the Mastership by Charles I. Fern's first

initiative at Trinity was to insist on Anglican conformity within the College itself, including use of the prayer book and wearing the surplice in chapel.[50] Ray described the situation at Trinity in a letter to Peter Courthope, dated September 1660, where 14 Fellows and scholars were forced to withdraw during autumn 1660. The letter shows both Ray's own uncertainty at remaining a Fellow as well as his reluctance to accept conditions of conformity:

> Dr. Fern, who is made master of this colledge by C. R. [Carolus Rex?] having obtained a letter from the said C. R. to restore the old Fellows, and fill up the remainder of the fellowships with such of the new Fellows as should be found worthy, came down hither, about the beginning of August … and then forsooth readmitted all the new Fellows except Dr. Pratt, Mr. Disney, Scott, Davies, Senior, Long, White, Wilkes, Castle, West, Oddy; and, at that time, Hutchinson was also omitted, whom since, I hear, they intend to admit. I being then out of town, and they having information that I should refuse the Common Prayer, surplice, &c., they had well near passed me by; but by the mediation of some, they were content to reserve my place, in case I would promise conformity. I wish they had spared themselves that trouble. About a month after that, I came hither, but am not as yet admitted; Dr. F[ern] hath been ever since out of towne. He returneth hither on Thursday next, they say, when I must expect my doome. I have long since come to two resolutions, namely, no promise of conformity, and no orders.[51]

Despite rhetoric to the contrary, Ray nevertheless chose to accept all the conditions stipulated by Trinity for remaining at Cambridge. In December of 1660, Ray made the decision to enter Anglican orders, and was ordained both deacon and priest on the same day by William Sanderson, newly appointed Bishop of Lincoln.[52] Ray was also reappointed to his office as Steward of the college and began the process of accepting new students.

In the autumn of 1660, conformity to the Anglican Church, and hence allegiance to the Crown, had been imposed on the Fellows of Trinity, but acceptability to the new regime at Trinity College was the primary qualification. In December 1660, acceptable appointments made during the interregnum were secured by the Act for Confirming and Restoring Ministers. The 14 scholars ejected in September 1660, who may also have qualified for reappointment at Trinity under the provisions of the Act, continued to be opposed as unacceptable to the college. Ray describes this situation in another letter to Courthope, which related 'Mr. Senior & the rest who are confirmed by the late act, are opposed heer by our governors: so that if they intend to come in, they must be put to sue in Westminister hall, w[hi]ch Mr. Senior intends not to doe, because in case he should be reinstated, our Doctor [Fern] would in a short time cast him out again for nonconformity.'[53]

Ray's tenure at Cambridge with the approval of the college was not in question after December 1660; nevertheless Ray's correspondence continued to reveal indecision about remaining at the college throughout 1661. Only a few months after his ordination, Ray wrote again to Courthope with his intentions of leaving the university: 'Yet still do I retain my purpose of discontinuing at the prefixed term, unless I have greater obligations then those to the contrary.'[54] One week later Ray reported that John Gauden, formerly Dean of Bocking near Black Notley, and now 'the Bp. of Exeter hath lately sent

to me to take his son to be my pupill w[hi]ch I have not refused'; given Gauden's own efforts to present himself as a loyal Anglican, it seems unlikely he would consider Ray a suitable tutor if there had been valid concerns about conformity.[55] In the same letter, however, Ray also announced the death of his student Edward Goring, and reiterated, 'This dismal event makes me far more willing to abdicate my pupils and knock them off, than before.'[56] By November 1661, Ray was approaching the end of his appointment as college steward, with the opportunity to voluntarily discontinue his fellowship: 'My time is now ready to determine. In about a fortnight I shall give up my accounts, and then I hope to be at liberty, though I cannot certainly promise myself, for it may be they may continue me another year, which yet I desire not.'[57] Despite his resolve to leave Cambridge, Ray again chose to remain at Trinity and was re-elected Fellow in December 1661.

Ray, however, was not drawn to the prospect of a clerical living, his most obvious professional choice. As early as 1658 he had refused a living in Staffordshire, reluctant to 'bid farewell to my beloved and pleasant studies and employments, and give myself up to the priesthood'.[58] In October 1661, Ray declined another living and because of a gap in the correspondence we are left to speculate on the reasons for his decision; Ray's surviving correspondence only alludes to 'those reasons you alleage' for the basis of his refusal. Although the living appears to have been attractive from a botanical perspective, 'One great motive to have induced me to take it was, because of its vicinity to the Yorkshire Alpes, and especially Ingleborough Hill, which is not above sixe or seven miles thence distant. Indeed the whole countrey of Westmoreland, for variety of rare plants, exceeds any that I have travailled in England'. Ray indicated that he was dissatisfied with the income: 'upon further inquiry, I find the yearly value to be lesse than it was at first represented'. What is especially interesting about this letter, however, is that Ray continued to discuss leaving Trinity and 'to discontinue from the colledge as soon as I shall have made even my accounts therewith'.[59] Therefore, by the end of 1661, Ray had already accepted conformity to the Anglican Church, had been reappointed a Fellow of Trinity, and held an office in the college, yet was discontented at Trinity and still indecisive about continuing at the university. At the same time, however, he did not find parochial responsibilities an attractive alternative.

In 1662, the newly elected parliament of Anglican gentry, hostile to the forces which had challenged their control over local society and anxious to reassert their authority, began to enact legislation to revive the Church of England and to fortify it against what they saw as the 'poisonous principles of schism and rebellion' engendered by religious heterodoxy.[60] The most important legislation was the Bill of Uniformity. The Bill was not designed to impose a set of theological beliefs on members of the Church, but to establish a uniform order of ritual and service, in the spirit of what Edward Stillingfleet, as Dean of St Paul's, was later to plead 'to those who continue in the Communion of our Church, let us walk by the same Rule and mind the same things. Let us study the Unity and Peace, and thereby the Honour and Safety of it'.[61] The Bill of Uniformity would affect all clergy, school masters and university scholars, and it had four major stipulations: existing clerics who had not been ordained by a bishop must be so; all clergy must disavow armed resistance to the King; clergy must agree to follow the established order of the Church including the use of a newly revised Book of Common

Prayer and subscription to the 39 articles; and finally they must repudiate the Solemn League and Covenant, the oath of loyalty to the Parliamentary regime. The eventual Act of Uniformity (1662), also known as the St Bartholomew's Day Act, ultimately resulted in the ejection of approximately 1000 clergymen from their livings; in combination with earlier measures, close to 1750 individuals in total chose to relinquish their livings rather than conform to the Established Church.[62]

In February 1662, a Bill for Uniformity was sent by the Commons to the House of Lords; however, its final shape was still uncertain as Clarendon continued to propose amendments which would enable the King to moderate or postpone the Bill. Also, in February, the Privy Council formally submitted a revised Prayer Book to the Lords. The changes to the Prayer Book would later become contentious, but in 1662 they appear to have been unequivocally acceptable to the Presbyterians.[63]

In April 1662, John Pearson, one of the clergymen responsible for the revision of the Book of Common Prayer and in fact the only cleric favourably reviewed by the Puritan leader Richard Baxter at the Savoy conference in 1661, replaced Henry Fern as Master of Trinity. Pearson, one of those clergymen who had been 'conspicuously loyal' to the King, had also been chaplain in the Civil War army of George Goring[64]; given Ray's association with the Goring family, it is no surprise to find him again writing to Courthope that Pearson 'promises fair to doe me all the service he can. He can stand me in stead in no way that I know of but in the matter of pupills, which I have not put myself out of. Possibly I may resume that trade about Michaelmas next, when I shall have performed all my visits.'[65] Even in late April, Ray continued to contemplate a return to Trinity and apparently foresaw no problems doing so. However, Ray was also actively considering other options for a future outside Cambridge; in particular he had been investigating with Thomas Hunt, one of his former students, the possibility of taking up a position at a private school.[66]

In early May 1662, a seemingly carefree Ray visited Francis Willughby at Middleton before embarking on an extended tour of Wales and South West England. It was only after the Cavalier Parliament had passed the Bill of Uniformity into law on 19 May 1662[67] that Ray's deliberations about leaving Cambridge became more than speculative. On 24 July he wrote to Courthope unhappy about the Act of Uniformity and registered his opposition to the imposition of yet another oath: 'I have already taken so many oathes & subscriptions as have taught me to discuss such pills.'[68] Ray, however, was clearly apprehensive about his choice: 'If I do not concoct this subscription, which I shall hardly prevail with my self to doe: & if I doe it will be certainly contrary to my inclinations and purely out of fear.'[69] Despite the proximity of St Bartholomew's Day, distaste for oaths and his fear of the consequences were the only reasons Ray communicated to his closest friends for refusing to subscribe.

Ray wrote an emotional letter to Courthope shortly after 24 August, the deadline for subscribing to the Act of Uniformity, but again chose not to justify his decision. Rather, Ray continued to elaborate on his fears and anxieties about the potential consequences of nonsubscription. He wrote:

> August 24 has passed by now and I have not returned to Cambridge: consequently, the die is cast; behold I have been ejected from the fellowship [at Trinity] without any rights to return;

> for me, therein nothing more is [to be] sown or reaped; and I must seek a new way of life in some other direction. You and those like you, afflicted by similar circumstances, grant assistance to our [situation]; you are my only help and solace; you are the only consolation. I have not yet begun to regret [the decision], nor do I hope that I that I will regret it in the future. It is preferable to suffer; rather that than at last I now take on the role of a timid little man in the midst of so many snares,[70] whence there remains no hope, no manner of escape. I see that I can be lacking in comrades more easily than I had hoped in my heart. This calamity held more fear in the beginning than in the retreat of my misfortune. Likewise whether I live nobly or obscurely begins to be up to me; truly even if, little by little, they withdraw who were believed to be my best friends; even if they forsake [me] an exile; even if my humility is shameful to you; even if (as Ovid once complained) 'Shall I desert the damaged ship in the middle of the water'? I shall not lose my courage in any way because I can support myself so that my heart shall be well prepared. And indeed although I do not fear or look forward to anything of this sort (it would have been evil on the part of men of such faith, piety and virtue always having deserved the best from me) nonetheless if that should happen against all hope and expectation (may it be allowed me to conjecture and imagine this) I shall make effort not to succumb to such a great burden, and depend on the divine providence of the Supreme Father, the support of my household. I shall cover myself in my virtue and I shall seek a pious poverty as my gift.[71]

It is possible that after John Wilkins's elevation to the See of Chester in 1668, Ray may have had the opportunity to reconsider his earlier decision not to subscribe to the provisions of the Act of Uniformity. However, Ray persisted in his reluctance to be an active participant in the Church, a position towards which he had consistently expressed his reluctance. He also continued to justify his voluntary absence from clerical office by an aversion to imposed oaths. Ray wrote to Martin Lister at St John's College, Cambridge:

> Dr. Wilkins has been elevated to a bishop's chair, and for his own sake, and for mine, and especially for the interest of the Church, I rejoice strongly. Nevertheless for me to be reinstated to the Church through him is quite impossible in my present way of thinking. Nor indeed do I suppose it is possible for me ever to be persuaded to subscribe to the Declaration, a broad law which was inflicted upon Presbyterians and other ministers of the church not very long ago; and yet my deprivation is not so great as I shall be almost no use to the church, however (as the saying goes) I stand in open court.[72]

Historians have attributed Ray's refusal to take the oath as a conscientious choice; indeed, Charles Raven dedicated Ray's biography 'to all who like John Ray have sacrificed security & career for conscience' sake'.[73] Claiming an undefined 'tender conscience' as Ray's grounds for refusing to take the oath stipulated by the Act of Uniformity would clearly situate him in the tradition of Puritan dissent. Matters of conscience were explicitly designated by the Anglican Church as illegitimate reasons for refusing to conform: Robert Sanderson, while Bishop of Lincoln, had directly addressed the question 'how far we may indulge good and godly men of tender consciences dissenting from us in liberty of Conscience'.[74] Sanderson, however, was determined in his opposition to Puritanism[75] and unequivocal in his denunciation of conscience as a valid reason to refuse lawful authority.[76] In subsequent years, Edward Stillingfleet, according to Ray 'one of the most learned men of our time',[77] was even more forceful in denying validity to reasons of conscience. Despite what were intended

to be attempts to comprehend differences in religious opinion within the Church, Stillingfleet maintained 'The scruple of conscience is no protection against Schism; no cause of Separating; nor doth it take off causeless Separation from being Schism.'[78] While natural philosophers were concerned with the possibility that the senses could lead men into error, Stillingfleet in addition worried about those conclusions 'which may arise from errors of conscience as well as carnal and corrupt reason'. Like Sanderson, Stillingfleet continued to conclude that conscience was an unreliable guide to action: 'Men ought not to rest satisfied with the present dictates of their Consciences, for notwithstanding them, they may commit very great sins. I am afraid, the common mistaking the Case of an Erroneous Conscience hath done a great deal of mischief to conscientious men.'[79]

In 1662, Ray would have had an extensive repertoire of arguments available to plead the cause of conscience had he chosen to justify his refusal in these terms. The nonconformist grounds for refusing the oath were widely reported after 1662, but close examination of his writings provides no evidence that Ray appealed to this literature. Nor did he appeal to the Anglican tradition where justification for refusing oaths had been well rehearsed during the interregnum. Especially during the 1650s, Anglican loyalists had pleaded matters of conscience for refusing the Solemn League and Covenant, which Ray as a student would not have been required to take. However, Ray, as an 'interested party' during the interregnum, would have been well aware of the literature. Ray may have read John Barwick's 1647 description of the hazards of life at Cambridge after the defeat of the King and the 'righteous' refusal to take the Covenant: 'Thus we are imprisoned or banished for our consciences, being not so much as accused of anything else, but only suspected of Loyaltie to our King, and Fidelity to our Mother the Church of England.'[80] It is likely that Ray had read Thomas Fuller's *History of the University of Cambridge* (1655), which recounted the refusal of many at Cambridge to take the parliamentarian Oath of Discovery;[81] designed to discover those who had not taken the Covenant, Fuller called the Oath of Discovery 'against all law and conscience'.[82] There is no doubt, however, that Ray was familiar with the writings and reputation of Robert Sanderson; and in his final confession, Ray reminded his auditors that he had chosen to be ordained by 'Dr. Sanderson, then Bishop of Lincoln'.[83] Sanderson, whose epitaph read 'Here lies Conscience enshrin'd', had led the Oxford University dons in their refusal to subscribe to the Solemn League and Covenant in 1646, and been imprisoned for his loyalty to the Crown during the 1650s. Well known for advising individuals on the 'resolution in cases of Conscience' during the interregnum, Sanderson had also written extensively on the matter; indeed, his reputation in this regard was such that, in 1659, Robert Boyle had provided financial assistance to assist in the printing of Sanderson's Oxford Lecture, *De obligatione conscientiae.*[84] Ray's personal library included the fourth edition of Sanderson's *34 Sermons* as well as his frequently printed *De Juramento, Seven Lectures concerning the Obligation of Promissory Oaths* (1655), first published in Latin in 1647, but later 'translated into English by his Late Majesties special command, and afterwards revised and approved under his Majesties own hand'.[85]

Ray's decision not to subscribe to the Act of Uniformity also follows Sanderson's

admonition to avoid unnecessary oaths, refuse unlawful ones, and accept only those oaths legally required. Sanderson's *de Juramento* had advised 'Wherefore Men, Fathers and Brethren, I beseech you as many as are here present, and all wherever they be, who wish well unto the publique peace of this Church and kingdom, or to the private of their own souls, and Consciences, that we take the most diligent heed, lest we fall into contempt of God's most holy Name, and violation of our own faith; that we flye all unnecessary Oaths, constantly refuse those which are unlawfully required, faithfully perform those which we have lawfully taken, as far as in our power, couragiously restrain the licentiousness of sin in oaths.'[86] Further, Ray's decision to avoid the oath required by the Act of Uniformity is also consistent with his actions in 1651 not to undertake the Oath of Engagement; on that occasion Ray withdrew from Cambridge until the selective enforcement of the Engagement had been abandoned.

It is true that many of those disqualified by their refusal to subscribe to the Act of Uniformity on the basis of conscience may have formed the clerical nucleus of the dissenting churches in the later 17th century; however, it is clearly not the case that all who refused the Act of Uniformity did so to pursue their religion within the dissenting tradition.[87] Many who chose not to comply with the Act simply conformed to the Church but retired from active participation in religious affairs with few or no disabilities caused by their action. Among Ray's immediate friends and associates, for instance, Edward Hulse left Cambridge to take up medicine at Leiden, and later became a physician at the court of William of Orange at the Hague.[88] Perhaps equally typical were those who withdrew from pastoral duties, yet whose sons became Anglican clergy. For instance, William, the father of Ray's students at Trinity, Robert and Job Grace, was ejected from his living as Vicar of Shenstone, Staffordshire, in 1662, and was briefly active in the dissenting tradition. However, both his Cambridge-educated sons became Anglican clergy, with Robert even succeeding his father at Shenstone; two of William's other sons were educated by Archbishop Sheldon.[89] Ray's contemporary at Cambridge and neighbour in Essex, Richard Courtman, was also deprived in 1662, but turned to the practice of medicine; three of his sons became Anglican clergymen, including Mansell Courtman, later one of Ray's friends and contributors. Richard Kidder, another friend and contemporary at Cambridge, was also deprived in 1662 and later conformed. Kidder was appointed Rector of Rayne near Black Notley in 1664, and later Bishop of Bath and Wells.[90]

If Ray did not leave the university as a matter of conscience, there nevertheless may have been other reasons for him to find Restoration Cambridge uncongenial, as did many of his contemporaries who also chose to withdraw from the university between 1660 and 1662. This number included several who became prominent in the Restoration Church, such as John Tillotson and John Tenison, both of whom later became Archbishops of Canterbury, and Edward Stillingfleet, later Bishop of Exeter. Simon Patrick, later one of the leading devotional writers of the Restoration Church and successively Bishop of Chichester and Ely, also chose to leave Cambridge and academic life as a result of an incident regarded at the time as an example of royalist reaction at the university. Patrick had been elected Master of Queens by a majority of Fellows but in opposition to a royal nominee; in the ensuing controversy the Vice-

Chancellor was instructed to form a commission to suspend the disobedient Fellows and Clarendon designated Patrick a 'factious fellow'.[91] In a letter written in the first week of May 1662 (and prior to passing of the Act of Uniformity in Parliament), Ray commented on this disruptive event at Queens and alluded to the tensions between the Restoration Fellows and the interregnum scholars: 'the junior fellows would have chosen Mr. Patrick of my year, a deserving person & one that wants nothing but years to qualify him for such a preferment. The old & new University will never kindly mingle or make one piece'.[92]

Ray may also have been dissatisfied with the intellectual climate being promoted in Restoration Cambridge by the returning scholars. During the interregnum, Ray had been part of a broad company of scholars active in pursuing a variety of approaches in natural philosophy, including animal dissections and chemical experiments, as well as Ray's own botanical enterprise.[93] Especially after John Wilkins's appointment as Master of Trinity in 1659, Ray belonged to a circle which included Isaac Barrow as well as Henry More and Ralph Cudworth, the Cambridge Platonists who introduced the atomic natural philosophies of the Greeks and Descartes to the university. However, many of the newly appointed or restored scholars after 1660 may have been unsympathetic to innovation and novelty in natural philosophy. John Pearson, Ray's Master at Trinity at the time of the Act of Uniformity, was a noted scholar in the scholastic tradition and advocated training students in the conservative, textual *scientia* of the Schoolmen. In his inaugural lecture as the Lady Margaret's Professor of Divinity, Pearson proposed returning to the 13th-century methods of St Thomas Aquinas.[94] Some years later, Ray alluded to the philosophical struggle at Cambridge in the preface to his *Synopsis methodica stirpium Britannicarum* (London 1690):

> I am full of gratitude to God that it was His will for me to be born in the last age when the empty sophistry that usurped the title of philosophy and within my memory dominated the schools has fallen into contempt, and in its place has arisen a philosophy solidly built upon a foundation of experiment: against it elderly professors protest and struggle in vain; they are men who when fruit has been discovered prefer to live on acorns for fear they should be constrained 'to lose in age the lessons of their youth' and acknowledge that they have wasted their lives following the shadow of philosophy and embracing a wraithe instead of the Queen of Heaven.[95]

There may also have been positive reasons why Ray chose to leave Cambridge. In July 1662, Ray's correspondence referred to a proposed continental tour with Francis Willughby, a route that was undoubtedly attractive to Ray. The comment that 'Mr. Willughby is <u>still</u> intent upon his transmarine expedition & will I believe, solicit you for your company' suggests that the excursion had been under discussion among Ray's circle for some time.[96] While this final letter before St Bartholomew's Day expressed apprehension about leaving Trinity, it was also decidedly optimistic about his immediate future prospects. 'I doubt not' Ray wrote 'but I shall be some way or other sustained, & it may be more to my satisfaction then if I should swallow the Declaration & continue still in Trinity College.'[97] One week later, Ray announced to Courthope that he had engaged himself to Robert Barham.[98] Barham, with whom Ray would correspond for years, had been imprisoned as a suspected royalist during the Civil Wars,

was a member of the Cavalier Parliament and Justice of the Peace as well as Deputy Lieutenant for Kent.[99] Shortly thereafter, Ray announced his position with Thomas Bacon at Friston Hall, Suffolk, which would occupy him until the proposed European tour commenced in March at which time 'I may then be free to wayte upon Mr. Willughby'.[100]

In the years subsequent to 1662, Ray spent almost four years touring Europe with Francis Willughby and Phillip Skippon. Later, he enjoyed the patronage of John Wilkins, Bishop of Chester, and for several years lived with Willughby at his Middleton estate. Upon Willughby's death in 1672, Ray was provided a pension 'sufficient to support me during life, without being burdensome to my friends; and my condition though not splendid, nor fortune affluent, yet is tolerable enough not to say easy to me'.[101] In 1690, with his reputation as the 'foremost botanist of the age' secure, and his fame as spokesman for 'rational piety, sound philosophy and solid instruction' still to come, Ray offered a private retrospective justification for his decision in 1662 to his former pupil at Trinity, Timothy Burrell: 'You may remember that [th]e rigorous exacting from all that were admitted to any office or employment in [th]e Church such oaths or subscriptions as my scrupulosity would not permit me to take, excluded me from the exercise of the ministerial function, to w[hi]ch I was by my education designed and had also actually engaged myself in.'[102] Although Ray still refrained from using the explicit word 'conscience', his statement may have been understood in terms of our 20th-century definition of scruples, referring to actions directed by the dictates of conscience, and characterized by a strict and precise regard for what is right.[103] In the 17th century, however, this reading of the term was not common and to be scrupulous was primarily understood as concerned with or troubled by doubts, anxiety or fear.[104] In this sense, Robert Sanderson for instance had considered the scruples, or doubts, of conscience: 'What is to be done, when the conscience is *scrupulous*? I call that a scruple, when a man is reasonably well perswaded of *the lawfulness* of a thing, yet hath withal some *jealousies* and *fears*, lest perhaps it should prove unlawful.'[105] Ray's own response to the Act of Uniformity had been one of fear and doubt, and his private letters consistently implied the meaning of scruples in this sense of the word.

It would be pedantic to insist on an excessively narrow interpretation of 'scruples' and therefore reasonable to allow some ambiguity with respect to Ray's precise meaning of the term in 1690. However, his published confession was intended to remove all doubt that scruples, whether of fear, doubt or conscience, were a valid defence for nonconformity. 'And after a serious and impartial Examination of the Grounds thereof, I am fully persuaded, that the Scruples Men raise against joining in Communion with [the Established Church] are unreasonable and groundless; and that the Separation [in the Church] which is made may very justly be charged upon the Dissenters themselves, as the blameworthy Authors of it.'[106]

In conclusion, there is no contemporary evidence to situate Ray within the Puritan tradition and no evidence that Ray justified his own actions in 1662 as a matter of conscience whether in the Anglican or in the Dissenting traditions. None of Ray's letters written in the summer of 1662 addressed his reluctance to subscribe to the Act

of Uniformity, other than to express a distaste for oaths and fear of the consequences arising from his decision. Further, a refusal based on Ray's avowed distaste for oaths would have been consistent with his earlier refusal of the Oath of Engagement. What is also important to emphasize is that in the months and years prior to St Bartholomew's Day 1662, Ray had displayed a disinclination to remain at Cambridge or to become a clergyman. There may have been positive reasons for choosing to leave Cambridge in 1662 and Ray may have found the 'old' and the 'new' at Trinity were an uncomfortable political or intellectual combination. It is equally possible that the attractions of travel and other secular activities were irresistible to an individual who had already spent more than half his life at Cambridge. Judgement of Ray's religious identity has been contested by modern historians, but Ray's own testimony has seldom been deployed in his defence. Ray wished himself to be remembered as a loyal Anglican and with his final public words professed himself to be 'a true tho' unworthy son of the Church by law esbablish'd in this kingdom'.[107]

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Notes

1 Although age and weather have rendered the monument unreadable, the contemporary English translation of the entire passage continues to be displayed at Ray's Parish Church in Black Notley.

2 During the Civil War and interregnum, Wilkins had avoided extreme political alignments and while Warden of Wadham College, Oxford, he turned the college into a haven for those with Anglican and Royalist sympathies, a position for which he was routinely criticized by the 'stricter puritans'. Described as a 'moderate Anglican', Wilkins made himself unpopular with Anglican high churchmen after the Restoration for his stance on moderation and toleration in religious affairs. J. H. Brooke, *Science and religion: some historical perspectives*, pp. 107–108 (Cambridge University Press, 1991); T. Harris, *London crowds in the age of Charles I: propaganda and politics from the Restoration until the exclusion crisis*, p. 86 (Cambridge University Press, 1987); B. Shapiro, *John Wilkins* (Berkeley, University of California Press, 1969). In the Preface to the *Synopsis Methodica Stirpium Britannicarum* (1690), Ray acknowledged '*Reverendiss. Praesule D. Joanne Wilkins, Episcopo tum Cestriensi Amico & Patrono"*, sig. a.

3 *Dictionary of national biography (DNB)*, vol. 12, pp. 96–98; S. H. Cassan, *Lives of the bishops of Bath and Wells*, pp. 227–264 (London, 1829–30); *Biographica Britannica*, vol. 4, pp. 2837–2839; J. Ray, *A Collection of English Proverbs*, 2nd edn, sig. A3v (London, 1678); J. Ray, *A Collection of Unusual Words*, 2nd edn, sig. A5v (London, 1691).

4 Compton, who spent several months in Ray's company while at Rome in 1664, was the son of Spencer Compton, Earl of Northampton, killed at Hopton Heath in 1643 in the royalist cause. Compton had been one of the seven signatories on the invitation to William of Orange in 1688, and in fact crowned William and Mary in place of William Sandcroft, Archbishop of Canterbury. *DNB*, vol. 4, pp. 899–903; *Biographica Britannica*, vol. 3, pp. 1425–1532; J. Ray, *Observations topographical, moral and physiological; made in a journey through part of the Low-Countries, Germany, Italy and France* (London, 1673).

5 *DNB*, vol. 5, pp. 842–843; *Biographica Britannica*, vol. 3, pp. 1649–1643; Rev. Mr Pyke, Rector of Black Notley, *The philosophical letters of John Ray*, ed. W. F. Derham, pp. 374–375 (London, 1718); the letter was later reprinted in full sub verba (*sv*) Ray, *Biographica Britannia*, vol. 7, pp. 3499 (London, 1747–66).

6 The publication of Ray's final confession formed part of an array of responses to non-conformist assertions of the early 18th century; S. McMahon, 'A True tho' Unworthy Son of the Church Establish'd' or 'Seditious Preacher, Ungodly Teacher: Inventing John Ray', Northwest Conference for British Studies, Edmonton, Alberta, 30 September–2 October 1999; E. Calamy, *An Abridgment of Mr. Baxter's History of his Life and Times. With an Account of many others of those Worthy Ministers who were Ejected after the Restauration of King Charles the Second. Their Apology for Themselves and their Adherents; containing the Grounds of their Nonconformity, and practice as to Stated and Occasional Communion with the Church of England. And a Continuation of their History, till the Year 1691* (London, 1702, revised 1713 and 1727).

7 R. K. Merton, 'Science technology and society in seventeenth century England'*, Osiris: Studies in the History and Philosophy of Science, and on the History of Learning and Culture* **IV**(2), 80–111 (1938, rpt. New York. Howard Fertig, 1970); C. Hill, *The experience of defeat: Milton and some contemporaries*, p. 20 (London, Faber and Faber, 1984); C. Webster, *The Great Instauration: science, medicine and reform 1626–1660*, pp. 84, 150–153 (London, Duckworth, 1975); M. E. Lazenby, 'The Historia Plantarum Generalis of John Ray', unpublished PhD dissertation (University of Newcastle upon Tyne, 1995); J. Gregory, 'Christianity and culture: the arts and the sciences in England 1660–1800', in J. Black (ed.) *Culture and society in Britain 1660–1800,* pp. 102–123 (Manchester University Press, 1997); *DNB*, vol. 16, pp. 782–787.

8 For accounts of the 'heroic fortitude' of post-Restoration Puritans, see for instance Hill, *op. cit*., note 7, and G.R. Cragg, *Puritanism in the period of the Great Persecution 1660–1688* (Cambridge University Press, 1957).

9 C. Raven, *John Ray: naturalist. His life and works,* pp. 36, 58, 60, 65 (Cambridge University Press, 1942, reprinted 1987).

10 Sir J.E. Smith, *Ree's Cyclopedia sv* Ray (first US edition 1812), reprinted in E. Lankester (ed.) *Memorials of John Ray,* p. 66, (London, Ray Society, 1848). The 'celebrated book on the *Wisdom of God Manifested in the Works of the Creation,* [is] known all over the world by its numerous editions and translations, and universally admired for its rational piety, sound philosophy, and solid instruction. This book is the basis of all the labours of the following divines, who had made the book of nature a commentary on the Book of Revelation; a confirmation of truths which nature had not authority of herself to establish'. James Edward Smith (1759–1828) was eminently qualified to comment on Ray: the first meeting of the Linnean Society was held in his home in Great Marlborough Street in April 1788, at which he was elected the first president; *DNB*, vol. 54, pp. 61–64 (1898).

11 For a discussion of 'social credit' see especially S. Shapin, *A social history of truth: civility and science in seventeenth-century England* (University of Chicago Press, 1994). For a discussion of competing claims for authority based on reputation, see J.A.I. Champion, *The pillars of priestcraft shaken: the Church of England and its enemies 1660–1730* (Cambridge University Press, 1992).

12 C. Blount, *The last saying and dying legacy of Mr. Thomas Hobbes of Malmsbury* (1680).

13 Gregory, *op. cit*., note 7, pp. 102–123; and N.C. Gillespie, 'Natural history, natural theology, and social order: John Ray and the "Newtonian Ideology"', *Journal of the History of Biology* **10**, 1–49 (1987).

14 See for instance Michael Hunter, 'Science and heterodoxy: an early modern problem reconsidered', in D.C. Lindberg and R.S. Westman (eds) *Reappraisals of the Scientific Revolution* (Cambridge University Press, 1990); M. Hunter, *Science and society in Restoration England* (Cambridge University Press, 1981). For discussions of the role natural theology played in redefining political and social legitimacy after 1688, see L. Stewart, *The rise of public science, rhetoric, technology, and natural philosophy in Newtonian Britain, 1660–1750* (Cambridge University Press, 1992), and Gillespie, *op. cit*., note 13.

15 R. Ashton, *The English Civil War: conservatism and revolution 1603–1649*, 2nd edn, pp. 127–156 (London, Weidenfield and Nicolson, 1989).

16 J.R. McGregor, 'The Baptists: fount of all heresy', in J.R. McGregor and B. Reay (eds) *Radical religion in the English Revolution*, pp. 23–63, esp. 26–28 (Oxford University Press, 1984, reprinted 1988).

17 K. Fincham and P. Lake, 'Ecclesiastical policies of James I and Charles I', in K. Fincham (ed.) *The early Stuart Church*, pp. 23–50 (Stanford University Press, 1993); K. Sharpe, *The personal rule of Charles I*, pp. 296–288, 317–322 (New Haven and London, Yale University Press, 1992). In fact, there is little evidence that William Laud, Archbishop of Canterbury and designated 'leader' of the Arminian party, was unambiguously an Arminian in the doctrinal sense.

18 Sharpe, *op. cit.*, note 17, pp. 286–288, 317–322; P. Lake, 'Serving God and the times: the Calvinist conformity of Robert Sanderson', *Journal of British Studies* **27**, 81–116 (1988).

19 P. Collinson, *The birthpangs of Protestant England: religion and cultural change in the sixteenth and seventeenth centuries,* p. 21 (New York, St Martin's Press, 1988); Collinson, *The religion of the Protestants: The Church in English Society 1559–1625* (Oxford, Clarendon Press, 1982).

20 See especially N. Tyacke, *The anti-Calvinists: the rise of English Arminianism 1590–1650* (Oxford, Clarendon Press, 1987); H. Trevor-Roper, 'Laudianism and political power', *Catholics, Anglicans and Puritans,* pp. 40–119 (London, Fontana Press, 1989); Fincham and Lake, *op. cit*., note 17, pp. 23–50; J. Morrill, *The nature of the English Revolution* (London and New York, Longmans, 1993).

21 Morrill, *op. cit*., note 20, pp. 34–67.

22 Ashton, *op. cit*., note 15, pp. 97–125.

23 See especially R. Hutton, *The Restoration: a political and religious history of England and Wales* (Oxford, Clarendon Press, 1985).

24 J. Spurr, 'From Puritanism to Dissent, 1660–1700', in C. Durston and J. Eales (eds) *The culture of English Puritanism 1560–1700*, pp. 234–265 (Macmillan, 1996).

25 Hutton, *op. cit*., note 23, pp. 143–147, 176–177; I. M. Green, *The re-establishment of the Church of England 1660–1663*, esp. pp. 37–60, 155–178 (Oxford University Press, 1978); P. Seaward, 'Gilbert Sheldon, the London vestries and the defence of the Church', in T. Harris, P. Seaward and M. Goldie (eds) *The politics of religion in Restoration England* (Oxford, Basil Blackwell, 1990).

26 J. Spurr, 'The Church of England, comprehension and the Toleration Act of 1689', *English Historical Review* **CIV**(413), 927–946 (1989).

27 Conrad Russell, for instance, reminds us that the fullest possible knowledge of an individual's background tells us nothing about civil war partisanship 'if it leaves out the preaching available in their home parish'; *Causes of the English Civil War*, pp. 2–3 (Oxford, Clarendon Press, 1990); for a rationale on this method for establishing links between action and context, see S. Shapin and A. Thackray, 'Prosopography as a research tool in history of science: the British scientific community 1700–1900' *History of Science* **12**, 1–28 (1974); for a case study see Lake, *op. cit*., note 18.

28 A.G. Matthews, *Walker revised: being a revision of John Walker's sufferings of the clergy during the Great Rebellion 1642–60*, p. 161 (Oxford, Clarendon Press 1948, reprinted 1988). In fact, Plume declared himself a royalist by becoming a chaplain in the King's Army during 1642. Although the list of 'scandals' levied against Plume is stereotypical, the fact that he was also charged with bowing at the name of Jesus suggests that at least some parishioners had objections to him.

29 A. Kingston, *East Anglia and the Great Civil War*, pp. 252–289, (London, Elliot Stock, 1897); B. Lyndon, 'Essex and the King's cause in 1648', *Historical Journal* **29**(1), 17–39 (1986); B.P. Lyndon, 'The Parliament's Army in Essex, 1648. A military community's association with county society during the Second Civil War', *Journal of the Society for Army Historical Research* **59**, 229–242 (1981).

30 A.G. Matthews, *Calamy revised: being a revision of Edmund Calamy's account of the ministers and others ejected and silenced, 1660–2*, pp. 453–454 (Oxford, Clarendon Press, 1934, reprinted 1988).

31 R. Kidder, 'Autobiography', in S.H. Cassan (ed.) *Lives of the Bishops of Bath and Wells*, pp. 231–232 (London, 1829–30). Kidder, a contemporary of Ray's at Cambridge and ordained by Ralph Brownrigg Bishop of Exeter in 1658, had also been deprived by the Act of Uniformity, but later conformed and was appointed to Rayne by the Earl of Essex, son of the noted royalist Arthur Capel, who had been executed after the siege of Colchester.

32 [John Barwick], *Querela Cantabrigiensis: or a Remonstrance by way of Apologie for the Banished members of the late flourishing University of Cambridge, By some of the Said Sufferers,* p. 19 (London, 1647); T. Fuller, *The history of the University of Cambridge from the Conquest*, pp. 318–322 (London, 1655, reprinted Cambridge University Press, 1840); C.G. Cooper, *Annals of Cambridge*, vol. 3, p. 342, (Cambridge, Warwick and Co., 1845); Kingston, *op. cit.*, note 29, pp. 95–98, 319–320, 367.

33 Trinity, St John's and Peterhouse especially suffered from Parliamentary ejections in 1645–46. J.B. Mullinger, *The University of Cambridge*, vol. 3, pp 308–312; Kingston, *op. cit.*, note 29, pp. 318–320; Fuller *op. cit.*, note 32, pp. 318–322; Matthews, *op. cit.*, note 28, pp. 36–41; J. Gascoigne, 'Isaac Barrow's academic milieu: interregnum and Restoration Cambridge', in M. Feingold (ed.) *Before Newton: the life and times of Isaac Barrow*, pp. 250–290, esp. p. 255 (Cambridge University Press, 1990).

34 M. Feingold, 'Isaac Barrow: divine, scholar, mathematician', in Feingold, *op. cit*., note 33, pp. 1–104, esp. pp. 10–11, 22–23.

35 Cooper, *op. cit*., note 33, p. 423; Kingston, *op. cit*., note 29, pp. 252–289; Gascoigne, *op. cit*., note 33, p. 256.

36 Matthews, *op. cit*., note 30, p. 10; Gascoigne, *op. cit*., note 33, p. 257; Mullinger, *op. cit*., note 33, p. 318; J. Venn and J.A. Venn, *Alumni Cantabrigiensis*, vol. 1 part 1, p. 76 (Cambridge University Press, 1922–27, reprinted Kraus, 1974–76); Feingold, *op. cit*., note 33, pp. 10–11.

37 *Calendar of the Proceedings of the Committee for Compounding &c. 1643–1660*, pp. 1450–1451; R.W. Blencowe (ed.), 'Extracts from manuscripts in the possession of William John Campion, Esq. at Danny; and of Sir Thomas Maryon Wilson, Bart, of Charlton House', *Sussex Archaeological Collections* **10**, 1–35 (1858); W. Smith Ellis, 'The Manor of Hurst-pierpoint', *Sussex Archaeological Collections* **11**, 50–72, (1859); Rev. Cannon J.H. Cooper, 'Cuckfield Families III', *Sussex Archaeological Society* **52**, 1–43 (1900); P. Jenkins, 'Wales and the Order of the Royal Oak', *National Library of Wales Journal (Great Britain)* **24** (3), 339–351 (1986).

38 J.H. Hodson, 'The Wollaton Estate and the Civil War, 1643–1647', Thoronton Society Record Series, vol. 21, pp. 3–15 (1962); Lucy Hutchison, *Memoirs of the life of Col. Hutchison* (ed. J. Sutherland), pp. 69, 99, 100 n.1, 304 n. 6 (London, Oxford University Press, 1975); *Calendar of the Proceedings of the Committee for the Advance of Money*, pt III, p. 1414 (London 1888); *Calendar for the Committee for Compounding 1643–1660*, pt II, p. 83 for February 25, 1647/48; see also December 15 1647, where Sir Francis Willoughby was provided relief for 'the extreme necessity of his lady and children'.

39 There are several grounds for this assumption. It is possible Ray's student was related to Michael Jermin or German (d. 1659), ejected from St Martin's Ludgate in 1643, although this individual had two daughters and apparently no sons. There had also been a William Jermin ejected from Oxford. *DNB*, vol. 10, p. 777; Matthews, *op. cit*., note 28, pp. 35, 52. It is unlikely that Ray's student was related to Henry Jermyn, described as 'extrovertly cavalier', son of Sir Thomas Jermyn, MP for Andover. Henry had been the Queen's Master of the Horse, spent the Civil War years abroad and later became first Earl of St Albans. However, Sir Thomas had a noteworthy friendship with the Protestant bishop of Ardagh, William Bedell (d. 1642), who had been born in Black Notley. *DNB Missing Persons*, pp. 352–353, (1993).

40 T. Birch, *History of the Royal Society*, vol. 2, p. 172–173 (London, 1756). Phillip Skippon Esq. was proposed candidate by John Wilkins and was elected and admitted on 16 May 1667; Venn and Venn, *op. cit*., note 36, vol. 4 part I, p. 86.

41 S.N. Zwicker, *Lines of authority: politics and English literary culture, 1649–1689*, pp. 1–12 (Ithaca and London, Cornell University Press, 1993).

42 '*Cum nobis plurimum valedutinariis, corporibus animique causa*' [John Ray], '*Praefatio ad Lectorem*', *Catalogus Plantarum circa Cantabrigium,* sig. 3 (Cambridge, 1660).

43 Ray was appointed Greek lecturer and did not return to the university until 1 October 1651 (Raven, *op. cit*., note 9, p. xvi). Although the Engagement was not repealed until 13 January 1653/4, it was effectively discontinued in the autumn of 1651. In July, William Sandcroft had been ejected from his fellowship for refusing to subscribe to the Engagement. But by 4 November 1651, the Committee for Reformation of the Universities (via Sir Henry Mildmay) reported that even the Chancellor of the University of Cambridge (the Earl of Manchester) did not comply with the Act of Parliament in subscribing the Engagement, and by which time enforcement was effectively abandoned. Mullinger, *op. cit*., note 33*,* pp. 391, 472.

44 [Ray], '*Praefatio ad Lectorem*', *Catalogus Cantabrigiam*, sig. A6.

45 For a discussion of the attempts at conciliation by the Restoration Government, see especially Hutton, 'The first settlement,' *op. cit*., note 23, pp. 125–154; for the tendency to interpret Ray's subsequent decision in terms of a future uncertain (and unknowable) event, see for instance Thompson, 'Some newly discovered letters of John Ray', *J. Soc. Bibl. Nat. Hist.* **7**, 116 n. 12, (1974), who suggests that as early as June 1661, Ray was concerned with staying at Cambridge because of the implications imposed by the Act of Uniformity.

46 Hutton, *op. cit*., note 23*,* pp. 173–176.

47 For an account of Restoration policies and problems see especially J. Spurr, *The Restoration Church of England 1646–1689*, pp. 30–42, (New Haven and London, Yale University Press, 1991); and Hutton, esp. Section III, 'The Restoration Settlements,' *op. cit*., note 23, pp. 125–184.

48 Green, *op. cit*., note 25, pp. 30–31, 49–60, 90–91.

49 Hutton, *op. cit*., note 23, pp. 130–131.

50 R.W.T. Gunther (ed.), *Further correspondence of John Ray*, pp. 17–18 (London, 1928).

51 *Ibid*. Matthews also reports an entry in the Trinity Conclusions that 'Mr. Ray have time till the 16th of October for ye making up his accounts of the Stewardship and giving his final resolution as to conformity', *op. cit*., note 30, p. 405; see also p. 181 *sv Ekins*. Later accounts even suggest that Trinity College was 'peculiarly desirous to keep him [Ray] in', *Calamy, account of the ministers ejected*, p. 122 (London 1727).

52 Ray was ordained 23 December 1660 by the Bishop of Lincoln, Robert Sanderson, a committed Calvinist and moderate Anglican, Raven, *op. cit*., note 9, p. 59. Lake, *op. cit*., note 18, *passim.* Sanderson later became the subject of a 'Life' by Izaak Walton, who had also written the lives of four other eminent Anglicans: Richard Hooker, John Donne, George Herbert and Henry Wotton.

53 Letter dated 12 February 1660/61. Thompson, *op. cit*., note 45, pp. 114–115.

54 Letter dated 5 June 1661, Thompson, *op. cit*., note 45, p. 115.

55 *Biographica Britannia*, vol. 6, pp. 2177–2181.

56 Letter dated 11 June 1661 Thompson, *op. cit*., note 45, pp. 115; and *op. cit*., note 50, pp. 18–19.

57 Letter to Courthope dated 26 November 1661, *op. cit*., note 50, pp. 26–27.

58 Ray to Courthope, letter dated 3 January 1658/9, *op. cit*., note 50, pp. 16–17. At Cheadle in Staffordshire, this living was valued at £100 per year.

59 Letter to Courthope dated 14 October 1661, *op. cit*., note 50, pp. 22–23. The living was at Kirby Lonsdale, supposed to be worth £120 per year.

60 *Ibid*., pp. 179–180; Spurr, *op. cit*., note 47, pp. 103–165.

61 Edward Stillingfleet, *The mischief of separation. A sermon preached at Guildhall Chappell May 11 1680,* p. 45 (London, 1680).

62 Matthews, *op. cit*., note 30, pp. xii–xiii. Based on available evidence, these total figures represent 1760 individuals ejected from their clerical livings, 149 individuals ejected from the schools and universities, less 171 who later conformed.

63 Hutton, *op. cit*., note 25, p. 175. Spurr, *op. cit*., note 47, pp. 40–42.

64 *DNB*, vol. 15, pp. 613–618; Matthews, *op. cit*., note 28, p. 347; Hutton, *op. cit*., note 25, p. 175.

65 Letter to Courthope 28 April 1662, *op. cit*., note 50, p. 28; see also letter dated 28 April 1662 to Courthope, E.W. Gunther, *Early science at Cambridge,* pp. 374–375 (Oxford University Press, 1937).

66 *Ibid.* Thomas Hunt of Essex was admitted to Trinity as a Subsizar 10 November 1653, matriculated 1653, BA 1657–58, MA 1661, tutor Mr Wray; W.W. Rouse Ball and J.A. Venn (eds), *Admissions to Trinity College Cambridge*, vol. 2, p. 428 (London, Macmillan, 1911–16).

67 Hutton, *op. cit*., note 25, p. 176.

68 Letter dated 24 July 1662, Thompson, *op. cit*., note 45, p. 119.

69 *Ibid.*

70 *Quod in tot laqueos timidus homuncio me jam jam induerim.* It is also possible to translate 'homuncio' as homunculus, which was a phrase commonly used to designate 'little man' in the 17th century. In the early 18th century, Calamy complained that the Church party called Dissenters 'that little kind of men'. 'Now, for their part, though they could see no reason for any great thoughts of themselves nor for expecting to be greatly thought of by others, they yet conceived, that as 'little' as they were they had been of some use to the government, and might be farther so. Though it was true enough they were but 'little men', compared with some others', E. Calamy, *An historical account of my own life with some reflection on the times I have lived in (1671–1731)* (ed. J. Towell Rutt), pp. 355–356, (London, Henry Colburn and Richard Bentley, 1830).

71 *Jam praeterit Aug. 24 necdum ego Cantabrigiensis reversus sum; jacta ergo est alea; sodalitio excidi sine postliminii spe ulla, mihi istic amplius nec seritur nec metitur, victus aliunde quaerendus est, tu tuique similes, afflictis rebus succurrite nostris, subsidium unicum, unicm estis soladium; me nondum incepti poenitet, nec in posterum spero poenitebit, illud potius dolendum, quod in tot laqueos timidus homuncio me jam jam induerim, unde evandendi nulla spes, nulla ratio superest. Video me posse carere sodalitio idque aequiore quam speraveram animo. Calimitas ista haec plus habet terroris in fronte quam in recessu mali. Spendid an obscure vivam mihi perinde esse incipit, verum quid si subducant sese paulatim*

qui amicissimi crediti sunt; si deserant extorrem; si humilitatis nostrae vos pudeat, si (quod Naso olim quaeritabat) 'In mediis lacera puppe re linquar aquis'? Non demittam animum utcumque quoad possum annitar ut sit in omnem eventum bene preaparatum pectus. Et quamvis nihil tale subvereor aut auspicor quidem (nefas id esset de viris tantae fidei, pietatis, virtutis tum de me semper optime meritis) attamen si id praeter omnem spem et expectationem acciderit, (liceat hoc mihi fingere et imaginari), dabo operam ne tanto oneri succumbam penitus divina innixus providentia. Supremi Patris familias cura, 'me virtute mea involvam, piamque pauperiem sine dote quaeram'. Letter to Courthope, 28 August 1662, *op. cit*., note 50, pp. 30–31. I would like to thank Dr Margaret Drummond, Department of History and Classics, University of Alberta, for her expert advice in the translation of this passage from the Latin. Some punctuation has been altered in my translation to make the passage more clear.

72 J. Ray, *The correspondence of John Ray*, p. 30. 'D. Wilkins in episcopalem cathedram erectum, et sui-ipsius, et mei, et praecipue ecclesiae causa vehementer gaudeo. Me tamen per eum ecclesiae restitutum iri stante sententia, plane est impossible, nec enim unquam adduci me posse puto ut declarationi subscribam quam lex non ita pridem lata presbyteris aliisque ecclesiae ministris injungit, nec tamen tanti est jactura mei qui nulli fere usui ecclesiae futurus essem, utut (quod dici solet) rectus in curia starem.

73 Raven, ' Dedication', *op. cit*., note 9.

74 R. Sanderson, *Judgement for the settling of the Church*, p. 45 (London, 1663), (appended to *reason and judgement or special remarkes of the life of the renowned Dr. Sanderson, late Lord Bishop of Lincoln*). Not only was it claimed that Charles I had declared that 'I take my conscience to Sanderson', but he was also reputed to have corrected the English translation of Sanderson's *De Juramento* published in 1655 (seven lectures concerning the obligation of promissory oaths) while in custody of the Parliamentary forces. Walton also reports that Robert Boyle became Sanderson's patron after reading *De Juramento;* I. Walton, *Life of. Robert Sanderson*, pp. 298–299, 316–317 (London 1678, reprinted London, 1899). Ray had chosen Sanderson for his ordination, but also collected many of his works and sermons, including a 1678 edition of Sanderson's *De Juramento* as well as Walton's *Life* (London, 1678) to which the *Judgement for settling the Church* was also appended. See *Bibliotheca Rayana: or a Catalogue of the library of Mr. John Ray, late Fellow of the Royal Society* (London, 1708).

75 Lake, *op. cit*., note 18, p. 113.

76 'Of which *scruples* it behooveth every man … [to] resolve to go on according to the more *profitable perswasion* of his mind, and *despise* those scruples. And this he may do with a good conscience, not only in things *commanded* him by lawful *authority,* but even in things *indifferent* and arbitrary, and wherein he is left to his own *liberty;* Sanderson, *op. cit*., note 74, p. 92.

77 J. Ray, *Wisdom of God Manifest in the works of Creation*, 4th edn., sig A6 (London, 1704).

78 Stillingfleet, *op. cit*., note 61*,* p. 40. In 1691, Ray listed Stillingfleet as one of the most learned men of the day. He also owned several volumes of Stillingfleet's sermons as well as Clarendon's defence of Stillingfleet: *Bibliotheca Rayana.* There is also reason to suppose that Ray and Stillingfleet were acquainted: not only were they contemporaries at Cambridge (Stillingfleet was admitted to St John's in 1649, became a Fellow there in 1653 and received his MA in 1656) but Stillingfleet was also Dean of St Paul's during the tenure of Ray's good friend, Henry Compton, Bishop of London.

79 *Ibid*, pp. 40, 43.

80 [John Barwick] *Querela Cantabrigiensis: or, A Remonstrance by way of Apologie for the Banished members of the late flourishing University of Cambridge*, p. 26 (1647).

81 Ray's personal library contained both T. Fuller's *Worthy's of England* (London, 1662) and Fuller's *History of the Holy Wars* (Cambridge, 1652); *Bibliotheca Rayana*, p. 21.

82 T. Fuller, *The history of the University of Cambridge from the Conquest* (ed. M. Prickett and T. Wright), AD 1642–43 Charles I, pp. 320 (Cambridge University Press, 1840).

83 Pyke, 'Mr. Ray's Dying Words', p. 374. *Philosophical letters of John Ray* (ed. W.F. Derham) (London 1718).

84 Ja.H., *An Elegy on the Much Lamented Death of Dr. Sanderson, Late Lord Bishop of Lincoln* (1663); D.F. *Reason and Judgement: or special remarques of the Life of the Renowned Dr. Sanderson, late Lord Bishop of Lincoln. Together with his Judgement for settling the Church; in exact resolution of sundry grand cases very seasonable at this time* (Oxford, 1663); I. Walton, *The life of Dr. Sanderson, late Bishop of Lincoln* (London, 1678, reprinted University Press, 1956); *DNB*, vol. 17, pp. 754–755.

85 Ray's copy of *De Juramento* was dated 1676. Ray's library also included 'Common Prayer neatly Bound in Turkey-leather, with the Cuts finely colour'd, work'd off with small Tools', *Archbishops Laud's Remains, writ by himself* (1700), and George Herbert's *Sacred poems* (1643). *Bibliotheca Rayana: or a catalogue of the library of Mr. John Ray, late Fellow of the Royal Society* (London, 1708).

86 R. Sanderson, *De Juramento, Seven Lectures concerning the Obligation of Promissory Oaths. Read Publickly in the Divinity School at Oxford. By Robert Sanderson D.D., His Majesties Public Professor there. Translated into English by his Late Majesties speciall command and afterwards revised and approved under his Majesties own hand*, pp. 271–272 (London, 1655).

87 See especially J. Spurr, 'From Puritanism to Dissent', in C. Durston and J. Eales (eds) *The culture of English Puritanism 1560–1700*, pp. 234–265 (New York, St Martin's Press, 1996).

88 *DNB*, vol. 10, p. 203, Venn and Venn, *op. cit*., note 36, vol. 2, p. 429; Munk, *Roll of the Royal College of Physicians*, vol. 1, pp. 397–398.

89 Matthews, *op. cit*., note 30, p. 230.

90 Matthews, *op. cit*., note 30, pp. 138–139, 231; Venn and Venn, *op. cit*., note 36, vol. 1, pp. 405–406; Kidder was at Cambridge 1649–1656; *DNB*, vol. 11, pp. 96–98; *Biographica Britannica*, vol. 4, pp. 2837–2839; Ray, *A collection of English proverbs*, 2nd edn sig. A3v; Ray, *A collection of unusual words*, 2nd edn, sig. A5v (London 1691).

91 See Gascoigne, *Cambridge in the Age of Enlightenment*, pp. 33–36, for further details on this incident.

92 Letter dated the first week of May 1662, Thompson, *op. cit*., note 45, p. 118; Gunther, *op. cit*., note 50, p. 29. Ray's comment was part of the evidence used by Gascoigne to describe the disruptive atmosphere at Cambridge immediately after the Restoration; see Gascoigne, *op. cit*., note 91.

93 J. Worthington, 'Letter to Samuel Hartlib dated 10 June 1661', in J. Crossley Esq. (ed.) *The diary and correspondence of Dr. John Worthington*, vol. 1, pp. 330–334 (Chetham, Chetham Society, reprinted 1968); see also Raven, *op. cit*., note 9, pp. 44–51; Webster, *op. cit*., note 7, pp. 150–153.

94 J.B. Mullinger, *History of Cambridge*, vol. 3, pp. 587 (Cambridge University Press, 1911, reprinted 1969); *DNB*, *sv* Pearson, vol. 15, pp. 613–618. See especially Gascoigne, *op. cit*., note 91, pp. 27–68. Gascoigne reports that both More and Cudworth, while continuing at Cambridge, nevertheless also suffered after the Restoration for their alleged lack of loyalty to the Crown as a result of remaining members of the university during the interregnum.

95 Ray, Preface, *Synopsis methodica*, translated by and quoted in Raven, *op. cit*., note 9, p. 251.

96 Letter dated 24 July 1662, Thompson, *op. cit*., note 45, p. 119, emphasis mine.

97 Letter undated, but believed to be 13 August 1662, *op. cit*., note 50, pp. 25–26; R.T. Gunther, *Early science in Cambridge,* pp. 376–377 (Oxford University Press, 1937).

98 '…coming over hither on purpose to see me, and making a strong invitation to Bacton, I could not avoid to engage myself to wait upon him'. Letter dated 28 August 1662, *op. cit*., note 50, pp. 30–31.

99 B.D. Henning, *The House of Commons 1660–1690*, vol. 1, pp. 599–600 (London, History of Parliament Trust, 1983); Ray, *Correspondence of John Ray, consisting of selections from the Philosophical Letters published by Dr. Derham* (ed. E. Lankester), pp. 9–10 (London, 1848, reprinted New York, Arno Press, 1975); *op. cit*., note 50, p. 116; Raven, *op. cit*., note 9, pp. 65, 130, 147.

100 Letter dated 4 September 1662 to Peter Courthope, *op. cit*., note 50, pp. 32–33. As it turned out, Ray was then happy with his tenure at Friston. See letter dated January 1662/3, *op. cit*., note 50, pp. 32–33, Thomson *op. cit*., note 45, p. 120; Gunther, *op. cit*., note 97, pp. 346–347. Bacon had been active in Cromwell's parliament of 1654, and in 1648, had been elected a Presbyterian Elder in the Sarmundon Classis; Henning, *op. cit*., note 99, vol. 1, p. 581.

101 Letter to Timothy Burrell, dated July 22, 1990, facsimile reproduced in R.T. Gunther, *op. cit*., note 97, p. 351.

102 *Ibid.*

103 *OED*, *sv* scruples (4).

104 In terms of being troubled with doubts or scruples of conscience, see especially *OED sv* scrupulous 1(b): prone to hesitate or doubt, distrustful, cautious or meticulous in action, deciding, etc., characterized by doubt or distrust.

105 Robert Sanderson, *op. cit*., note 74, p. 45. Not only was it claimed that Charles I had declared that 'I take my conscience to Sanderson', but he was also reputed to have corrected the English translation of Sanderson's *De Juramento* published in 1655 (seven lectures concerning the obligation of promissory oaths) while in custody of the Parliamentary forces. Walton also reports that Robert Boyle became Sanderson's patron after reading *De Juramento;* Walton, *op. cit*., note 74, pp. 298–299, 316–317. Ray had chosen Sanderson for his ordination, but also collected many of his works and sermons, including a 1678 edition of Sanderson's *De Juramento* as well as Walton's *Life,* to which the *Judgement for settling the Church* was also appended. See *Bibliotheca Rayana: or a catalogue of the library of Mr. John Ray, late Fellow of the Royal Society* (London, 1708).

106 Pyke, *op. cit*., note 83, p. 374.

107 *Ibid.*