Historical Papers
Communications historiques

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Volume 5, Number 1, 1970

Winnipeg 1970

URI: https://id.erudit.org/iderudit/030730ar
DOI: https://doi.org/10.7202/030730ar

See table of contents

Publisher(s)

The Canadian Historical Association/La Société historique du Canada

ISSN

0068-8878 (print)
1712-9109 (digital)

Explore this journal

Cite this article

Barker, J. C. (1970). The Royal Society and "The Ingenious Monsieur Pascal". *Historical Papers / Communications historiques*, *5*(1), 158–170. https://doi.org/10.7202/030730ar

THE ROYAL SOCIETY AND "THE INGENIOUS MONSIEUR PASCAL"

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Blaise Pascal died in 1662, and the impact of his various writings and achievements upon those English intellectual interests which centered upon the Royal Society played some part in developing, towards the end of the century, a new climate of opinion increasingly characterized by the standards of objectivity and reason which the *virtuosi* sought and upheld in their enquiries. I intend to trace the effect of Pascal's mathematical and physical discoveries upon members of the Society, and then follow the gradual emergence in that circle of an appreciation of Pascal as a reasoning thinker upon matters relating to human nature and religion, my suggestion being that, as in subsequent periods, opinions towards Pascal and his writings provide a useful means of measuring the views of men and women upon a whole range of issues. While such an investigation is mostly dependent upon specific examples of an awareness of Pascal's works, it may fairly be assumed, in light of the men involved, that their opinions reflect in some measure the general attitudes of the Society as a whole. The picture would be incomplete, however, if the religious and political atmosphere of the years in which the Society first met was not recognized, many members being as much involved in affairs of the day as in intellectual pursuits. It should not be forgotten that Pascal's best-known work by far to the English public at large during this time was the *Lettres Provinciales,* and members of the Society were among those in England who early realized its importance.

Within a few months after the last instalment of the *Provinciales* had come from Pascal's pen in 1657, an English translation was published, entitled *The Mysterie of Jesuitisme.* Its success was instant, and it was soon followed by a second edition and by numerous supplements relating to the Jansenist controversy. The Jesuits had been feared for their organizational strength, their personal abilities and their foreign intrigues since the time of Elizabeth, and the contents of the letters were well-suited to the emotional religious atmosphere of Commonwealth England. The *Provinciales,* however, were translated upon Anglican initiative, partly because it was hoped the Church of France, purified by Jansenism, might eventually ally with the Church of England. In addition to an ecclesiastical interest, events in France were matters of political concern, and,

after the Restoration, John Evelyn was instructed by Lord Clarendon to translate certain Jansenist writings, Charles II later congratulating him on his work. Growing sympathies led Anglicans and Puritans alike to see Jansenism as very near to Protestantism, and Pascal as a polemicist and religious thinker whose views in many respects resembled their own. In 1679, when the excitement generated by the alleged discovery of the Popish Plot was still high, the *Provinciales* were re-issued with the authority of the Bishop of London, and one of Pascal's most durable claims to fame, that of being the exposer of the Jesuits and the evils of Catholicism, was thus established in England with official approval.

The available evidence shows that the combination of Evelyn's interests in several aspects of Pascal's career was repeated elsewhere in the Royal Society. His fellow-members, Sir Robert Moray and Bishop Wilkins, concerned themselves in his work, and, in the libraries of Sir Kenelm Digby, Robert Hooke and John Ray, *The Mysterie of Jesuitisme* in one or other of its forms lay on the shelves with books of science. Still more indicative is a letter of 1664 from Henry Oldenburg, who had once met Pascal in Paris, to Robert Boyle, announcing the arrival together of a Jansenist work soon to be translated by Evelyn and an attempted refutation of Pascal's discoveries on atmospheric pressure.[1] Catholicism, Jansenism, happenings abroad and scientific experimentation were all concerns which evoked from active, intelligent men a response or reaction; and, in their desire to protect the nature of their thought from unsuitable religious interference, the Society's members doubtless found the *Lettres Provinciales* adding a new feature to their distrust of Catholicism.

Quite probably the first Englishman to learn of Pascal's particular gifts was Thomas Hobbes, while attending the meetings of the Académie Mersenne in Paris; and, in 1648, Hobbes wrote to Mersenne regarding a dispute arising from Pascal's experiments on the vacuum.[2] It seems, however, that Pascal did not become widely known to English mathematicians, including those who became prominent in the Royal Society, until he announced his competition on the cycloid, and then largely because of the intense objections of John Wallis, the noted professor of geometry at Oxford, to the final award. Pascal had issued his anonymous challenge to the mathematicians of Europe in June, 1658, copies being sent to Wallis and Christopher Wren by Sir Kenelm Digby, who was close to

[1] Henry Oldenburg, *Correspondence*, ed. Hall and Hall (Madison and Milwaukee, 1965-), II, pp. 311-312.

[2] Blaise Pascal, *Œuvres*, ed. Brunschvicg and others (Paris, 1908-1921, 14 vols.), II, pp. 212-214.

mathematical circles in Paris. Without apparently seeking the prize, Wren proceeded to make a connected discovery which Pascal praised highly; but, in contrast, his relationship with Wallis was marked by misunderstanding and bitterness. Wallis received details of the competition on August 10, and, since time was limited, immediately set to work, returning an essentially accurate answer nine days later; but he reserved the right to make corrections, and subsequently wrote communicating a number of slight errors. When the papers received were adjudicated, it was decided that Wallis' original reply must stand, and that neither he nor the other final contestant was eligible for the prize. This strict interpretation of the rules regarding the arrival of solutions in a completed state within the short time period was construed by Wallis both as a personal affront, and as an insult to English mathematicians in general. When he published a tract on the cycloid the following year, he listed his several grievances, and also charged Pascal – "lupus in fabula" – with plagiarizing the work submitted to him. He refused to be placated, and ever afterwards bore a violent animosity towards Frenchmen. [3]

Whatever prejudices he had aroused, Pascal's valuable research in this and other areas was inevitably utilized and incorporated into ongoing investigations. Isaac Barrow, Newton, and the Scotsman, James Gregory, were all familiar with his work as a mathematician, also John Collins, who has been called the English Mersenne for his zeal in spreading news to others and stimulating them in their enquiries. When Pascal's *Traité du Triangle Arithmétique*, developing and applying the theory of binomial coefficients, appeared posthumously in 1665, he soon informed Wallis; and, a few years later, having given his own copy to Edward Bernard, the Oxford astronomer, Collins requested the secretary to the British ambassador to France to purchase him a second. When he considered calculations submitted to him to be too similar to those set down in Pascal's *Traité* to bear publication, Collins would recommend a study of the book for enlightenment. "I could have wished yourself had been chancellor of [his] performances," he wrote to one such correspondent, and forthwith lent him an available copy of the work itself. [4]

Oldenburg, the Society's first secretary, may well have seen Pascal's calculating machine while in France, and, in 1665, he wrote to Boyle that Wren had been shown it during a visit to Paris. [5] The high estimation of Pascal held by both Oldenburg and Collins led to their asking after any further manuscripts on conics that

[3] For a short account of this controversy, see J. F. Scott, *The Mathematical Work of John Wallis* (London, 1938), pp. 151-155.

[4] S. P. Rigaud (ed.), *Correspondence of Scientific Men of the Seventeenth Century* (Oxford, 1841, 2 vols.), I, pp. 139, 186; II, pp. 454-459.

[5] Oldenburg, *op. cit.*, II, p. 480.

Pascal might have left; but there must have been practical limits to their interest, for, when writing to a friend upon publishing difficulties in France which condemned work by Pascal and others to obscurity, Collins mentioned, "they have offered to send over hither, on condition of getting the same printed, but we have refused" — no doubt because, as he said, "Mathematical learning will not here go off without a dowry." [6] The persistence with which these fragments were sought by English mathematicians and scientists nevertheless bears witness to the value attached to any research believed to have come from Pascal's resourceful mind.

While Pascal was becoming known to mathematicians in the ranks of the Society, keen interest was also being shown in reports of his physical experiments. In 1648, he had begun research upon the phenomenon described by the Italian Torricelli, in which a tube of mercury was inverted into a bowl, already full of the same substance. The puzzling result was that, although some mercury ran down into the bowl, a column of it remained at a certain height in the tube, posing the question of what the void at the top consisted. In a notable demonstration carried out at the Puy de Dôme under his direction, Pascal showed that the mercury in the Torricellian tube or barometer was subject to the effects of atmospheric pressure. Within a few years, similar enquiries were being conducted at Oxford, and it must have been during that time that more of Pascal's discoveries regarding air and water pressure became known to Robert Boyle.

Boyle's support of Pascal's findings was based upon experiments carried out by *virtuosi* on mountains in Lancashire and Devon, and he himself, "for want of hills high enough," had attempted the experiment with a tube filled with water on the roof of Westminster Abbey, the apparatus afterwards being lowered onto the pavement inside. This research was hindered by some accidents, but Boyle considered he had gathered enough evidence to support Pascal's deductions. [7] Some of Pascal's descriptions, however, prescribed unusual equipment as well as settings, and the willingness of Henry Power, physician and naturalist, to investigate water pressure extended to the most laborious procedures :

> We tried the Pascalian-Experiment in a Tin-Tube of 33. foot long, made of several sheets of Tin, and closely soddered up with Peuter : To the upper end whereof we fastned a long Glass-Tube, open at both ends; then, having soddered up the lower end, we reared the Tube to a Turret at Townley-Hall, and fill'd it with water; then closing the top of the Glass-Pipe, and immersing the other end of the Tin-Tube into a cistern of water a foot deep, we opened

[6] Rigaud, *op. cit.*, II, pp. 14-15.
[7] Robert Boyle, *Works*, ed. Birch (London, 1772, 6 vols.), I, pp. 151-156.

> the lower end, and perceived the water to fall out of the Glass-Tube into the Tin, but how far we could not tell, onely we conjectured to be about the proportion given by Doctor Pascal; viz. that a Cylinder of water stood in a Tube about 32. foot high: but presently our Glass-tube, at the juncture to the Tin, began to leak, and let in Ayr; so we could make no further Process in the Experiment: onely one thing we observed in filling of the Tube, that after the water which we tunnelled in had gone down a pretty way into the Tube, part of it (by the rebounding Ayr) was violently forced up again, and shot out at the upper end of our Glass-tube two or three foot high into the open Ayr: Which Experiment may be a caution to Pump-makers, & all Artificers that deal in Water-works, that they attempt not to draw water higher than 33. foot (its Standard-Altitude) lest they lose both their credit, cost, and pains in so unsuccessful a design. [8]

In 1663, the most systematic account of Pascal's physical enquiries was published, and, at the newly-founded Society's command, Boyle undertook to determine their validity. He characteristically tried to perform each experiment himself, and, after reporting his findings to the Society, published the results in 1666, under the title *Hydrostatical Paradoxes.* His fundamental criticism was that, while Pascal's conclusions regarding water pressure were essentially without fault, they appeared to be partly deduced from experiments which, to Boyle, were questionable; and he early summarized the reasons why he declined to follow certain of Pascal's methods of proof:

> First, Because though the experiments he mentions be delivered in such a manner, as is usual in mentioning matters of fact; yet I remember not, that he expresly says, that he actually tried them, and therefore he might possibly have set them down, as things, that *must* happen, upon a just confidence, that he was not mistaken in his ratiocinations....
>
> Secondly, Whether or no Monsieur Pascal ever made these experiments himself, he does not seem to have been very desirous, that others should make them after him. For he supposes the phaenomena he builds upon to be produced fifteen or twenty foot under water. And one of them requires, that a man should sit there with the end of a tube leaning upon his thigh; but he neither teaches us, how a man shall be enabled to continue under water, nor how, in a great cistern full of water, twenty foot deep, the experimenter shall be able to discern the alterations, that happen to mercury, and other bodies at the bottom.
>
> And thirdly, These experiments require not only tubes twenty foot long, and a great vessel of, at least, as many feet in depth, which will not in this country be easily procured; but they require brass cylinders, or plugs, made with an exactness, that, though easily supposed by a mathematician, will scarce be found obtainable from a tradesman. [9]

[8] Henry Power, *Experimental Philosophy* (London, 1664), pp. 131-132.
[9] Boyle, *op. cit.*, II, pp. 745-746. Pascal's experiments were described in his *Traitez de l'Equilibre des Liqueurs et de la Pesanteur de la Masse de l'Air;* Pascal, *Œuvres, op. cit.*, III, pp. 143-292.

It is generally conceded, in support of Boyle's suspicions, that certain of Pascal's experiments remained purely hypothetical, and that their inclusion was merely an attempt to fortify arguments resting upon a selection of demonstrable proofs. A distinction between actual and imagined experiments was never clearly drawn, however, and Power's experience with a thirty-three foot tube must have been typical of several efforts to repeat procedures which called for unusually large and exact apparatus. To Boyle, such methods seemed "more ingenious than practicable," and he applied himself to discovering "a far more expeditious way to make out, not only most of the conclusions, wherein we agree, but others, that he mentions not." He related the improvements he had made in the conduct of experiments, invariably in the direction of simplification and greater efficiency, and did not hesitate to refute anything which, from his own observation, he found to be incorrect. For instance:

> The ingenious Monsieur Pascal would persuade his readers, that if into a glass vessel, with luke-warm water in it, you cast a fly; and, by a rammer, forcibly press that water, you shall not be able to kill, or hurt the fly. Which, says he, will live as well, and walk up and down as lively, in lukewarm water, as in the air. But, upon trial with a strong fly, the animal was (as we expected) presently drowned, and so made moveless, by the lukewarm water.

Boyle therefore substituted another experiment, which was not only more likely to succeed, but enabled him to measure the force to which "the included animal" had been exposed. Tadpoles were used instead of a fly, and it was found that these creatures easily survived the equivalent weight of three hundred feet of water upon them, since the water's pressure was exerted equally in all directions; and, from this, he concluded that a diver should be able to operate at such a depth unharmed.[10]

"Experiments, that are but speculatively true," Boyle wrote, "should be proposed as such, and may oftentimes fail in practice." Moreover, they were liable to bring the new philosophy into disrepute, for, if any research were founded upon an almost impossible experiment, "most men would rather reject the experiment as a chimerical thing, than receive for its sake a doctrine that appears to them very extravagant." Boyle's insistence in *Hydrostatical Paradoxes* upon accuracy and straightforward intelligibility both rendered Pascal's work more useful to English scientists, while advocating recognition of the many important discoveries Pascal had undoubtedly made. The early transactions of the Society frequently reveal attention being paid to matters closely related to Pascal's work, and, while the progress of research advanced or qualified his conclusions,

[10] Boyle, *op. cit.*, II, pp. 796-797.

his achievements in physics continued to be regarded as having lasting value. National considerations notwithstanding, most English scientists are one in showing respect for his abilities, and Lord Brouncker, the Society's first president, probably voiced an opinion widespread among the *virtuosi* when he commented upon a mechanical device Pascal had left in a preliminary state, "I canot doubt but that Monsr Pascal would [have] brought it to perfection." [11]

It is, perhaps, a little surprising that the *Pensées* were not published in English until eighteen years after they had appeared with success in France; but they did not lend themselves to religious polemics like the *Provinciales,* and, for a while, only enjoyed some reputation among those in touch with French thought or otherwise involved in the intellectual currents of the age. In 1675, Hooke recorded purchasing the small volume from the Royal Society's printer, although he returned it ten days later, perhaps because it was not sufficiently scientific; and, on Barrow's death in 1677, Newton listed both the *Pensées* and the *Provinciales* in a catalogue of his books. In 1688, however, *Monsieur Pascall's Thoughts, Meditations, and Prayers, Touching Matters Moral and Divine, As they were found in his Papers after his Death,* were "done into English" by Joseph Walker, a hack-writer of staunch Protestant convictions, who, interestingly, had developed some contacts with the Boyle family. He had earlier undertaken some translation for the statesman and dramatist Earl of Orrery, and dedicated another of his works to Michael Boyle, Archbishop of Dublin. Most intriguing to us, however, is his dedication of his version of the *Pensées* to Robert Boyle.

There is no definite trace in Boyle's writings of a familiarity with the Pascal of the *Pensées,* although Evelyn wrote to him regarding one of the supplements to the *Provinciales.* Seeing the circles in which Boyle moved and his general respect for Pascal's achievements in physics, some knowledge of the *Pensées* may surely be assumed. It is altogether most likely, however, that the translation was a business venture arranged by Jacob Tonson, a rising London publisher, who, aware of the success of *The Mysterie of Jesuitisme* and of the importance attached to Pascal's scientific writings, concluded that the *Pensées* in English would be a worthwhile proposition. Naturally the publisher must have hoped the name of Pascal would attract many potential readers, but he probably had in mind above all the interest of the *virtuosi* in Pascal's thought which very likely had suggested the project to him in the first place.

To attach by some means the name of Boyle to the book would have the dual effect of drawing upon that interest in Pascal typified

[11] Oldenburg, *op. cit.,* II, p. 547.

by the Royal Society, and also render Pascal's thoughts more acceptable to a wider audience for whom Boyle symbolized rectitude in religion as well as intellectual accomplishment. Walker's sentiments should thus be seen not merely as humble expressions of goodwill, but also as complying with Tonson's calculations as a businessman. With both ends in view, Walker developed his leading theme of resemblances between the two great men, seeing similarities at almost every turning of their lives. The flattery was ultimately intended, of course, to enhance Boyle; and it would be scarcely an exaggeration to suggest that, rather than appearing as an individual in his own right, the Pascal of the *Pensées* was introduced to English readers as a French Robert Boyle – as it were his counterpart across the Channel in the devotion he gave to both science and religion, one who, in spite of having lived amid "the Mists of Superstition," had possessed unusual virtues, and who might conceivably have been among the early members of the Royal Society :

> Monsieur Pascall was Nobly Descended, and a great lover of Vertue and Learning from his Infancy, Every body knows, Sir, you Eminently enjoy these Advantages.
>
> He was call'd a Christian Philosopher, and Mathematician; who knows not but your Honour deserves these Epithets, by the many Learned and Profound Treatises you have Compos'd. He made all his Works, and Actions of his Life, tend to the Temporal and Eternal good of Men : You have Employ'd your whole Life and Estate in Laborious Studying the abstrusest Recesses of Nature, for the Glory of God, of Religion, and the good of Mankind. as appears by your Excellent Treatise of the Stile of the Holy Scritures, &c. . . .
>
> I observe, and could Instance other particular Strains in Monsieur Pascall's and your Honours Works, and Life, which the World would be Proud to know; but I hold my Hand, and referr so weighty a Work to be perform'd by your Panegyrist. [12]

Most of Walker's remarks were full of praise for Boyle alone as a scientist, comparing the extent of his discoveries to the conquests of Alexander the Great. Ultimate commendation, however, was reserved for the manner in which Boyle had devoted himself to an upright life, informed by the new learning yet respectful of the dictates of God. By representing Pascal as clothed in Boyle's virtues as well as his own, Walker thus sharpened the distinction of each of them as men deeply interested in harmonizing religious belief with the methods and conclusions of rationalist philosophy.

One section of the *Pensées* at least, some comments upon the difference between "l'esprit de géométrie" and "l'esprit de finesse," had already been studied closely by certain prominent members of the Society, and called forth in 1685 a hearty correspondence be-

[12] Blaise Pascal, *Monsieur Pascall's Thoughts, Meditations, and Prayers . . .*, trans. Walker (London, 1688), Epistle Dedicatory.

tween Sir William Petty, the statistician, and his friend, Sir Robert Southwell, later the Society's President. The exchange originated with Southwell's sending a copy of the passage to Petty for his inspection, informing him that Pascal's views had proved acceptable to at least one of their fellow-members. In his argument, Pascal had sought to distinguish between two methods of reasoning proceeding from either very few or a great number of principles, their rival characteristics being, in Petty's words, "a witt strong in a narrow compass" and "a witt much extended but of little force." While recognizing the value of the former, Petty, as a man of the world, also saw advantages in the latter's ability "with a single glance of the eye to survey all business at once"; and, writing to Southwell, he criticized Pascal's propositions for lack of clarity and affirmed that a combination of both methods of reasoning might produce better results than either applied exclusively. Petty sought to test his opinion by examples from among the ancients – Archimedes, Aristotle, Hippocrates, Homer, Julius Caesar, Cicero, Varro and Tacitus – and the moderns – Molière, Suarez, Galileo, Sir Thomas More, Bacon, Donne, Hobbes and Descartes; and, from these, he deduced that "the good parts of men" consisted of :

> (1) Good Sences,
> (2) Tenacious memory of figures, colors, sounds, names &c,
> (3) A quickness in finding out, matching and compareing, as alsoe in adding and substracting the *sensata* layd up in the memory,
> (4) A good method of thinking,
> (5) The true use of words,
> (6) Good organs of speech and voice,
> (7) Strength, Agility, and Health of Body and of all its parts.

Out of these "Ingredients," Petty claimed he could make "an Archimedes, an Homer, a Julius Caesar, a Cicero, a chess-player, a musitian, a Painter, a dancer of the Ropes, a couragious Spark, a fighting fool, a Metaphysicall Swarez &c"; and he ended by stating his disbelief in how, according to Pascal's strict definitions, "all the above mentioned species of Transcendentall Men can be produced."

Southwell finally admitted he was much in agreement, remarking that "your Painter's Pallet is a more generous offspring of Colours and Ingredients to build up Heros of every sort." Their mutual curiosity partly arose from anxiety over the education of their sons, Petty considering Pascal too narrow and theoretical a guide for developing those men of parts he and Southwell wished their sons to be. He afterwards wondered if he had not been too idealistic, but the young Edward Southwell was already experiencing the effects of Petty's analysis, for his father next wrote :

> ... after your further enlargements of Monsr Paschall's materials of Ability, I have done my best to drive in those 7 spikes into our

young man's Scull which you have already Assigned, and am convinced those 7 Ingredients made up the 7 wise men of Greece. [13]

The emphasis placed upon this single, relatively inconspicuous passage from the *Pensées,* drawn from the final chapter composed of Pascal's miscellaneous thoughts, suggests it circulated separately in some form among a group of acquaintances in the Society, this fragment also being found among the papers of Samuel Pepys. [14] Once attention had been directed towards these propositions, however, it is not too difficult to see why interest should have been aroused. During the Society's early years, much importance was attached to those mental characteristics that made a man best fitted for the new learning; and Pascal's reflections, comparing the inductive method with other types of reasoning, would have seemed very relevant. In seeking to ascertain the true nature of the physical world, the *virtuosi* were aware of the extent to which they should rely upon an approach of objectivity, supported by experimentation, Pascal's own record by and large making him an acceptable mentor in their efforts. At the same time, they were cultivated men who had not forgotten that worthwhile knowledge might also be reached through intuition, and who were willing to believe that the most admirable type of man should hold several aptitudes in harmony. Pascal's discussion of the rival merits of "l'esprit de géométrie" and "l'esprit de finesse" demonstrated that he, too, had been conscious of benefits and deficiencies, and, although his definitions might seem arguable, they were still generally provocative.

One of the most influential of Pascal's readers at this time was John Locke, whose *Essay Concerning Human Understanding* was instrumental in bringing certain themes from the *Pensées* towards acceptance by a wider English audience than the membership of the Society included. Between 1675 and 1679, Locke travelled extensively in France, gaining there an acquaintance with the *Pensées* after an earlier knowledge of Pascal's experiments. He also became familiar with the scientific circles in which Pascal had moved, and grew interested in other writers of Port Royal. The whole experience resulted in enlarging and refining many ideas on subjects of a philosophical nature, which had largely originated through his intimacy with men in England devoted to the pursuit of the new learning.

It was during his stay at Montpellier in particular that Locke first read widely among French authors of the day, and we find he

[13] *The Petty-Southwell Correspondence, 1676-1687,* ed. Lansdowne (London, 1928), pp. 148-173; also Sir William Petty, *The Petty Papers,* ed. Lansdowne (London, 1927, 2 vols.), II, pp. 198-199. For the passage in question, see Pascal, *Œuvres, op. cit.,* XII, pp. 9-16.

[14] See R. W. Ladborough, "Pepys and Pascal," *French Studies,* Vol. X (1956), pp. 133-139.

eventually sent two copies of the *Pensées* back to England, together with a commentary and the *Lettres Provinciales.* Of special interest to us are the occasional entries in his journal when he chose to set down his expanding thoughts on several subjects; and, on July 29, 1676, some brief reflections on the problems of belief in God and the immortality of the soul supply the first sign that he had been reading the *Pensées.* In this attempt to establish the grounds for belief, he showed he had been struck by Pascal's famous argument of the wager; and, on February 8, 1677, over thirty pages were devoted to a number of reflections upon the limits of human reason and the insignificance of man, which were clearly indebted to Pascal. [15]

The appeal of these arguments obviously continued for Locke, for, when the *Essay* appeared in 1690, both passages from the journal, developed but not wholly transformed, found a place; moreover, when the second edition of the *Essay* was published, he inserted into a chapter on the powers and defects of memory the story of Pascal's ability of total recollection. [16] Pascal's influence may have slightly affected other aspects of Locke's thinking, while his apology for the *Essay*'s length – "to confess the truth, I am now too lazy, or too busy, to make it shorter" – is perhaps the first English expression of a phrase popularized by the *Provinciales;* [17] and it would seem to have been chiefly with respect to Locke's orderly mind, proceeding by way of definitions, that Voltaire later was prepared to pay him the strange compliment (from Voltaire's point of view) of being "le Pascal des Anglais." [18]

The impact of Locke's *Essay* upon English intellectual life was profound, and it was certainly one of the most widely-read books during the following century. By drawing upon instances of Pascal's reasoning, Locke must have assisted in introducing the next generation to Pascal's thought, both the *Essay* and the *Pensées* being simultaneously available in England. The argument of the wager, Pascal's theme of the contrarieties in man, and the story of his extraordinary memory all become widely known at about this time, due to a growing familiarity with the *Pensées* in French or English, but reinforced, no doubt, by Locke's presentation of them in his *Essay;* and it is evidence of the high standing of the two authors,

[15] R. I. Aaron and Jocelyn Gibb (eds.), *An Early Draft of Locke's Essay* (Oxford, 1936), pp. 81-82, 84-86. For a discussion of Locke's indebtedness to Pascal, see Gabriel Bonno, "Les Relations Intellectuelles de Locke avec la France," *Univ. of California Publications in Modern Philosophy,* Vol. XXXVIII (1955), pp. 37-264.

[16] John Locke, *An Essay Concerning Human Understanding,* ed. Fraser (Oxford, 1894, 2 vols.), I, pp. 364-366; II, pp. 215-216; I, pp. 199-200.

[17] *Ibid.,* I, p. 10.

[18] Voltaire, *Œuvres Complètes,* ed. Moland (Paris, 1877-1885, 52 vols.), XXXI, pp. 11-12.

also of the associations likely to be drawn between them, that, in 1704, the future Bishop Atterbury chose to crown an argument on the connection between morals and belief in the soul's immortality by joining their names and their words together. [19]

Locke described Pascal as "that prodigy of parts," and it is striking how much these early impressions were characterized by a sense of relationship between his various talents, which today perhaps seem more diffuse. The very immediacy of Pascal's achievements in itself created an appearance of unity, as they proceeded from the mind of the brilliant Frenchman who was still living during the years of the Society's formation. His mathematical and physical discoveries then bore the mark of novelty, the *Lettres Provinciales* had an unrepeatable freshness, and, as the *Pensées* became known, their arguments and reflections proved relevant to issues in the forefront of intellectual discussion. In some respects, for all its faults, Walker's dedication to Boyle managed to summarize this broader view of Pascal as he arrived on the English scene, recording it before any one feature overshadowed the others and before a composite view of his genius was newly derived from foreign sources; for, as intellectual enquiry gradually turned to larger questions of religion and philosophy than the Society had at first examined, there began for the *Pensées* a period of relative ascendancy over Pascal's other accomplishments.

We have noticed how certain readers able to comprehend the originality of the *Pensées* and Pascal's precise reasoning saw in that work, in spite of its unfinished state, a discussion of several matters of fundamental interest carried out in an appealing and forceful manner. Moreover, Pascal's literary style possessed great facility of expression, which was attractive to a group much concerned with exactness and simplicity in language. The *Pensées*, however, had been primarily conceived by their author as a Christian apology, founded upon an objective analysis of man and aiming to convert the sceptic, and many members of the Society shared Pascal's conviction that the new philosophy might ultimately serve best as the ally rather than as the enemy of true religion. As a result, when growing confidence led to new endeavours to place religion upon a more firmly rational foundation, the relationship between faith and reason depicted in the *Pensées* proved extremely applicable; and Pascal's portrait of man's contradictory nature, his place in the universe, and his search for happiness were found to be particularly intriguing.

[19] Francis Atterbury, *Sermons and Discourses on several Subjects and Occasions* (London, 1761, 4 vols.), II, pp. xxxix-xl.

The Pascal who, in 1704, was reported as "gay and brisk in the Ale and Coffee-Houses" owed much of his popularity to having treated such questions in ways that now lent themselves to deistic controversy; and, when Basil Kennett offered his translation of the *Pensées* in the same year, he notably emphasized Pascal's thought as a defence against complete free-thinking. Indeed, as fellow of an Oxford college, Kennett may be viewed as standing in a tradition of understanding towards Pascal as a Christian philosopher found at that university since the early days of the Society, which would flourish for several years to come. In such a context, it must have seemed entirely fitting to many that Pascal should have been compared to Boyle, who, in *The Christian Virtuoso* and by the lectures he established in his will, sought to defend the ways in which Christianity might benefit from the new learning; and that Pascal's name should be linked with that of Locke, who had written his own version of the reasonableness of Christianity, and was a thinker as much aware of man's limitations as his potentialities.

The eighteenth century, inspired by Newton's discoveries, would, however, become less persuaded by arguments of the reason's inadequacy; and, while Pascal's evaluation of man's predicament continued to fascinate many an English writer, culminating in its use by Pope in *An Essay on Man,* the scepticism generated by the rationalist outlook increasingly questioned the nature of his conclusions, also his manner of life. On the basis of a reputation fashioned in no small way by the approaches inaugurated within the circle of the Royal Society, Pascal thus came for a short while to enjoy a position of some eminence in English thought before being overtaken by some of the very forces which, previously, had identified with him most strongly; and, while he has never lacked English admirers, his early standing has not, perhaps, been equalled until the present day, when the contrast between man's powers and his deficiencies has once again been forced upon our attention.