

MEMOIRS  
OF THE  
ROYAL  
SOCIETY.  
VOL. 1.

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{506}

{10<sup>th</sup>/2}[reversed]

SOCIETATI  
LITERARIÆ  
SPALDINGENSI  
D.D.  
W. Stukeley  
rector  
D. Georgii in  
area  
Reginensi.  
1749.

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Meetings of the royal society

{These Memoires  
were read at the  
under written Meeting of SGS}

					{Minute B.5.V}
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MEMOIRS  
of  
the  
ROYAL  
SOCIETY.  
{in LONDON}  
taken  
memoriter  
by  
Wm: Stukeley

{Animas sapientiores fieri  
quiefcendo}

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[1]

MEMOIRS  
of the  
Royal Society

To

Maurice Johnson<sup>1</sup> esqr. founder, & ~~per {Pr.} petual secretary~~ of the Gentlemans literary society, in Spalding Lincolnshire.

[[who recieved them by the Carryer with other Books from his Bookbinder 9 March 1749/50 & delivered them to Dr Green<sup>2</sup> secretary who read the same to the Company at the Societys meetings as numberd and marked before them and in the minutes]]<sup>3</sup>

For the entertainment of the company that meet weekly, at your Society, held in the old seat of the Hobsons my ancestors; I have transcribed my papers of what I recollect, by memory, after our entertainment, at Crane court<sup>4</sup>. that entertainment, may truly be so calld! to persons of genius, & contemplation,

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<sup>1</sup> Maurice Johnson (1688-1755); SGS, 1712.

<sup>2</sup> Dr. John Green (1708-1756); SGS, 1729.

<sup>3</sup> This information, like the correction of 'perpetual secretary' to 'Pr.', is in the hand of Maurice Johnson.

<sup>4</sup> The Royal Society met at the north end of Crane Court, Fleet Street, London from 1710-80.

highly agreeable. & was indeed one of the inducements, that drew me to Town again; on the Duke of Montagu's<sup>5</sup> invitation.

You, my friend, with a zeal never enough to be commended, very early in life, erected your Spalding Society; & brought the Muses, into our native country {Elloe Holland Lincolnshire}<sup>6</sup>; which has the honor, to have been in old time, the cradle of the potent, Mercian kingdom.

for our great ancestor Hengist<sup>7</sup>, built Stamford castle, & was the founder of Stamford. the Saxons were lovers of freedom, & the pastorial life. descending the incomparable meadows, upon the river, for the sake of pasturage: they naturally came into our Holland, across the fens.

charmed with the richness, & security of the country; there the ancestors of the Mercian kings fixed their seat, about Spalding {where they had a Castle on Roman foundation}<sup>8</sup>: till growing numerous & strong, they returned to their

original Stamford, in regal splendor: & carried with them the Mercian title, derived from our Marsh country. X

[Facing page: X In domesday book, earl Algar possessed Tite, Lucton, Gadenea, Fleot, Holobech, & Spalling. king harold had Granham, Fulnodeby, Carleton, & all the Belvoir castle estate: uffington, Stamford: the earl of winchelseas estate by okeham: all the estate granted by the conqueror to the earl of Richmond. Tikencote, Ryhale, Caster, Peterborough, & very many more towns about Stamford belongd to the mercian family royal, as descendants of Hengist. the like of cliff, colliwston & indeed all Rockingham forest, & quite to peterborough. ulf brother to king harold owned ulfs oaks, now corruptly wulfox. wulsthorp near Stamford. & another near belvoir, belonged to him: another in colsterworth parish Sir Is. newtons<sup>9</sup> birthplace & estate.

Leak & Wrangle were king harolds, given to waltham abby.]

These memoirs, which I send you, can only give a general notion of what passes at the Royal Society: preserve, & refresh a memory of their transactions: or serve as a kind of index; to find what we want, in its original: if we consult their minutes.

You must be very candid, to such a performance as this. which is merely the effect of memory; when I return home. there may be many blunders, & errors. imperfect it must needs be: the variety of one paper confounding the idea's of a foregoing. but I have found both use, & delight in this method. & I wish it may be any entertainment to your Society.

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<sup>5</sup> John Montagu, 2<sup>nd</sup> Duke of Montagu (1690-1749); FRS, 1718.

<sup>6</sup> In Maurice Johnson's hand.

<sup>7</sup> Hengist and his borther Horsa were legendary leaders of the first Anglo-Saxons in Britain.

<sup>8</sup> In Maurice Johnson's hand.

<sup>9</sup> Sir Isaac Newton (1642-1727); FRS, 1672; SGS, 1724.

I was admitted in the year 1717. by our great country man Sir Isaac Newton. & when I left London in 1726, I regretted nothing so much, which I left behind, as the Royal Society.

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& on my return hither, to pass the remainder of my life; it is one of my chief amusements.

in november 1740. I went to live in winter time, in Gloucester street, for three years.

1.¶ 13 november. at the Royal Society {Fossil, petrif[action]s}<sup>10</sup>

Hans Sloan<sup>11</sup> discoursd a good while, upon fossils. & the certainty of their being the exuvi'a<sup>12</sup> of animals. some, says he, have grounded their opinion of their being lusus naturæ<sup>13</sup>, chiefly on this observation; that some fossil fishes are found which we do not meet with, at sea. therefore these say they are all made by the plastic power of nature, in the earth: when she finds congruous matter.

but Sir Hans says, in answer to this; that many of these species of fish shells, have since been found in the sea; that were thought before, not in being: except in the fossil kingdom. he mentioned several, in particular.

now I see no reason, but that some species of fishes, may possibly have been quite lost, in the deluge. Sir Hans thought the greatest

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difficulty relating to these matters, was, that fossil bodys are found, quite out of their climate: as elephants bones in England, & Muscovy; whales in Africa: corals &c with us.

I mentioned a great piece of corallium tubulatum<sup>14</sup> in my possession, taken out of the river ribble in Lancashire: tis as big as a mans head. another piece of red coral, dug up in Newark church yard.

Sir Hans says, in Berkshire is a quarry of Stone, near the surface; composd intirely of corallium stellatum<sup>15</sup>. the same is very common in jamaica: & in Wiltshire this is become agate; making when polishd, a most beautiful, starry appeareance. upon this occasion, the quarry of great oysters near Reading, was mentioned. I have one of them.

Mr Machen<sup>16</sup> proposd to answer this difficulty by supposing, that if the degree of the angle of the obliquity of the ecliptic<sup>17</sup>, has been changing from all time, as we have reason to believe;

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<sup>10</sup> In Maurice Johnson's hand. This note resembles the marginal glosses Johnson added to the SGS minute books and were intended to help readers locate information.

<sup>11</sup> Sir Hans Sloane (1660-1753); FRS, 1685, SGS, 1733.

<sup>12</sup> Exuvia, the cast-off outer skin.

<sup>13</sup> A deformed person or thing; freak.

<sup>14</sup> Tubular coral.

<sup>15</sup> Star shaped coral.

<sup>16</sup> John Machin (c1686-1751); FRS, 1710.

<sup>17</sup> The angle between the equator and the tropic of Cancer.

from the observations made in the days of Eratosthenes<sup>18</sup>, Ptolomy, & of the Arabian astronomers: so down to Tycho Brahe<sup>19</sup>, Mr Flamsted<sup>20</sup>, & Dr Halley<sup>21</sup>, compared together. then the alteration of climates has passd over the whole globe. but this was rejected, as being long before creation: if the matter it self be fact, that there is such a change, in that angle.

I took notice, that I thought, it might be solved more naturally, by the Mosaic deluge. for when the water was supernaturally raisd, 3 miles perpendicular, above the surface of the sea; so as to equal the top of the highest mountain, according to the Sacred description: then the tops of the hills, & high ground, was as much the bottom of the sea, as now is the bottom of the sea, properly speaking {(Genes[is] vii. 20. viii. 4. & 5. &c)}<sup>22</sup>

Sir Hans spoke of the variety in the petrification of these shells, whereof he has infinite numbers of specimens, in his museum<sup>23</sup>. particularly, a shell from a chalk hill in Surrey, partly chalk, partly chrystal. I answerd, that the chrystal was an exsudation<sup>24</sup> of the petrific juices out of the chalk, of a white color: as is plain, from the strata of the blackest flints most commonly found in chalk: being exsudations of a different color.

Sir Hans says, he has known sand laid at the bottom of a cistern, for the new river water, to percolate through, turned into stone: so hard, that they, after a years time, were forced to break it with a pick ax.

I mentioned, that last year, upon making the new turnpike road by Wansford bridg, they dug into a gravel pit by Stibbington. the upper stratum of the gravel was so hard, that they found great difficulty in breaking through it with pickaxes. underneath this, they found a perfect human sceleton. it was not far from the river. I took pieces of that upper stratum & found it so hard, as to bear a polish like granite: consisting of matter of different colors; it had a pretty appearence.

a paper<sup>25</sup> was read, containing a most surprizing account of two pendulum clocks, made similar, with extreme care. placing these close together, side by side, they were set agoing. after some hours time, one of the pendulums would vibrate shorter, & shorter. at last stand still. this was no. 1. set that clock going again: & stop the other no. 2. in a certain space of time, 2 would begin to move, & gradually increase

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<sup>18</sup> Greek astronomers: Eratosthenes (276-194 bce); Claudius Ptolemy (c100-c170).

<sup>19</sup> Tycho Brahe (1546-1601).

<sup>20</sup> John Flamsteed (1646-1719); FRS, 1676.

<sup>21</sup> Edmond Halley (1656-1742); FRS, 1678.

<sup>22</sup> In Maurice Johnson's hand.

<sup>23</sup> Sloane collected over 71,000 objects: books, manuscripts, drawings, coins and medals, plant specimens and other objects. He bequeathed his collection to the nation. The collection later became the foundation for the British Museum, Natural History Museum and British Library.

<sup>24</sup> Obsolete variant of exudation i.e. the process of excluding.

<sup>25</sup> By John Ellicott (c1706-1772), FRS, 1738.

the vibration of its pendulum, till the other clock no. 1. was stopt again. he tryed these strange phœnomena divers times, & found the same consequences: but did not pretend, to give a solution of it.

{analogy of all generation, } <sup>26</sup>

a letter was read, concerning the analogy, which nature observes, in the process of the production of plants, & generation of animals. the farina fœcundans<sup>27</sup> of a plant falling upon the seed, impregns it so, that being received into the earth, as an ovarium, by the afflux of proper juices, its little vessels expand, & become a plant. so in animals, the fœcundating seed of the male falls upon the seed (properly speaking) included in the female ovum: which ovum then falling down into the ~~illeg.~~ womb, shoots forth, by the continual accretion of proper nourishment, till it becomes a perfect animal.

upon this occasion, the gentleman<sup>28</sup> showed us, in a microscope, the seed of the gramen tremulum<sup>29</sup> which he has lately taken notice of, to have a very curious appearance. he exhibited it in its several forms,

as an egg of a plant: then the plant expanded: in its perfect form: he had made elegant drawings of them likewise.

another gentleman brought us a machine, to explain his new improvement of the pumps of a ship. he contrives 6 chain pumps, in the same space as one, at present. & insted of working them by a windlas, which has great inconveniences, he works them by a long chain, fastned to the adjacent mast before: another chain fastned to the mast abaft: each running round in a proper pully. by this means, 50 or 100 men may be applyd at a time, to the working these pumps: & that with the whole force of their inclined bodys, in pulling these chains round. whereas only 20 can use a windlas; & that by the strength of their arms alone. & even in that action, the whole strength of the arm, can be employed only in one part of the revolution.

further, this improvement may be applyed to all the decks of a ship, in an emergency; by which 3 or 400 men are set to work at once, without

hindring one another. there is likewise a contriveance, by discharging a bolt, to take off the working of one, or more pumps, at any time; as occasion may require.

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<sup>26</sup> In Maurice Johnson's hand.

<sup>27</sup> Pollen; literally the flour fertilizing.

<sup>28</sup> Probably Henry Baker (1698-1774); FRS, 1741.

<sup>29</sup> Quaking grass, also known as trembling grass.

he showd us further, how he has improved the use of the capstan, aboard a ship; to a degree equal to that above mentioned. in all which matters, we recommended him, to the encouragement of the lords of the admiralty.

2.¶ 20 novr. 1740. at the Royal Society.

a letter was read from Mr Short<sup>30</sup>, concerning a new discovery he had made, of a satellite to the planet Venus. it appeared horned, of the same figure, as Venus: & about a third part of its diameter.

another account was read, from a french gentleman, being the system of human generation; from the vulgar opinion of an animalcule in the male seed, dropping into the female ovary. he argues against the other opinion (which according to my notion of things, is the most probable) that the female ovary contains the sketch of the foetus: which the male seed impregnates. his chief argument is

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that in the egg, nothing can be found, but an uniform liquor: no sign of any rudiment, or type of a nascent foetus. but what is easily answered, by saying; such a thing may really be, though not visible to the naked eye, any more than the animalcula<sup>31</sup> in human seed. & as to the use of those animalcula, it seems to me they are only designed to keep the seed in a state of fluidity: till it be excreted. he likewise discourses upon the production of monsters.

monsr. Klein<sup>32</sup> privy counsellor to the king of Poland, & secretary, at Dantzick, sent the society a present of two books, which he has lately published: one concerning the hearing of fishes<sup>33</sup>, the other, a catalogue of all kind of formed stones<sup>34</sup>: upon the plan of Dr. Scheutzer<sup>35</sup>.

Mr. Stevenson brought some more of his improvements in mechanics. particularly, an horizontal millsail of a new contrivance, which works with much less wind, than usual: & avoyds the inconveniences of other sails. a machine of like contrivance, he says, would make a good

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water wheel, that would goe in the middle of a river, & under the water.

likewise he exhibited a contrivance of two water wheels, set at 100 feet distance from each other; with a chain going between: to run round them, furnished with flyers, to take the force of the stream. by this means, they will perform ten times as much, as ordinary water wheels: they receiving ten times as much, the force of the water.

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<sup>30</sup> James Short (1710-1768); FRS, 1737.

<sup>31</sup> A microscopic or minute organism.

<sup>32</sup> Jacob Theodor Klein (1685-1759); FRS, 1719.

<sup>33</sup> Jacobi Theodori Klein, *Historiae Piscium naturalis promovendæ Missus secundus de Piscibus per Pulmones Spirantibus AD iustum numerum et ordinem regigendis* (Litteris Schreiberiansis, Gedani, 1740).

<sup>34</sup> J. J. Scheuchzer, Jacobi Theodori Klein ed, *Sciagraphia lithologica curiosa seu: Lapidum figuratorum nomenclator* (Gedani, 1740).

<sup>35</sup> Johann Jakob Scheuchzer (1672-1733); FRS, 1703.

likewise he show[e]d two several models, of his invention, for raising water without valves.

an account of an occultation of jupiter, by ☽<sup>36</sup>, lately observed. the Duke of portland<sup>37</sup> was admitted a member: & Mr Arundel<sup>38</sup> master of the mint elected.

3.¶ 11. dec. 1740. at the royal Society.

Dr. Hartley<sup>39</sup> showed a parcel of human calculuses<sup>40</sup>, taken from the bladders of people, that had taken Mrs Stevens medicines<sup>41</sup>. they plainly appeared shattered, broken, & great parts of their laminæ<sup>42</sup> dissolved, & gone off. some of them, as that particularly, taken from Mr Carteret<sup>43</sup> late postmaster had a new crust

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superinduced, on the old ruins of the stone, which was owing to the petrific quality of his urine: again restored, after he had left off taking the medicines: which had given that dissolvent quality to his urine, before.

he presented to the Society, a pamphlet lately published, containing Dr. Stephen Hales's<sup>44</sup> observations, & experiments on the medicines. he thinks, their chief virtue consists in the lime, made of the egg shells calcined: which alone will dissolve stones. the herbs may as well be left out: as contributing very little to the cure: but swell the medicine to a nauseous quantity.

an account of experiments lately tryd at Wolwich, on gunpowder from Dantzick, compared to the english. whereby it appears, that several sorts of Dantzic gunpowder would raise a 20 lb weight 2.4.6 inches high: whereas all the english raised it to 6, & 7.

a drawing of a new invented cannon, that will be discharged 10 times in a minute. its contrived to introduce the charge, consisting of powder & ball, wrap'd up in flannel, into the breech of the

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piece, which is open. this is done by one man. another drives a square wedg of iron perpendicularly into the breech, at right angles to the piece. another is ready to fire it. another knocks up the wedg again. another puts in the charge; & so round. with some of these cannon, two regiments of Saxon troops defeated a much larger body of Turks: who had vowed to give 'em no quarter; at the late battle of Meadia.

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<sup>36</sup> Symbol for moon.

<sup>37</sup> William Bentinck, 2<sup>nd</sup> Duke of Portland (1709-1762); FRS, 1739.

<sup>38</sup> Richard Arundel (d.1757); FRS, 1740.

<sup>39</sup> Dr. David Hartley (1705-1757); FRS, 1736.

<sup>40</sup> Stones, or concretions, formed in the gallbladder, kidney, or other part of the body.

<sup>41</sup> In 1738 Joanna Stephens announced a cure for bladder stones and petitioned Parliament for £5000 to disclose it. Parliament agreed subject to a 'clinical trial' and full disclosure which Mrs Stephens accepted. Stephens' medicine consisted of a powder, decoction and pills, containing respectively calcined shells and snails, herbs boiled with soap, and calcined snails, burnt vegetables, honey and more soap.

<sup>42</sup> Layer of organic tissue.

<sup>43</sup> Edward Carteret (1671-1739).

<sup>44</sup> Dr. Stephen Hales (1677-1761); FRS, 1718.

an account from France, of the effects of lightning, which breaking into a smiths shop, happened on a file, to which it imparted a strong magnetic quality. it was observed by some of the company, that the contrary effect is often produced by lightning: which altogether destroys the verticity, in the mariners compass.

a present of a huge parcel of volumes, from professor wolffius<sup>45</sup>, being the whole collection of his works. Dr. Lobb<sup>46</sup> presented his book lately published, of the small pox<sup>47</sup>.

4. ¶ 18 dec. at the Royal Society.

Mr Collison<sup>48</sup> says, a garden bean set before christmas will

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produce much more, than one set after. the later bean generally produces about 14 pods: whereas the other produces 90. tis but a fortnight earlier in fruit, than those set later.

a second letter was read, from monsr. de Lisle<sup>49</sup> at Paris, concerning his invention of the longitude: by means of two fixt points in the heavens, opposite to each other. whence at any time, & in any part of the globe, by sea or land, he can, by calculation, point out the longitude; as well as we commonly do the latitude.

a long dissertation of monsr. celsius<sup>50</sup>, about a runic coyn found often in Sueden, & sometime in England, inscribed Thurgut Luntis. tis mentioned by the bishop of London, in his notes on Camden<sup>51</sup>, p. 814. by Mr Thoresby<sup>52</sup> ducal. leod.<sup>53</sup> by Sir A. fountain<sup>54</sup>, in his letter to Ld Pembroke<sup>55</sup>, in Hicke's thesaur. septen.<sup>56</sup> {who makes it of London}<sup>57</sup> & other writers: but not rightly understood by any of them. he says, he learnt the truth from one Dithmarus a Suedish writer, cotemporary with this Thurgut, who lived in 1016; & was general to Hardicnute the dane<sup>58</sup>; who in that year invaded england, beseiged

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<sup>45</sup> Christian Wolffius (1679-1754).

<sup>46</sup> Dr. Theophilus Lobb (1678-1763); FRS, 1719.

<sup>47</sup> Theophilus Lobb, *A Treatise of the Small-pox. In two parts*, (London, 1731).

<sup>48</sup> Peter Collinson (1794-1768); FRS, 1728.

<sup>49</sup> Joseph Nicholas Delisle (1688-1769); FRS, 1725.

<sup>50</sup> Andreas Celsius (1701-1744); FRS, 1736; SGS, 1735.

<sup>51</sup> Edmund Gibson, *Camden's Britannia newly translated into English, with large additions and improvements* (F. Collins, London, 1695).

<sup>52</sup> Ralph Thoresby (1658-1725); FRS, 1697.

<sup>53</sup> Ralph Thoresby, *Ducatus Leodiensis; or the Topography of the antient and populous Town and Parish of Leedes and parts adjacent in the West Riding of the County of York* (1715).

<sup>54</sup> Sir Andrew Fountaine (1676-1753).

<sup>55</sup> Thomas Herbert, 8th Earl of Pembroke (1656-1733); FRS, 1685.

<sup>56</sup> George Hicke, *Linguarum veterum. septentrionalium thesaurus grammatico-criticus et archæologicus*, 2 Vols (1703-1705).

<sup>57</sup> In Maurice Johnson's hand.

<sup>58</sup> King of Denmark from 1035 to 1042 and King of England from 1040 to 1042.

London, & was killd in a foraging battle near London. he thinks, the coyn was struck by this Thurgut; & relates, either to our London, or Lunden in Scania. but he is not mentioned by any of our writers.

a letter from Dr. Huxam<sup>59</sup> of plymouth, concerning a remarkable case of a venereal patient, who had been repeatedly poxed, had got the yaws<sup>60</sup> too, as calld, in the west indies, with impure commerce with the indian women. it was the most deplorable case that human nature can well be reduced to: & brought into our minds Jobs calamity: which, no doubt, was the utmost degree of misery, the devil himself could inflict on a mortal. the man dyed.

Boerhave<sup>61</sup> observes, the seat of the pox to be in the membrana adiposa<sup>62</sup>. Dr Huxam found this true. in his patient, it consumed all the fat of his body: & then turned to the fat of the vitals: in this case, like the gout.

Mr auditor Benson<sup>63</sup> presented a fine quarto book of the psalms of David, translated into elegant hexameter, & pentameter verse, by Dr. Arthur Johnston<sup>64</sup> physician to C.I.<sup>65</sup> in usum principis<sup>66</sup>. there are notes, all the way accompanying the text. many other

sacred poems are added.

a letter from a german gentleman, concerning an earthquake, that happened in that country. he says too, at blowing up a rock, he found many shells, remains of the deluge. he speaks of a whirlwind in form of a pillar, or spout, as we call them; that tore up trees by the roots; & carryed them to a considerable distance: turned some houses, quite contrary way, to what they stood before: & carryed some others to a distance.

5. ¶ 8. jan. 1740.1. at the Royal Society.

Dr. Plumtre<sup>67</sup> brought a stone lately taken from a son of Sir John Billers's<sup>68</sup>; corroded, & in appearance like those brought by Dr. Hartley; which he supposes, had been wrought on, by Mrs. Stevens's medicines. he brought likewise a large stone branchd out several ways, as big as ones hand; taken out of the pelvis of the kidney of a nobleman, who lived to be above 70. drank very hard; rode much a hunting; & felt no inconvenience.

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<sup>59</sup> Dr John Huxham (1692-1768); FRS, 1739.

<sup>60</sup> A tropical infection of the skin, bones and joints caused by a bacterium called *Treponema pertenue*.

<sup>61</sup> Dr. Herman Boerhaave (1668-1738); FRS, 1730.

<sup>62</sup> Lipid membrane.

<sup>63</sup> William Benson (1682-1754); Auditor of the imprest of George II, 1735-1754.

<sup>64</sup> Dr. Arthur Johnston (c1579-1641).

<sup>65</sup> King Charles I (1600-1649).

<sup>66</sup> Arthur Johnston, trans, *Psalmorum Davidis paraphrasis poetica: Cum indice vocabulorum*. The psalms of David according to the translation in the English Bible (London: 1740)

<sup>67</sup> Dr. Henry Plumtre (d. 1746); FRS, 1707.

<sup>68</sup> Sir John Billers, son of Sir William Billers (1689-1745); FRS, 1726; Lord Mayor of London 1734.

Sir James Louth<sup>69</sup> gave an account of a fire

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damp, in his coal-works at Whitehaven: which he carries off, by a pipe brought from the bottom of the pit, to the surface; where tis branchd out into three, which continually emit a flame half a foot in diameter, & half a yard high. Sir James says, his mine of coal is carried under the main ocean, as far as they can get air; being 100 yards perpendicular, under the surface of the water. he employs 3 fire-engines to draw the water off: one the biggest ever yet usd. his coal works are the deepest in the world. the deeper they goe, the better, the coal. Mr Roger Gale<sup>70</sup> & I went into this work, 1725.

an abstract or account of Mr auditor Bensons new edition of Dr. Johnstons psalms of david turned into elegiac verse, drawn up by my self, was read. tis a detail of that prefatory discourse, which mr Auditor presented along with the book, to the society. it contains the rules of the art of versification, learnt from Virgil, & other authors of the augustan times: & the comparison between the

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performances in poetry, of the antients & moderns. dr. johnstons work is exceedingly commended by this learned critic.

an account from paris, of the method of making china ware there.

an account from dr. graham<sup>71</sup> of nottinghamshire, of a girl who over straining her self in lifting, felt a violent pain in her belly; which grew worse & worse, till it killd her. she was opened, & many odd appearences observed; preternatural<sup>72</sup> humors in the abdomen; a wonderful thickness in the peritoneum<sup>73</sup>; no water in the pericardium<sup>74</sup> &c.

6. ¶ 15. jan. 1740-1. at the Royal Society.

Dr. Hartley brought again the human calculus's taken from people, who had taken Mrs. stevens's medicines; to obviate Dr. plumtre's insinuation. it appears, the stones are very different. these are manifestly in a decreasing state, exceedingly corroded, & carious: not so of the other stone.

Mr Dunkthorn<sup>75</sup> servant to Dr Long<sup>76</sup> of Pembroke hall, sent his observations of two small

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<sup>69</sup> Sir James Lowther, 4<sup>th</sup> Baronet (1673-1755); FRS, 1736.

<sup>70</sup> Roger Gale (1672-1744); FRS, 1717; SGS 1728.

<sup>71</sup> Dr Walter Graham (d. 1742).

<sup>72</sup> Beyond what is normal or natural.

<sup>73</sup> The serous membrane lining the cavity of the abdomen and covering the abdominal organs.

<sup>74</sup> The membrane enclosing the heart.

<sup>75</sup> Richard Dunthorne (1711-1775).

<sup>76</sup> Dr Roger Long (1680-1770); FRS. 1729; SGS, 1733.

comets, that had passed by us lately: which he observed with the telescope, in taurus. one had a nebulous appearance quite round it: the other had a falcated<sup>77</sup> tail: like a new moon. he observed 'em, several nights in motion, till they went quite out of sight.

Dr. Desaguliers<sup>78</sup> gave us a discourse, containing the general laws of electricity; whether in vitreous, or resinous bodys; which he promised to explain by experiments.

a letter was read, from a physician, containing a remarkable case of a maid 17 years of age, to whom he was called by a midwife, who pretended to deliver her: & said, the child's head was come into the world. the girl was siezed with swooning fits, delirium; & had a total suppression of urine, for some time, & a considerable protuberance, or swelling out of the vagina, which the women took for a child's head. when he carefully examined the affair, he fancied at first, it had been a prolapsus uteri<sup>79</sup>, but he could find no ostincaë, or passage. at length, he discovered it to be an

imperforate hymen. & that the matter of the menstrua flowing down, from time to time, had by force, & weight, made that preternatural tumor. so he introduced a catheter into the urinary passage, & let off the water of the bladder, stopt by the tumor. then he made an incision into the hymen; & let out the blood contained there: & restord the girl to perfect health, & saved her reputation. some drawings of the part were sent with this account.

Mr Lyn<sup>80</sup> of suthwic, northamptonshire sent his 14 years observations meteorological, with tables of the mean height of barometers, thermometers, fall of rain, weather &c for every year.

7. ¶ 22 jan. 1740-1. at the Royal Society.

Dr. Desaguliers showd some electrical experiments, to prove some of his laws of electricity; which he had laid down, the preceding meeting. particularly to prove a difference between the electricity of resinous, & of vitreous bodys.

a very great stone taken out of the bladder of an ox, belonging to the repository of the society, was exhibited; weighing many pounds. tis thought the largest animal calculus known.

Dr. Hartley exhibited a stone, for which a man had been cut; extracted out of the cicatrix<sup>81</sup> some years after.

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<sup>77</sup> Hooked or bent like a sickle.

<sup>78</sup> Dr. John Theophilus Desaguliers (1683-1744); FRS, 1714; SGS, 1730.

<sup>79</sup> Prolapsed womb.

<sup>80</sup> George Lynn (1676-1742); SGS, 1719.

<sup>81</sup> The scar of a healed wound.

Sir Hans Sloan knew a case of a woman, who pulld a stone out of an ulcer in the abdomen, which had workd its way out of the ureter. (as its thought) having first been dislodged thence, by an accidental kick.

a paper was read, of a ditch in lancashire by a coal mine; which takes fire by holding a peice of lighted paper to it. some of the coal was put into chymical glasses, & the spirit of coal drawn from it, which took fire with a lighted candle: & was received into bladders, & let out again in a flame: like those Sir James Louthier exhibited before us, from his coal-works, at Whitehaven.

Lord Petre<sup>82</sup> gave a paper, wherein is an account from Burton in sussex, of the bones of an elephant, lately found there in digging, under the natural earth, 8 or 9 foot deep. most of the bones were found. the animal was full grown:

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& of an enormous size. the two tusks were found, about 9 foot long each. 2 lesser tusks: the grinding teeth &c. the bones were not much in situ, but disjointed. the two tusks were 20 foot asunder, from each other. both tusks, & bones were rotten, & friable<sup>83</sup>, through long time.

Sir Hans Sloan recited a like case, of an elephants intire sceleton, found in a sand hill in germany. part of the scull was sent to him, full of its cellular apartments, in the outward part, to render it light; as is commonly observed, in the scull of that animal. the sand hill was dug away for use of the neighborhood, & discoverd this antediluvian<sup>84</sup> curiosity.

8. ¶ 29. jan. 1740-1. at the Royal Society.

Sir Hans Sloan president brought the most part of a huge oxes head, with the boney nucleus of the horns, found lately, in digging a gravel pit, at Brentford. the creature is not known to exist, at present. tis much larger, than the largest of our oxen. he brought likewise some very

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large drawings of a like oxes head, of exactly the same dimensions, found some years agoe, near Dantzick. of which he has given an account in the Phil. Trans.<sup>85</sup> together with the drawings.

discoursing on these remarkable appearances, & of the elephants bones frequently found in england, & elsewhere: he says, count marsigli<sup>86</sup> who was the emperors commissary to settle the limits, between the imperial, & turkish dominions, observed, they are often found in higher hungary. they think there, that the creatures were brought thither by the Romans. so some people have thought here. but Sir Hans rightly observed against that opinion, that no one would be so ridiculous, as to bury their ivory teeth; which are of high price with all nations, & ever were.

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<sup>82</sup> Robert James Petre, 8<sup>th</sup> Baron Petre (1713-1742); FRS, 1731.

<sup>83</sup> Easily crumbled.

<sup>84</sup> Antediluvian: of or belonging to the time before the biblical flood.

<sup>85</sup> *Philosophical Transactions*, the Royal Society's scientific journal.

<sup>86</sup> Count Luigi Ferdinando Marsigli (1658-1730); FRS, 1691.

Sir Hans has a tooth of this creature, found near Pancras. & I gave him one, several years agoe, thought to have been a giants, by the country people, found near Newark: near where the stone came from, that I gave to the R.S.<sup>87</sup> containing the intire sceleton of a crocodile in-

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crusted in the stone. in the whole, there can be no doubt, but these appearences are the effects of the deluge; equally as those trappings in the strata of coalmines: plainly showing, there has been a convulsive disorder, in the bowels of the earth; brought about at that time, though nothing like what woodward<sup>88</sup>, & whiston<sup>89</sup> would have.

lord lovel<sup>90</sup> was admitted a member. the hon[oura]ble Mr York<sup>91</sup> eldest son of lord chanc[ello]r proposd & elected.

Sir H. sloan president brought curious drawing made in china, of a particular thea plant, that bears a most beautiful red flower, like a rose. which plant now grows in Lord petres garden, brought alive from china. other flowers, & vessels were painted in the same drawing: & the manner how the chinese put such flowers into vessels: in order to preserve them.

Sir Hans observed, the chinese ladys never go abroad. therefore they find out many methods of diverting themselves at home, with those golden & silver fishes, kept in water, & other kinds of animals; with painting, drawing, cultivating flowers,

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& a thousand other fancys.

an account was read, of the method of making soap, at alicant: by oyl olive, boild for a considerable time, with potashes, & quick lime, with a little verdigrease<sup>92</sup> put to it.

[[{P}]]<sup>93</sup>

two specimens of a very fine kind of turpentine, from the west indies: as good as balsam of capivi, for medical uses. one had a finer smell & flavor, than the other: somewhat like the balm of gilead<sup>94</sup>, brought by mocha<sup>95</sup>, from arabia foelix<sup>96</sup>: which the grand seignior<sup>97</sup> makes presents of.

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<sup>87</sup> Royal Society

<sup>88</sup> John Woodward (1665-1728); FRS, 1693.

<sup>89</sup> William Whiston (1667-1752).

<sup>90</sup> Thomas Coke, Baron Lovell (c1695-1759); FRS, 1735 & 1740 as Baron Lovell.

<sup>91</sup> Philip Yorke, 2<sup>nd</sup> Earl of Hardwicke (1720-1790); FRS 1741.

<sup>92</sup> A blue or green powder consisting of basic copper acetate used a pigment and fungicide.

<sup>93</sup> In Maurice Johnson's hand.

<sup>94</sup> A rare perfume used medicinally, mentioned in the Bible, and produced in the region of Gilead.

<sup>95</sup> A port city on the Red sea coast of Yemen.

<sup>96</sup> Arabia Felix was the Latin name previously used to describe south Arabia or what is now Yemen.

<sup>97</sup> The sultan of the Ottoman Empire.

a list of the surgeons company from paris, printed on a large sheet. likewise the prize question proposd by that company, for next year: on the repercussion of bodys: as applyd to surgical purposes.

9. ¶ 5.feb. 1740.1. at the Royal Society.

Sir H. Sloan president brought us an ourang outang from borneo. it dyed in the voyage. they took out the viscera<sup>98</sup>, & brain, put it into a cask of arrack, & brought it home. when taken out of the cask, they dyled it by the fire, put eyes into the head, & placed

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placed it in a sitting posture. it has very long, strait hair, all over the body, hanging downward, when in an erect posture. whence we gather, it chiefly usd that posture.

dr. desaguliers gave an account of his late experiments on electricity. especially his deductions therefrom. this amazing quality in bodys, which may be communicated to 800 foot in length, was first taken notice of in england: first cultivated by my fr[ien]d Mr Stephen gray<sup>99</sup>, who often visited me, & his nephew dr. john gray, afterward physician at canterbury: at Bennet college together. where he usd to entertain us with electrical experiments. this was in the year 1705. since then it has surprized, & employed all the philosophers of Europe. the dr. designs to publish a treatise about it. his paper tended chiefly to show the difference between vitreous, & resinous electricity.

{Sara Courée soup}<sup>100</sup>

the president had a letter read, concerning the birds nests from china, which are used in food, for soops. they are made by swallows, who gather

{Capt[ai]n Johnson<sup>101</sup> presented one of these nests to SGS}<sup>102</sup>

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a plant growing by the sea, fucus marinus feniculaceus, which they swallow. when digested, they vomit up, & make their nests of it: ag[ains]t the rocks. as our swallows do with clay. these nests are gathered, & usd in soops, by the chinese, as a very great delicacy. they boyl it first in warm water, then put it into veal broth. a nest was brought out of the repository, with the bird sitting upon it: likewise the plant.

a letter from north america, showing how they may mesure a triangle of 150 miles long, in a strait line, running north & south, in hudsons bay, when frozen over; in order to find out the figure of the earth. but it was observed, we must mesure degrees near the pole, & near the equator, for that purpose: whereas this country is in the midway.

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<sup>98</sup> The internal organs in the main cavities of the body, especially those in the abdomen.

<sup>99</sup> Steven Gray (c1666-1736); FRS, 1733.

<sup>100</sup> In Maurice Johnson's hand.

<sup>101</sup> Colonel Maurice Johnson (1713-1793); SGS, 1733.

<sup>102</sup> In Maurice Johnson's hand.

a letter from dr. James<sup>103</sup>, to Sir H. Sloan; giving an account of his successful experiments, in giving turbith mineral, to men & animals, bit by mad dogs. even after the hydrophobia. he took the hint from observing, the foam, & frothing at mouth, in all creatures bit; when the fever arises. this

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indicated natures attempt, critically to discharge the poisonous matter, by the glands of the fauces<sup>104</sup>. that the inflammation brought upon these parts, was the reason of their aversion to water; because of the extreme soreness. but mercurials administred bring the saliva so plentifully, as to enable nature to make a salutary excretion, of the morbid matter. he gives many instances of cures, both in men, dogs, & other creatures.

an account of an astronomical clock; which was refered to Mr Graham<sup>105</sup> to look over, & report.

dr. mortimer<sup>106</sup> brought a long, flinty instrument sharp pointed at both ends, with 3 holes in it. it was brought from among the indians, in america. he judges it to have been usd for drawing wire through. my opinion is, that it was an instrument of offence. the holes were for fastning it. this was the figure of it.

[image]

10. ¶ 12 Feb. 1740-1. at the Royal Society.

the remainder of a paper was read,

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concerning the use of mercury, internal & external: in the cure of a bite of a mad dog. many letters concerning it: & cases of cures recited by dr. James.

an account of dr. frobenius's<sup>107</sup> ethereal spirit<sup>108</sup>: the whole process of preparing it. the dr. brought a furnace into the repository, & showd it.

two new plants from Switzerland, undescribed, now described in a letter to Sir H. Sloan.

the duke of leeds<sup>109</sup> admitted a member.

11. ¶ 19. feb. 1740-1. at the Royal Society.

dr. frobenius showed the experiment of his ethereal spirit. how by putting a drop of it into a spoon, & holding it over a candle, it dos not fly away, as other spirits; but draws its self together,

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<sup>103</sup> Dr. Robert James (1705-1776).

<sup>104</sup> The arched opening at the back of the mouth leading to the pharynx.

<sup>105</sup> George Graham (1675-1751); FRS, 1721.

<sup>106</sup> Dr. Cromwell Mortimer (c1699-1752); FRS, 1728; SGS, 1737.

<sup>107</sup> Joannes Sigismundus Augustus Frobenius (d. c1741); FRS 1730.

<sup>108</sup> Frobenius's ethereal spirt was ether.

<sup>109</sup> Thomas Osborne, 4th Duke of Leeds (1713-1789); FRS, 1739.

like a drop of quicksilver. he showed its power in extracting the essential oyls of plants, without distillation.

Mr Graham brought abundance of curiosities, found in the bottom of the thames, in digging for the foundation of the 5th. peer. a long broad sword, a short sword, which I take to be roman. thus.

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[31]

{Roman Muir<sup>110</sup>}

[image]

many horns of deer; a forehead of the skull of a sheep: a horn, or rather the nucleus of a horn, of the great antediluvian ox. a piece of antediluvian oak, from a large tree, which they dug up. several odd formed stones, shells, & mineral substances. several roman, english, & tradesmens coyns, easterling farthings<sup>111</sup> &c. & what is remarkable enough, a cheshire cheese, found 2 foot deep. it lasted perfectly good.

the remainder of dr. james's paper was read, concerning the cure of the hydrophobia, by mercurials; with more cases recited. & a method prescribed, in that dreadful malady. he says, the wound always grows sore, & festers, when the fever begins. but if it heals up, & scabs, there is generally no danger. for many people are bit, that never suffer from it; as in the case of inoculating for the smallpox: if the blood be not in a state proper for receiving the poison. the bite of the dog, is truly

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inoculating the madness from the dog, into another creature. & when they inoculate for the small pox, the wound grows sore, & festers; when the fever begins. but if it scabs, & dries up, the inoculation will not take effect; as in the former case.

{Sir Cob for Bite of a Mad Dog<sup>112</sup> ↗<sup>113</sup>}

he speaks of the chinese remedy, cinabar<sup>114</sup> factitious, or native, & musk. he supposes the cure to proceed from the cinabar: & in that, from the mercury contained in it. for the factitious cinabar consists of 3 parts mercury. the musk being an animal substance, consequently alcalic, can do no harm in the case; & he believes, no good. but the easterns use these perfumes, without prejudice; which we cannot.

he would have a mercurial unguent, like that made by Mr John Douglas<sup>115</sup> the surgeon, applied to the wound: whilst you give mercurials inwardly, so as not to salivate.

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<sup>110</sup> In Maurice Johnson's hand. Meaning unclear.

<sup>111</sup> Silver quarter penny, believed to derive its name from the German coin makers who made the first farthings in England in the reign of Henry II.

<sup>112</sup> Sir George Cobb, 3rd Baronet (c1670-1762) contributor to *An Infallible Cure for the Bite of a Mad Dog* (1752).

<sup>113</sup> In Maurice Johnson's hand.

<sup>114</sup> Cinnabar: a bright red substance consisting of sulphide of mercury; when pulverised it is called vermilion.

<sup>115</sup> Dr. John Douglas (d. 1743); FRS, 1720.

a discourse was read, concerning the power of hot water steam, above that of rarified air. an experiment was tryed with papins digester<sup>116</sup>, in the

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kitchin at Elton, by wansford<sup>117</sup>. they put in two ounces of a marrowbone, with a few spoonfuls of water. screwing it down, & setting it on the fire, it soon broke the engin, & went off with an explosion like a musket. repeating the experiment. in a better manner, it dissolvd the bone, in a few minutes.

some plants from the madera islands, described.

a discourse in high dutch, concerning the longitude; which the society declined reading, under a mistaken notion; that because they are neither appointed the judges, nor distributors of the reward: therefore have no business to take cognizance of it. as if the longitude was no part of their province, no part of natural knowledg. whereas the royal founder must needs judg it a material point of his institution. thus they have, from time to time, injudiciously discouraged the learned of europe, from communicating their studys to the society, relating to this inquiry. which, at least, might have a chance of starting hints, some ways useful. & thus they put the

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society out of the chance, of having the honor of being concerned in this important discovery: if ever it should be found out.

though they are not the distributors of the reward, yet they are competent judges, of such as deserve it. the lords of the admiralty are neither famed for their skill in such studys: nor probably would give the reward, without the approbation of the royal society. but at all events, the society need not deprive themselves, of the entertainment to be had, in such discourses; which certainly aim at the improvement of n[at]ural knowledg: which most tends to the glory, & the interest of a maritime power.

12. ¶ 26 feb. 1740-1. at the Royal society.

my fr[ien]d Mr Beighton<sup>118</sup> gave us a long account of his improvements, on that old instrument, the plane table; for surveying: which he prefers to theodilits<sup>119</sup>.

a letter concerning a method, which a gentleman has found out, for reducing distorted spines; & preventing people growing crooked.

monsr. de lisle from petersburg, sent us word, that he was unsuccessful, in the long journey north-

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<sup>116</sup> A high-pressure steam cooker for extracting fats from bones which renders them brittle enough to be easily ground into bone meal. Invented by Denis Papin (1647-1713).

<sup>117</sup> Probably Elton Hall home of John Proby, 1<sup>st</sup> Baron Carysfort (1720-1772).

<sup>118</sup> Henry Beighton (d. 1743); FRS, 1720.

<sup>119</sup> Theodolite, an optical surveying instrument for measuring horizontal and vertical angles.

ward, which he took, in order to make his observations on the transit of mercury over the suns disc. the day proved cloudy. it was as far as the river oby. he recommended a gentleman that lives there, for a member of the society; from whom we may expect a correspondence.

Mr Stirling<sup>120</sup> first found out, that the earth was of a spheroid form. Mr Machen is writing concerning it. he assents to Dr. Halleys notion, that there is an internal globe.

an account of the cures of distempers, by the west indians, which consists chiefly of herbs, & simples<sup>121</sup>.

a map of the country round tybur in italy, presented to the society.

13. ¶ 4 March 1740-1. at the Royal Society.

dr. desaguliers tryed some electrical experiments, to prove some of his former propositions laid down, concerning electricity: particularly, that though there be a difference between the electricity of vitreous, & resinous bodys, so that the one attracts, what the other repels: yet a long rod of iron, glass, or the like laid horizontal, will convey the electricitys of both sorts equally together; so as to

attract a fether of down, leaf gold, or the like light bodys, at the other end; at any distance: & repel them.

the continuation of the account, of the natural history of Virginia, was read; which was wrote many years ago<sup>122</sup>, in answer to some quære's by the great Mr Boyl<sup>123</sup>. it was found among the bishop of Corks<sup>124</sup> papers; & communicated by lord percival<sup>125</sup>.

it recites the method of physic among the antient native indians, which consists chiefly of simple herbs: but with which they seem to do wonders. one I took particular notice of, in a dropsy: they burn the wood of a certain tree, to a charcole. with grease they work the powder of it, into an unguent; with which they anoint the whole body of the patient, rubbing it on very strongly. this puts the patient into a most violent sweat; so that it runs down their legs, in streams: & in short, evacuates all the water of the disease, through the cuticular pores.

this put me in mind of the trifling objection ag[ains]t my gout oyls<sup>126</sup>, often raisd by the ignorant: that they stop perspiration.

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<sup>120</sup> James Stirling (1692-1770); FRS, 1726.

<sup>121</sup> Term for some herbs with medical properties.

<sup>122</sup> By Revd. John Clayton (c1656-1725); FRS, 1688.

<sup>123</sup> *Philosophical Transactions* citation (Vol 41, 1740, issue 454, p. 143-162) says in answer to queries from Dr. Nehemiah Grew (1641-1712).

<sup>124</sup> Revd. Robert Clayton (1695-1758); FRS, 1744.

<sup>125</sup> John Percival (also Perceval), 1st Earl of Egmont (1683-1748); FRS, 1701.

<sup>126</sup> Stukeley endorsed and promoted "Dr. Rogers's Oleum Arthriticum, a specific oil for the gout".

the antient method among the Virginians, is to give a rescript, of the efficacy of any herb, that has

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cured a disease, to be laid up in the temple. whence the priests became the chief physicians. & thus it was among the antient greeks. for hippocrates learnt much of his skill, from these kind of prescriptions, in the temples.

lord percivale says, these indians have a custom, once in the year, on a certain day, to put out their fires, throughout the whole country, on a great festival. then they chuse one man, the most innocent among them, who builds a great pile of faggots. he lives 3 days privately in a wood, is painted white, in token of his innocency. he then, in sight of the multitude, performs many solemn devotions, preaches to them: directs them, not to murder, not to tell lyes, which they have a great abhorrence of: not to commit adultery, with them a capital crime: not to use the name of god profanely, which they are commonly very careful of: together with many other principles of morality. then he kindles fires by rubbing two sticks together, with which he sets the pile of wood on fire. when tis burnt out, every one carrys a lighted brand home with him, to kindle his own fire by, all the year after.

this was a patriarchal custom: & our druids

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used the same, on may 2. which day, the Scots now call belt[a]in; as the druids; meaning bells fire. of which Mr Toland<sup>127</sup>, in his history of the druids<sup>128</sup>.

my lord says further, that some of these indian nations circumcize. whence one wd. be apt to imagin, {☞}<sup>129</sup> that the northern america was peopled from tartary: whether some jews were banishd, in the first captivity. they have likewise a notion of the great deluge: & of a canoo, that was conducted to a high hill, by means of a white eagle.

a letter to mr. collison<sup>130</sup>, from the gardiner<sup>131</sup> at lord burlingtons<sup>132</sup> seat in yorkshire, lonsborough; giving an account of plants observed in a tour last summer, in yorkshr. particularly mistletoe, on several sorts of trees; & among the rest, on oak.

14. ¶ 12. march 1740-1. at the Royal Society.

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<sup>127</sup> John Toland (1670-1722)

<sup>128</sup> John Toland 'Specimen of the critical history of the Celtic religion and learning: containing an account of the Druids', in Pierre Desmaizeaux ed., *A Collection of Several Pieces of Mr John Toland*, 2 Vols (J. Peele, London, 1726).

<sup>129</sup> In Maurice Johnson's hand.

<sup>130</sup> Peter Collinson (1694-1768); FRS, 1728.

<sup>131</sup> Henry Scott gardener to Lord Burlington at his Chiswick House made a journey to his Yorkshire estate in 1738.

<sup>132</sup> Richard Boyle, 3<sup>rd</sup> Earl of Burlington and 4<sup>th</sup> Earl of Cork (1694-1753); FRS, 1722.

part of a letter was read, from dean coppen<sup>133</sup>; being a n[atu]ral history of the county of antrim, in ireland: a description of all that occurs there, remarkable, in art, or n[atu]re.

Sir H. Sloan president brought a buffalo's head, & horn, from the east indies, of an enormous bulk: but of the ordinary size there. another from the

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west indies, much less; of this form, & proportion.

[image]

Sir Hans says, the antediluvian head, & horns here exhibited lately, which was found at brentford, was of this east india buffalo; as that too found near dantzick: pictured in the Phil. trans. the nuclei belonged to this kind of horns; as appeared plainly upon examination.

mr lockyer<sup>134</sup> present, who procured the brentford head, for Sir Hans, gave us this account of the affair. about  $\frac{1}{2}$  a mile or less, from the river, the workmen dig clay to make tiles of. first, they take off a stratum of fine red clay, fit for making bricks, 8 foot thick: then sea sand about 3 foot thick: which has a quick spring in it. then a bed of gravel about 12 foot thick. then follows blue clay, for making tiles: whose depth they know not.

in the stratum of sand lay the bones of two of these east india buffaloes, together with many

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deers horns. the workmen beat most of them in pieces, with their pickaxes, through folly & wantoness. mr lockyer saved a small part, which he procured for Sir Hans. the lower part of the stratum of gravel was so hard, as that they were forced to break through it, with pickaxes. as was the very case at stibbington, by wansford bridg, last year. when they found the sceleton of an antediluvian man, under the gravel.

Sir Hans says, on the other side the thames, at brentford, they dig up the like clay for tiles. there they find large layers of sea shells: such as now only occur in the east indies.

Sir Hans brought a painting of a remarkable sceleton of a man, near cork in ireland, who dyed about 5 years agoe. 'twas one intire bone: not a single joint in the whole sceleton flexible. the man lay out in the fields, & got a great cold: which raisd a fever, & so poisoned his mass of blood, as to procure this universal ossification. they were obliged to force out his foreteeth, in order to give him sustenance, which was spoonmeat<sup>135</sup>, & ale: for his jaws were grown together, as well as the other joints. he lived many years, this immovable life,

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<sup>133</sup> Dean John Copping (d. 1743); FRS, 1740.

<sup>134</sup> Probably Charles Lockyer (d. 1752); FRS, 1740.

<sup>135</sup> Food, such as liquids or semisolids, eaten with a spoon.

inclosed in a sort of centry box, night, & day.

tis probable, this man might have been cured, by totally anointing him with Dr. Rogers's<sup>136</sup> oyl: as they did by the duke of manchesters black. for it would have prevented this ossification: as it dos in the joints affected by the gout. it extinguishes the fiery poison, before it solders the ends of the bones together.

15. ¶ 19 march 1740-1. at the royal society.

Mr Rand<sup>137</sup> brought his yearly specimens of dried plants, from chelsea garden; pursuant to Sir Hans's donation. it makes the no. 900.

dr. Stuart<sup>138</sup> gave his lecture on the muscles, pursuant to dr. croun's will<sup>139</sup>. he began with the muscle of the intestin, the first mover, & fountain of animal life. this he describd largely, & accurately, as to its composition, vessels, coats, nerves &c.

a letter from abroad, concerning the best method of securing the clavicular<sup>140</sup>, & other arteries, going to the arm, when obligd to make an amputation of it, very high. as in the case sent. where a girl falling into fitts, fell into the fire, & burnt off her arm, in a manner, quite up to her sholder.

I exhibited my model of a travelling chaise, with a written account of it, & a drawing of that now shown by grosvenor square. I proposd two methods of performing this motion. one by the model here shown, where the charioteers foot alternately works the crank, that sets the wheels forward.

another & better method, I exhibited in another model: whereby the wheels were put in motion by two flying wheels, which would be set a going, & continued so, by the least action of the toe of the charioteer. these flying wheels are to be 6 foot diameter, loaded with lead at the outer circumference: would goe with great force. might easily be set a going, continued, & stop't at pleasure, with utmost efficacy, & facility.

mr godfrys son<sup>141</sup> proposes a chymical lecture. wherein he shows the famous miracle of naples;

<sup>136</sup> Dr. John Rogers (fl 1730); SGS, 1731. Creator of Dr. Rogers's Oleum Arthriticum, a specific oil for the gout

<sup>137</sup> Isaac Rand (1674-1743); FRS, 1719.

<sup>138</sup> Dr. Alexander Stuart (c1673-1742); FRS, 1714; SGS, 1740.

<sup>139</sup> Dr. William Croone (1633-1684); FRS, 1663. Croone left plans, but no money, for two lectureships. One was to be delivered annually at the Royal College of Physicians, the other, on the nature and laws of muscular motion, was to be delivered before the Royal Society. His widow provided the money for the lectures in her will in 1701. The lecture is now known as the Croone Lecture and is the Society's premier lecture on biology.

<sup>140</sup> A pair of large arteries in the thorax that supply blood to the thorax itself, head, neck, shoulder and arms.

<sup>141</sup> Ambrose Godfrey (1660-1741); FRS 1730, had 3 sons Boyle, Ambrose and John, all chemists, unclear which this refers to.

the liquifying the blood of Saint Januaruis<sup>142</sup>: on holding the saints head near it. likewise the miracle of Saint Clara<sup>143</sup>. take 3 little stones of equal weight. put one into a pair of scales, 2 into the other scale:

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& they shall be equiponderant: change them & the scales, as you please.

thus, in time, will free philosophy, & liberty of inquiry, together with an improved knowledg of n[atu]re, beat down popish superstition, founded on ignorance. but alas it is apt to carry people too far: thinking, bec[ause] the sham, insipid, useless & childish miracles of popery are cheats: therefore, the great, & noble, the beneficent, & humane, the divine miracles, on which christianity is founded, may be false too.

England, in the person of Sir Isaac Newton was destined, to open the scene of true philosophy. I wish his succeeding philosophers had as good a regard to the bible, as he had. I fear too much, & too well grounded, that the present admiration at natures works; at its beautys: carries us away from admiring the equally grand beautys of the moral world.

16. ¶ 26. march 1741. at the Royal Society.

mr Collison showed 2 large flint drinking glasses sent from hamburggh by the maker, he

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has found out the art of laying gold upon glass, so as never to wear out. these glasses have each a rim of gold, on the lip part. on one the king of great brittains arms, & supporters, are elegantly designed in gold. ~~on one~~. on the other, a curious landskip.

Sir H. Sloan showed us a picture-like piece out of his musæum; golden figures, trees &c. laid on a silver ground; in the same manner, & same workman.

a long letter from my fr[ie]n[d] dr. Short<sup>144</sup> of sheffield, being meteorological observations, on wind, weather, aurora borealis, balls of fire, & the like appearences, for some years last past: taken notice of thereabouts, with the state of diseases concomitant. one of the aurora borealis's was perfectly red in color, which is not common. Sir Hans observed upon it, that in distillatio[n] of all acid spirits, white vapors arise; which become those acid spirits in the receiver; except niter<sup>145</sup>, which always sends up red vapors.

dr. desaguliers gave a paper containing a recital of some of his late experiments, on electricity.

a nother part of the entertaining account of

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<sup>142</sup> Bishop Januarius of Benevento (d. 305) was a martyr and is the patron saint of Naples.

<sup>143</sup> Clare of Assisi (1194-1253) s an Italian saint and one of the first followers of Francis of Assisi. She founded the Order of Poor Ladies, a monastic religious order for women in the Franciscan tradition.

<sup>144</sup> Dr. Thomas Short (c1690-1772).

<sup>145</sup> Another term for saltpetre.

the n[at]ural history of antrim, was read, which dean copen procured us.

dr. stuart showed many preparations of the intestines; serving to illustrate his doctrin, concerning muscular motion: together with a written account which was read.

mr. seymor an apothecary near oxford, has found out a method of striking a fine, variegated color, quite through a two inch pear tree plank. so that it looks like the finest grained walnut tree. he thinks, he can so stain wood with a {☉} <sup>146</sup> chymical poison, that it will resist the worms, that eat our ships in the west indies. & probably destroy the breed of bugs, in london.

mr hawksby<sup>147</sup> says, there is commentator on Saint Matthew, who wrote before fryer bacons time: when he speaks of the devil taking our Savior on the high mountain, & showing him all the kingdoms of the world: mentions on that occasion, the use of telescopes.

I observed upon this discourse, that Saint Matthew means, that the devil set our savior upon one of the mountains of taurus, in asia: whence

he showed him the limits of the Roman, & of the Parthian empires: which very well answers the full import of the expression, in the sacred evangelist.

17. ¶ 9 april 1741. at the royal society.

Sir alexander murray<sup>148</sup> sent us the maps, & prints, belonging to his political book <sup>149</sup>, lately published, concerning the improvement of land navigation: & a great many other curious, & useful subjects.

{Solar microscope which immensely magnifys objects to 3 feet distance.}<sup>150</sup>

a paper<sup>151</sup> was read, accompanied with a drawing, concerning the circulation of the blood, seen in a very large, & curious manner, in the tail of a water newt. the spectrum of the microscope was thrown, at 3 foot distance, or more: which enlarged it exceedingly. & the light was cast along with it: so that it was the most entertaining sight in the world. this was by the solar microscope.

two apples were sent to Mr Collison, with a letter from his friend, giving an account of them. they are of two sorts, in one apple; being russets on one side: pearmains on the other. he says, tis owing to the trees growing near one another.

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<sup>146</sup> In Maurice Johnson's hand.

<sup>147</sup> Francis Hauksbee (1688-1763); FRS, 1703.

<sup>148</sup> Sir Alexander Murray, 3<sup>rd</sup> Baronet (c1684-1743).

<sup>149</sup> Sir Alexander Murrey, *The True Interest of Great Britain, Ireland And Our Plantations*, (1740).

<sup>150</sup> In Maurice Johnson's hand.

<sup>151</sup> From Revd. Henry Miles (1698-1763); FRS, 1743.

& the fecundating farina of one, dropping upon the other. this is his opinion. to which I cannot readily subscribe.

Mr Stevenson sent us a large, & elaborate account of his work, for the improvement of machinery: in many kinds. together with large, & curious drawings, relating thereto: which were refered to dr. desaguliers mr. Eames<sup>152</sup>, & mr Machen, to give an account thereof.

a continuation of the entertaining account of the natural history of the county of antrim, was read.

18. ¶ 16 april 1741. at the royal society.

a long, & curious account was read, from a physician at whitehaven<sup>153</sup>, in cumberland; concerning the fire damps in Sir Ja. Lowthers coal-mines there. he made many observations, & experiments about them: in order to find out their nature & qualitys. he confined 'em in a glass alembic<sup>154</sup>, as in distillation of acid spirits; but could get nothing, except a soot. he put it into vials with water, & shaking 'em, found, it gave the water a sulphureous smell. he says,

the smelling to volatile alkaline spirits, in some mesure prevents its ill effects. tis generated in the fissures of the coal band, where it has been confined since the creation. the thin flame of a candle sets it on fire: but not the sparks of flint, & steel: or a red hot iron. therefore they use a steel wheel turned softly round, & a flint applyed to it; for a light in some coal works, where they durst not carry a candle. the dr. promises to send up a section of the coal work here, taking in both earth, & sea, with all the trappings, & fissures: which will do a great deal, toward finding out the internal constitution of the globe.

19. ¶ 23 april 1741. at the royal society.

mr collison told us, he had been at the duke of richmonds<sup>155</sup> park, {at Goodwood}<sup>156</sup> in sussex; where he was highly entertained with the wild beasts there collected, in great number: bufaloes, wild boars, antelopes, &c. he was at Mr Biddulfs park<sup>157</sup> at burton, & saw the place, where they dug up the antediluvian elephant, half a mile below the south-downs. he saw the strata of earth, that never had been disturbd, above 6 foot deep. he saw

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<sup>152</sup> John Eames (d. 1744); FRS 1724.

<sup>153</sup> Dr. William Brownrigg (1711-1800); FRS, 1742.

<sup>154</sup> A distilling apparatus, now obsolete, consisting of a gourd-shaped container and a cap with a long tube to carry the products to a vessel.

<sup>155</sup> Charles Lennox, 2nd Duke of Richmond, 2nd Duke of Lennox, 2nd Duke of Aubigny (1701-1750); FRS, 1724.

<sup>156</sup> In Maurice Johnson's hand.

<sup>157</sup> Burton Park in Duncton, West Sussex passed by marriage to Richard Biddulph in 1724.

the petrifyd bones, at dr. langwiths<sup>158</sup>, at petworth.

Sir hans sloan brought a bit of wood, an inch long, set in silver; which was the point of a wooden sword, a boy playd withal. falling down, it ran into the orbit of his eye, & lay there a year & more. at length forced its way out.

a letter from france; that some people there, are silly enough, still to dwell upon descartes's vortexes<sup>159</sup>: & endeavor to demonstrate them, by pretended mathematical figures.

mr Millar<sup>160</sup> sent very many large drawings on imperial paper, of plants, that cannot well be dryd; from chelsea garden.

two gentlemen in rome<sup>161</sup> sent us two volumes<sup>162</sup>, which they have printed, at geneva; in 4to. being commentaries on Sir Isaac newtons principia. the inquisitor would not suffer them to be printed at rome, for fear of offending holy ch[urch].

an account of two women that had oedematous<sup>163</sup> swellings on their arms, so enormous, as to weigh above 100 pounds each; & As big as their whole bodys besides: with observations on the dissection.

20. ¶ 30 April 1741. at the royal society.

Sir hans sloan presid[en]t showed two large silver medals, of about 10s<sup>164</sup>. weight each, lately struck in holland, cut by rotier<sup>165</sup>: the one of sir isaac newton, (a good likeness, but too old) the other of mr lock<sup>166</sup>: with suitable reverses.

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<sup>158</sup> Dr. Benjamin Langwith (c1684-1743).

<sup>159</sup> René Descartes (1596-1650), devised a Theory of Vortices which postulated that the space was entirely filled with matter in various states, whirling about the sun.

<sup>160</sup> Either Joseph Miller (c1668-1748), master Chelsea garden or Phillip Miller (1691-1771), gardener Chelsea garden.

<sup>161</sup> Thomas Le Seur (1703-1770) and François Jacquier (1711-1788).

<sup>162</sup> Thomas Le Seur and François Jacquier, *Isaaci Newtoni philosophiae naturalis principia mathematica, perpetuis commentariis illustrata*, 3 Vols (Geneve, 1739-42).

<sup>163</sup> Tissue with an excess fluid; fluid-filled.

<sup>164</sup> 10 shillings. The value of coins was determined by the market price of the metal contained within them. Shillings, made of silver, were minted during the reign of every English monarch following Edward VI, with a vast number of variations and alterations appearing over the years. In 1787 the weight of a shilling was fixed at 66 shillings to a troy pound (approx. 5.6 grams).

<sup>165</sup> The Roettier [Roettiers, Rotier] family were renowned Dutch engravers and metalsmiths working between 1620 and 1784. Philip Roettier (1596-1669) of Antwerp was a goldsmith and medallist. His sons John (1631-1703), Joseph (1635) and Philip (1640-1718) were all commissioned to work for the Royal Mint in England. Members of the family were still active in the 1740 especially Jacques Roettier (1707-1784) who moved to London in 1732 and was appointed engraver to the Royal Mint.

<sup>166</sup> John Locke (1632-1704); FRS, 1668.

dr. parsons<sup>167</sup> showed several female foetuses, preservd in spirits; with an intent to demonstrate the largeness of the clitoris: in proportion to the other parts of the pudenda<sup>168</sup> in young ones. so the thymus<sup>169</sup> & glandulae renales<sup>170</sup>, other glandulous bodys, are larger proportionally, in infants, than in adults: for reasons in n[at]ure, which we know not. but hence he observes, the storys of hermaphrodites arise: when it happens, that the clitoris preserves this extravagant bulk; as the girls grow up. & this is the case oftner in hot countrys, than in more northern climates.

a professor of astronomy<sup>171</sup> in cambridg university<sup>172</sup>, new england, sent his observations of the late transit of mercury, over the suns disc.

dr. Gould a glocestershire physician sent a learned discourse on fluxes. he makes

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good observations, & comparisons, upon the evacuations in general; sweat, perspiration, stool, urine, & the matter of respiration; their quantity & proportion, in hotter, & colder climes: from the experiments of sanctorius<sup>173</sup>, & dr. keil<sup>174</sup>. whence physicians may better judg, what climates to send their patients to, in this, & that distemper. he enumerates all kind of fluxes, with a general history of their cause, & cure.

an account of a good mineral water, lately discoverd, near the Town: saltpeter bank<sup>175</sup>.

Sir H. Sloan showed a peice of the wood of the camphor tree; & the manner how that volatile gum grows, between the joints of the tree, where the new branches shoot out.

21.¶ 7 may 1741. at the royal society.

sir H. Sloan brought a letter wrote to him a good while agoe, from dr. powel<sup>176</sup> of denbigh; concerning a woman that voyded a large quantity of hair by urine. he showed us a good deal of it. it generally gatherd sabulous<sup>177</sup> matter, during its stay, in the bladder. his answer to

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dr. powel was read, giving an account of some like cases, observed in his own practise: with the prescriptions in the case. he supposes, these hairs are generated in the kidneys, or ureters.

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<sup>167</sup> Dr. James Parsons (1705-1770); FRS, 1741.

<sup>168</sup> A person's external genitals, especially a woman's.

<sup>169</sup> A lymphoid organ situated in the neck which produces T-lymphocytes for the immune system. The human thymus becomes much smaller at during puberty.

<sup>170</sup> Adrenal glands located on the top of each kidney.

<sup>171</sup> John Winthrop (1714-1779); FRS 1766.

<sup>172</sup> Harvard College, Cambridge, Massachusetts

<sup>173</sup> Santorio Santorius (1561-1636).

<sup>174</sup> Dr. James Keill (1673-1719).

<sup>175</sup> St Mary Whitechapel, Middlesex

<sup>176</sup> Dr. John Powell.

<sup>177</sup> Sandy or gritty.

dr. mortimer spoke of a person, who lately voided by urine, a worm; as it was thought: but in his opinion, he took it to be a polypus<sup>178</sup>, bred in the ureters.

some bottles of the spaw water were sent, to tast on; from salt peter bank, by wellclose square; said to be a good mineral, like bristol, & good in like cases: it would keep a sea voyage. it had a very sensible tast.

Mr sheldrake<sup>179</sup> from norwich, sent specimens of his new improvements in trusses, making the pads moveable, & with springs. new ways of application, & new bandages; which seemd to be worthy of attention.

a letter to sir H. Sloan, from abo in finland. among other things, the method they use there, to know whether eggs be sound, or no. tis common to try them by looking through them. if sound, they are transparent; if opaque, otherwise.

to shake them: & if corrupted, you hear the shake. to put them in water, & if corrupted, they swim. but the finlanders affirm, that naturally, one end of an egg is warmer than the other, when found: & this they explore, by the most sensible part, the tip of the tongue. so that a blind man perhaps better than another, can judg of 'em this way.

a person brought a long, brass instrument, which he has invented; & which, he says, is extremely useful to people, that are deafish: putting the small end, into their ear. tis of this shape.

[image]

22. ¶ 14 may 1741. at the royal society.

a very long, & curious account or n[at]ural history, of the tree, flower, leaves, fruit &c of the peruvian bark<sup>180</sup>: from a french missionary. it grows chiefly on the mountains, near the town of loxa; & sent chiefly to panama. the name quinquina, or chin china, he thinks, in the most antient language of the country, signifys the bark, by way of excellence. for he finds in

an old dictionary of that language, a MS<sup>181</sup>. in a library there, the word, importing a cloak. whence he infers, that the language being exceeding poor, & the method of it, in extending one word to signify many things; that here, when applied to a tree, it is the cloak, or bark of that tree.

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<sup>178</sup> A small vascular growth on the surface of a mucous membrane.

<sup>179</sup> Timothy Sheldrake (1691-1758).

<sup>180</sup> Also known as Jesuit's bark or China bark, the former names of the bark of the several species of the *Cinchona*, belonging to the Rubiaceae family, which contain quinine used to treat malaria.

<sup>181</sup> Manuscript.

he says, they have a tradition, that the most antient inhabitants were indebted to the lyons, for their knowledg of the vertue of the bark. for these a[n]i[m]als being subject to an aguish disorder, eat of the bark, to cure themselves: by the bye, he adds, that the lyons in that country, are very small, in comparison with the african lyons.

he says further, that the indians for a long time, industriously conceald the vertue of this bark from the spaniards; out of a n[at]ural hatred to their cruel conquerors. that a countess<sup>182</sup>, wife to a governor, was the first european, who was cured by it. whence it was first calld the countesses powder. she left it, on her return to europe, to the jesuits; whence it was calld the jesuits bark. they brought it to a cardinal at rome. then it was calld the cardinals powder. so it was propagated over europe. abundance of more,

curious particulars will be seen, when it is printed in the transactions.

we had specimens of the leaves, fruit, & flowers, on paper likewise. Mr Millar tryed to raise some of the seed; at chelsea; but without success.

dr. desaguliers tryed some more experiments, concerning electricity: of communicating electricity, from one body to another; & at any distance. what sort of bodys will transmit it best? some that will not transmit it dry, as silk, glass &c. some when wetted. packthred<sup>183</sup>, rope, woolen does it readily to 1000 feet, & further. with more curious particulars.

dr. hartley sent us his latin pamphlet<sup>184</sup>, printed abroad; being an account of mrs. stephens's medicine, for curing the stone.

two volumes of the memoirs of the royal academie de sciences<sup>185</sup>, a paris; sent to the society.

adjourned for whitsun week.

we may always observe, god alm[ighty] produces good out of evil. this fine entertainment, & improvement of knowledg, owing to the royal society, was the effect of that fearful, civil war; which commenced just 100 years ago. many

great genius's, & noblemen living then, especially of the royal party; who were out of employ, during the usurpation; diverted themselves in philosophical experiments, & conversation: first at Wadham college, in Oxford, next in gresham college, london. at the restoration, they projected the royal society: which has been imitated by most other nations, in Europe, but still it keeps up its character; all the learned, in all parts of the world, crowding to become fellows.

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<sup>182</sup> Countess of Chinchon (1576-1636), wife of the Viceroy of Peru.

<sup>183</sup> Strong thread for sewing or tying up parcels or bundles.

<sup>184</sup> David Hartley, *De Lithotriptico a Joanna Stephens nuper invento dissertatio epistolaris* (Leyden, 1741)

<sup>185</sup> *Histoire de l'Académie royale des sciences, Avec les Mémoires de Mathématique & de Physique, pour la même Année*, (De L'Imprimerie Royale, Paris, 1741)

23. ¶ 12. novr. 1741. at the royal society.

a letter from versailles, concerning a discovery of two kinds of animals, that partake very much of a vegetable n[at]ure. they shoot out their limbs, like branches of plants. if you cut any of them off, even their heads; they will shoot out again anew. & all mutilated parts will thus be restored, like plants.

an account of the two clocks formerly mentioned, from a clockmaker<sup>186</sup>, by the royal exchange. he sets down two pendulum clocks, near one another, fastned to one rail. set one agoing. it will in time gradually communicate its motion to the other, so as to set it agoing. & after some time, it will lose its own; so as to stand still, & that gradually.

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he made many observations about the times, & quantitys of these motions; & proposes a solution of this odd, & remarkable appearence.

a letter from the spalding literary {Gentlemens}<sup>187</sup> society; with a critical inquiry after the form of the instrument, which Plutarch describes, in the life of Numa: wherewith the vestal virgins use to light the fire, on their altar. the commentators only puzzle the matter. it can't be doubted, that it was a concave, metallic speculum<sup>188</sup>, {this Dr. Rutherford's<sup>189</sup> Solution}<sup>190</sup>

dr. desaguliers showed an experiment of electricity. he suspended a vessel of water, & let a small stream run, of it. apply the glass tube rub'd to the vessel, & the water, which is a non electric body, becomes electrical. for hold a string near the falling stream, & tis attracted by it. hold the glass tube near the stream, & it draws the stream quite aside, so as to disperse it, in drops.

a large portifolio containing 100 specimens of plants, curiously dried, & varnished over, so as to be preserved from worms: presented to the society. tis a secret.

an account of the violent hurricane in the beginning of september last, as observed at Dr. knights<sup>191</sup>,

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house at bluntsam, cambridgshire. it beat down the statues, urns, tiles of his rectory house with excessive rapidity. subverted his outhouses & those of the whole town, & did very great damage to all the houses in the town.

mr. Folks<sup>192</sup> vice president said, the leaden spire of St. margarets, lyn<sup>193</sup>, fell its whole length, upon the body of the ch[urch], being of timber, & lead. it made a deep hole, in the pavement

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<sup>186</sup> John Ellicott, see page 1.7.

<sup>187</sup> In Maurice Johnson's hand.

<sup>188</sup> An instrument used to dilate an orifice or canal in the body to allow inspection.

<sup>189</sup> Dr. Thomas Rutherford (1712-1771); SGS, 1742.

<sup>190</sup> In Maurice Johnson's hand.

<sup>191</sup> Dr. Gowin Knight (1713-1772); FRS, 1745.

<sup>192</sup> Martin Folkes (1690-1754); FRS, 1714; SGS, 1743).

<sup>193</sup> King's Lynn, Norfolk.

of the ch[urch]: forced the corpses out of their graves: mounted the font higher than the level; & made an universal havoc, throughout that most spacious ch[urch].

the spire of St. Nicholas there, being of timber, & lead, likewise fell in the ch[urch]yard, & made its self, as it were, a great grave, of an isosceles triangular form.

dr. jones<sup>194</sup> gave me an account of some british urns, being dug up in wales, in a place calld still in welsh, the burying place.

24.¶ 20 novr. 1741. at the royal society.

a piece of matter spongiou<sup>195</sup>, & like blue paper past board<sup>196</sup>; when put into water, it swells like jelly. it came from gombbron, said to drop from the clouds, after a storm of thunder. they call it there, a peice of cloud, & say, tis a common thing.

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mr baker read a paper, concerning Mr lewenhoecks<sup>197</sup> microscopes, bequeathd by him to the society. Mr. baker had used them, & made many observations on them. but says, that he had many more microscopes, & greater magnifyers, than these he bequeathd. his common method was, to fasten an object to a microscope, not having the contrivance of what we call sliders, with several objects included, in muscovy glass<sup>198</sup>. he says, they may observe, not only the animalcula in semine masculino<sup>199</sup>, of human, & other animals of bulk; but even in a flea, or gnat: for the glass magnifyes so many thousand times, that minuteness now has lost its proportion.

{Solar reflecting Microscope ☞}

mr. cuff<sup>200</sup> brought his solar, reflecting microscope; a late, & vast improvement. which being plac't in a hole, in a window shutter of a darkned room, casts a magnified spectrum of huge dimensions, on a white sheet; like the italian shades<sup>201</sup>. that is done by the solar rays. it shows exceeding large, & distinct, the vessels in a frogs foot, or the like; a fishes fin. where even the blood vessels shall appear an inch in diameter; & the globules of blood running through them, as big as pepper corns<sup>202</sup>.

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<sup>194</sup> Dr. Roger Jones (d. 1748); FRS, 1736.

<sup>195</sup> Archaic term for spongy, full of small holes like sponge.

<sup>196</sup> Pasteboard, a type of thin board made by pasting together sheets of paper.

<sup>197</sup> Antoni van Leeuwenhoek (1632-1723); FRS, 1680.

<sup>198</sup> Sheets of muscovite were used in Russia for windowpanes and became known as Muscovy glass (isinglass)

<sup>199</sup> Literally in the male offspring of animals i.e. semen.

<sup>200</sup> John Cuff (c1708-c1772).

<sup>201</sup> Venetian blinds, brought to Britain in the 18<sup>th</sup> century by Italian migrants.

<sup>202</sup> Text overwritten in Stukeley's hand, original read 'an inch in diameter'.

three maps sent from paris<sup>203</sup>, by the abbé<sup>204</sup> who made them. he has designed, & ingraven the city, & environs of paris, on 9 maps, whereof the middle one is the city: all in the same scale, so as to tally with one another.

some fossil shells, & formed stones, from the isles of orkney.

at woodford is a pond of china gilt fishes; gold, & silver. the like at the duke of montagu's seat at ditton, by windsor. they thrive in our climate, in soft water.

25. ¶ 26 nov. 1741. at the royal society.

dr. stuart's cronian lecture was read on the muscles, & muscular motion. this consisted in observations by the solar microscope, on the motion of the blood, in the mesentery<sup>205</sup> of a frog. where veins, & artery's were thrown in form of a drawing, or picture on white paper. these blood vessels were magnified, to the diameter of an inch & a half. he observed the blood in the artery's is push'd forward, by the pulse of the systole<sup>206</sup> of the heart; then remits, at the diastole. but in the veins, it runs with a continued current. he discerned too, some vessels, going parallel to the artery's, with some transparent. globules

moving slowly, in a seeming liquor, though invisible: which he took for a secretory duct. as to the muscular fibers, he observed 'em plainly to be fine strings made up of bladders, inwrap'd in one tegument<sup>207</sup>. & a bundle of these strings inwrap'd in a common tegument, made a fibre.

dr. hook<sup>208</sup> & mr Lewenhoeck seem before to have observ'd this fabric of the fibers. hence we may well suppose, the contraction of these muscular fibers in motion, is affected, by the blowing up of these bladders, which shortens their length. but how, that sudden, & arbitrary effect is produced. is yet one of nature's mysteries.

many letters from new england, & the neighboring countrys, of north america, read; containing an account of last winter being the hardest frost ever known in that climate, lasting from the middle of december, to march half over. most creatures abroad were kill'd.

an account of an internal cancer from a stroke on the small of the back, which was incurable, & kill'd the patient.

an account of a most antient date (as thought observed)

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<sup>203</sup> L'Abbé De La Grive, *Environs de Paris Levés Géométriquement*, (Paris, 1740).

<sup>204</sup> Abbé Jean Delagrive (also De La Grive) (1689-1757); FRS, 1734.

<sup>205</sup> A fold of membrane that attaches the intestine to the abdominal wall and holds it in place.

<sup>206</sup> Systole and diastole are two phases of the cardiac cycle. Systole occurs when the heart contracts to pump blood out, and diastole occurs when the heart relaxes after contraction.

<sup>207</sup> An outer covering or vestment.

<sup>208</sup> Dr Robert Hooke (1635-1703); FRS, 1663.

in the arabian character, as calld, upon the front of the very antient ch[urch] of romsey, in hampshire; being thus, as commonly understood 1011, {for 1411 vide infra 64}<sup>209</sup>

a dissertation upon the analogy between our weights & mesures<sup>210</sup>: all originally taken from natures standard. a cubic foot of water, weighs [gap] pounds. half that quantity, makes a gallon. [gap] times that quantity, makes a hogshed<sup>211</sup>. [gap] times that quantity, makes a tun<sup>212</sup>. a tun, wet mesure is equal to a chaldron<sup>213</sup>, dry mesure. a quarter, as calld in some countrys, is a fourth part.

the society has orderd 5 pound gold medals to be struck, pursuant to a donation for that purpose, to be destributed annually, to such person, as showd the most useful experiment. the counsel are judges.

the auditors of the yearly accounts of the society reported, that £290 is now remaining in cash, to the society. & that moreover, they have bought an estate of £60 per ann[um], this year, in middlesex.

Mr Tempest<sup>214</sup> says, he knows a man, who can

with his own hands, make 22000 bricks, in one day. he lives at hammersmith.

26. ¶ 10 dec. 1741. at the royal society.

dr. parsons gave a drawing of the horse-mussel, with the anatomy of it; having a remarkable proboscis, like an elephants, with two holes at the end of it; this he can extend 4 or 5 inches out of the shell, in order to get its food.

an account of the seed of the fernleaf, a dorsiferous plant; as observed by the microscope. with drawings: & the method, how it shoots off its seed, when ripe, by crispations<sup>215</sup>, & contractions of the seed case, in order for its propagation.

a paper was read, from a dutch gentleman<sup>216</sup>, who quarrels with mr. Maitland<sup>217</sup>, for his calculations; wherein he shows, the city of london to be bigger than paris. he endeavors to show the contrary, by his calculations. mr maitland being present, desired a copy of the paper, which

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<sup>209</sup> In Maurice Jonson's hand.

<sup>210</sup> By William Barlow

<sup>211</sup> Large cask, with the capacity for 48 gallons.

<sup>212</sup> A vessel holding 252 gallons, usually of wine.

<sup>213</sup> An English dry measure formerly used for coal, coke, lime, and the like, varying locally from 32 to 36 bushels.

<sup>214</sup> William Tempest (1681-1761); FRS, 1712.

<sup>215</sup> Slight muscular spasms or contractions.

<sup>216</sup> William Kersseboom (1691-1771).

<sup>217</sup> William Maitland (c1693-1757); FRS, 1733.

was granted. the president observed, an overgrown head of a kingdom, when become a disease, was a glory, not worth contending for.

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[64]

Sir Hans Sloan gave a present of a fine french book<sup>218</sup> magnificently printed, being many large plates engraven, with printed descriptions of the fireworks, & other festivitys, exhibited in the city of paris; on account of the marriage of don philip of spain, with a french madame<sup>219</sup>.

a drawing of the numeral characters, on the north front of romsey ch[urch], 1Q11 {ante p[agina]: 62 probably for 1Q11 1411}<sup>220</sup>

a discourse read before the academy of sciences, concerning the articulation of the voice. a dissection of a circular, muscular fillet, extended at the entrance of the windpipe, under the epiglottis, from the pomum adami<sup>221</sup>; quite round the windpipe. the author observes the mistake so common: that the voice, in singing, is formed by the epiglottis: which really has no concern in it. the affair is wholly owing to this circular fillet, which contracts its self insensibly; so as to frame all the notes of three octaves, which are many in number, flats & sharps: so that the variation of that contraction of this muscle, must be extremely little & nice.

FINIS

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<sup>218</sup> *Description des festes données par la ville de Paris: à l'occasion du mariage de madame Louise-Elisabeth de France, et de dom Philippe, infant & grand amiral d'Espagne, les vingt-neuvième & trentième août mil sept cent trente-neuf.* (De l'imprimerie de P.G. Le Mercier, Paris, 1740)

<sup>219</sup> The marriage of Louise-Elizabeth, eldest daughter of Louis XV of France, to Don Felipe, younger son of King Philip V of Spain.

<sup>220</sup> In Maurice Johnson's hand.

<sup>221</sup> Adam's apple.