Preambles:

Force Laws & Snowflakes
Evangelical Scientists Refute Gravity With New ‘Intelligent Falling’ Theory

KANSAS CITY, KS—As the debate over the teaching of evolution in public schools continues, a new controversy over the science curriculum arose Monday in this embattled Midwestern state. Scientists from the Evangelical Center For Faith-Based Reasoning are now asserting that the long-held "theory of gravity" is flawed, and they have responded to it with a new theory of Intelligent Falling.

"Things fall not because they are acted upon by some gravitational force, but because a higher intelligence, 'God' if you will, is pushing them down," said Gabriel Burdett, who holds degrees in education, applied Scripture, and physics from Oral Roberts University.

Burdett added: "Gravity—which is taught to our children as a law—is founded on great gaps in understanding. The laws predict the mutual force between all bodies of mass, but they cannot explain that force. Isaac Newton himself said, 'I suspect that my theories may all depend upon a force for which philosophers have searched all of nature in vain.' Of course, he is alluding to a higher power."

Founded in 1987, the ECFR is the world's leading institution of evangelical physics, a branch of physics based on literal interpretation of the Bible.
When does a Chain of Atoms Snap?
Force Laws & Molecular Structure

\[ F = -k \Delta x \]

Spring

\[ F = -k / (\Delta r)^2 \]

Gravity / Electrical Charge

Balanced minimum

Single Minimum

Balanced minimum

Double Minimum
Morse Potential
(1929)

Snaps at Inflection Point
(Change from direct to inverse force)

Sum
Force Laws are pretty Fundamental.

When / How / Why by Whom were they Discovered?
Chapt. 23: On the snow castles of children

Olaus Magnus (Rome, 1555)
Chapt. 22: On the various shapes of snow

window frost

snow storm

snow flakes

Olaus Magnus (Rome, 1555)
René Descartes
Les Météores (1637)
“...Hooke includes an array of snowflakes that look more like caricatures than the real thing. These images are copied not from Nature but from Thomas Bartholin’s *De Nivis Usu Medico Observationes Variae* (1661).”

Careful study of the images which Hooke published reveal that he himself was not above plagiarism.

Brian J. Ford (1996)
Microscopist & Columnist for *Mensa*
Bartholinus (1661)

Descartes (1637)

Fleur de Lys

Hooke (1665)

Nature via “Snowflake” Bentley (1931)
Hooke was copying Nature, not Bartholinus, nor Descartes.
B. J. Ford to J.M.M. (6/15/05)

“The flakes you chose to analyze aren't the definitive examples, I fear. The clincher is the flake labelled K.”

Bentley Photomicrographs (1931)

Bartholinus (1661)

Hooke (1665)

J.M.M. to B.J.F. (6/15/05)

“Hooke was careful not to reproduce images directly, but - as was the habit - to make small changes so that he couldn't be accused of copying. But - given that the K flake couldn't possibly be coincidence -

And it was not, assuredly not, observed in nature!”

B.J.F. to J.M.M. (6/16/05)

“elegant argument...though, having looked at a great many snowflakes under the microscope, I am not persuaded.”
“Hooke was a particularly pushy and strident character, a man for whom I have unlimited admiration. But I don't doubt that he took Bartholin's pictures as his source.”

Who was Robert Hooke, and what did he do to deserve this reputation?
Who was Robert Hooke?

*Micrographia*
Mushrooms & Self Assembly
(1665)

Hooke’s Coded Top Ten List
(1676)

Hooke’s Law & Its Utility
(1678)

Gravity, Geometry & Newton
(1679-1687)

Background:
Bacon, the Royal Society & the “Scientific Method”
On his scholastic Cambridge tutors:

"Men of sharp wits, shut up in their cells of a few authors, chiefly Aristotle, their Dictator."

All the philosophy of nature which is now received, is either the philosophy of the Grecians, or that other of the alchemists… The one is gathered out of a few vulgar observations, and the other out of a few experiments of a furnace. The one never faileth to multiply words, and the other ever faileth to multiply gold.

Shakespeare (1564-1616)  
Galileo (1564-1642)  
Francis Bacon (1561-1626)

The Great Restoration  
Inductive Scientific Method to replace Aristotelian deduction?

Jebel Musa  
(Morocco)  

Jebel al Tarik  
(Gibraltar)  

Pillars of Hercules  

www.confluence.org
"Many will pass through and knowledge will be increased."

Daniel 12:4
Instauratio Magna (1620)

“…that wisdom which we have derived principally from the Greeks is but like the boyhood of knowledge, and has the characteristic property of boys: it can talk, but it cannot generate;”

“…it is but a device for exempting ignorance from ignominy.”

“…the end which this science of mine proposes is the invention not of arguments but of arts.”

“…not so much by instruments as by experiments …skilfully and artificially devised for the express purpose of determining the point in question.”

“restoration of learning and knowledge”
Ac ne forte roges, quo me duce, quo lare tuter,
Nullius addictus jurare in verba magistri
Quo me cumque rapit tempestas, deferor hospes.

Horace (15 B.C.)

Lest you ask who leads me, in what household I lodge,
There is no master in whose words I am bound to take an oath,
Wherever the storm forces me, there I put in as a guest.

“The Royal Society for the Improving of Natural Knowledge by Experiments”

Francis Bacon

Viscount Brouncker (President)

Navigation

Forerunner of Institute for Soldier Nanotechnologies
Focus on Mechanics and Mechanism

…I had call’d to mind what my Curiosity for Dissections has shown me, and remembred how many Bones, and Muscles, and Veins, and Arteries, and Grisles, and Ligaments, and Nerves, and Membranes, and Juices, a humane Body is made up of…

_Upon the Accidents of an Ague_

Robert Boyle (1665)
...it being no more strange that a Man’s Body should be subject to Pain, or Sickness, than that an Instrument with above a thousand Strings (if there were any such) should frequently be out of Tune...

the inimitable Structure of humane Bodies is scarce more admirable, than that such curious and elaborate Engines can be so contriv’d, as not to be oftner out of order than they are...

Robert Boyle (1665)
Our Life contains a thousand Springs,
And dies if one be gone;
Strange! that a Harp of thousand strings
Should keep in Tune so long.

Isaac Watts (1707)
Mechanical Understanding is a Venerable Tradition in British Science

I am never content until I have constructed a mechanical model of what I am studying.
If I succeed in making one, I understand; otherwise I do not.

Lord Kelvin, *Baltimore Lectures* (1884)
As to his Person he was but despicable, being very crooked, tho’ I have heard from himself, and others, that he was straight till about 16 Years of Age when he first grew awry. He was very communicative of his philosophical discoveries and inventions, with a Turnbath, till some Accidents made him to a Crime close and reserv’d.

His Temper was Melancholy, Mistrustful and Jealous, which more increas’d upon him with his Years. He was in the beginning very communicative of his philosophical discoveries and inventions, till some Accidents made him to a Crime close and reserv’d.

He was of an active, restless, indefatigable Genius even almost to the last,... It is the most, and promises the least, of any man in the world that ever I saw.

Pepys Diary, 15 February 1665
Robert Hooke

1635  Born youngest son of Isle of Wight curate

1648  Father dies

To London, apprenticed to Peter Lely

(6 books of Euclid in 1 week)

Westminster School

“Choral” Scholarship, Westminster School

1655  Lab Assistant to Robt. Boyle, Oxford

1662  Curator of Experiments, Royal Society (unsalaried)

Louise de Keroualle ~1672
Some Hooke Inventions

Universal Joint

Iris Diaphragm

Double-Hung Sash Window

“Telephone”

“I have, by the help of a distended wire, propagated the sound to a very considerable distance in an instant, or with as seemingly quick a motion as that of light”
Some Hooke Instruments

Index Barometer

Oat Beard
Hygrometer,
Weather ‘Clock’
& Many Other Meterological Instruments

Reflecting Quadrant
Micrometer Screw, Telescopic Sight
(clockwork drive & spirit level)

Compound Microscope

“By the addition of such artificial Instruments and methods, there may be, in some manner, a reparation made for the mischiefs, and imperfection, mankind has drawn upon it self.”

Micrographia Preface (1665)
Some Hooke Discoveries

Spots and Rotation of Jupiter & Mars

“Chladni” Figures

Fossil record of mutability of Earth and species

Role of the lungs in aerating blood

Consumption of “nitrous air” by combustion
Three Weeks for Hooke (October, 1663)

- Prepare a paper on what should be observed and recorded for a history of weather
- Make and demonstrate a hygroscope from the beard of a wild oat, with an index
- Prepare two thermometers (tin and glass, invented by Wren)
  - Make an artificial eye.
- Prepare a suitable concave glass for projecting a picture in a lighted room
- Remove and restitch a piece of a dog’s skin to see if it will regrow
- Move in at Gresham College
  - Supervise making a new air pump and a machine for measuring the force of gunpowder
- Prepare micrographs of common fly and moss growing on brick
- Care for Society Repository - labeling objects (with provenance)
  - Prepare demo of lineless depth sounder to show King Charles
- Graft feathers onto a cock’s comb
Failing to show parallax from Earth’s orbiting

Objective Lens

Micrometer Eyepiece

Zenith Telescope (1669)
MICROGRAPHIA:  
OR SOME  
Physiological Descriptions  
OF  
MINUTE BODIES  
MADE BY  
MAGNIFYING GLASSES  
WITH  
Observations and Inquiries thereupon.  

By R. HOOKE, Fellow of the Royal Society.  

Non posse oculo quantum contendere lineas, 

LONDON, Printed by J. Martyn, and J. Allestry, Printers to the 
Royal Society, and are to be sold at their Shop at the Bell in 
S. Paul's Church-yard. M DC LX V.
TO THE ROYAL SOCIETY

...I have added some Conjectures...And therefore ... I must also beg YOUR pardon. The Rules YOU have prescrib’d YOURselves in YOUR Philosophical Progress do seem the best that have ever yet been practis’d. And particularly that of avoiding Dogmatizing, and the espousal of any Hypothesis not sufficiently grounded and confirm’d by Experiments.

...I desire them to be understood only as Conjectures and Quaeries.
Observation 1:
Of the Point of a sharp small Needle
Observ. XI.

Of Figures observ’d in small Sand

First Protozoan Picture

Foraminiferal from Dover Cliffs
"How great an advantage it would be to such as are troubled with the Stone, to find some \textit{menstruum} that might dissolve them without hurting the bladder."
Observ. XIII.

Of the small Diamants, or Sparks in Flints.

“arise onely from three or four several positions or postures of Globular particles”

“there was not any regular Figure, which I have hitherto met withal, that I could not with bullets…imitate, even almost by shaking them together.”
“…the Philosophers hitherto… conclude nature in these things to play the Geometrician, according to that saying of Plato

God does geometry

“impossible to imitate exactly the curious and Geometrical Mechanism of Nature in any [snowflake]”
“Nor have I hitherto found indeed an opportunity of prosecuting the inquiry “…I designed…to get as exact and full a collection as I could, of all the differing kinds of Geometrical figur’d bodies… Having such a multitude of instances to compare…as in the Solution and Crystallization of Salts, we cannot but learn plentifull information…of the Principle which Nature has made use of almost in all inanimate bodies.”
Hooke’s Mechanism of Growth

Imagination
Sensation
Amination
Plantamination
Vegetation
Germination or Ebullition
Angulization or Crystallization
Fixation
Orbiculation
Fluidity
"The several kinds of hairy mouldy spots... are all of them nothing else but several kinds of small and variously figur’d Mushrooms. It does not as yet appear (that I know of) that Mushrooms may be generated from a seed, but they rather seem to depend merely upon a convenient constitution of the matter out of which they are made, and a concurrence of either natural or artificial heat."

"concreeted by mechanical principles"
“Mushrooms” in Candle Wick
“Diana Tree”
(\text{AgNO}_3 + \text{Hg})
Petrifying Water

“I have seen some knobb’d a little at the lower end, though, for the most part, indeed, they are otherwise.”
Growth by Self-Assembly

“...as far as I have been able to look into the nature of this Primary kind of life and vegetation, I cannot find the least probable argument to perswade me there is any other concurrent cause then such as is purely Mechanical...”
Observ. 17:
Of Petrify’d wood, and other Petrify’d bodies

Observ. 18:
Of the Schematisme or Texture of Cork, and of the Cells and Pores of some other such frothy Bodies
“This is a Creature so officious that ‘twill be known to everyone at one time or other, so busie, and so impudent, that it will be intruding itself in every one’s company, and so proud and aspiring withall, that it fears not to trample on the best, and affects nothing so much as a Crown…”
So, naturalists observe, a flea
Has smaller fleas that on him prey;
And these have smaller still to bite ‘em;
And so proceed _ad infinitum._

Jonathan Swift (1667-1745)
To conclude therefore, it being very probable, that the Moon has a principle of gravitation, it affords an excellent distinguishing instance in the search after the cause of gravitation, or attraction, to hint, that it does not depend upon the diurnal or turbinated motion of the Earth.

Cf. ‘Mons’ Olympus of “Excellent Hevelius”
Obs. 58. Of the Inflection of the Rays of Light in the Air

But it being more likely, that there is a continual increase of rarity in the parts of the Air, the further they are removed from the surface of the Earth: It will hence necessarily follow, that (as in the Experiment of the salt and fresh Water) the ray of Light, passing obliquely through the Air also, which is of very different density, will be continually, and infinitely inflected, or bend'd, from a straight, or direct motion.

A $\propto r^2$

cancelled by

F $\propto \frac{1}{r^2}$

we will suppose a Cylinder indefinitely extended upwards,
American mathematicians visit Newton’s apple tree

Oct. 1665 - April 1667

Lisa Kolbe www.maa.org/england/
Observ. IX.

Of the Colours observable in Muscovy Glass, and other thin Bodies.

Confus’d Pulses of Light
“The broken light does not change its color.”

 ⇒ Light is a *substance*; not Hooke’s waves.

Newton’s “Experimentum Crucis” (1666 -1672)
Newton to Hooke Feb. 5, 1676

“What Des-Cartes did was a good step. You have added much several ways, & especially in taking ye colours of thin plates into philosophical consideration. If I have seen further it is by standing on ye shoulders of giants.”

(Hooke was hunchbacked!)

From Lucan’s Civil War (~62 A.D.) via Robt. Burton (1624)
London 1666
Great Fire
Moorfields
Gresham College

Worked for Christopher Wren, F.R.S. (51 Churches and St. Paul's)
Hooke’s Bethlehem Hospital (1675)
(Bedlam)
Hooke / Wren Monument to the Great Fire (1677) 200 foot Zenith Telescope Hatch www.bluffton.edu/~sullivanm/england1
A DESCRIPTION OF HELIOSCOPES,
And some other INSTRUMENTS
MADE BY ROBERT HOOKE,
Fellow of the Royal Society.

Hos ego, &c.
Sic vos non vobis—

LONDON,
Printed by T. R. for John Martyn Printer to the Royal Society
at the Bell in St. Pauls Church-yard, 1676.
119

Hos ego versiculos feci,
tulit alter honores:
Sic vos non vobis nidificatis aves;
Sic vos non vobis vellera fertis oves;
Sic vos non vobis mellificatis apes;
Sic vos non vobis fertis aratra boves.

Of these short verses I composed,
another person had the honour:
So you not for yourself build a nest,o birds;
So you not for yourself bear the wool,o sheep;
So you not for yourself make honey,o bees;
So you not for yourself pull the plough,o oxen

ALTRUISM

PLAGIARISM

1676
To fill the vacancy of the ensuing page, I have here added a decimate of the centesme of the Inventions I intend to publish, but as I can get opportunity and leisure; most of which, I hope, will be as useful to Mankind, as they are yet unknown and new.

1. A way of Regulating all sorts of Watches or Timekeepers, so as to make any way to equalize, if not exceed the Pendulum-Clocks now used.
Hogarth (1735)

Bedlam (1735)
$3,000,000 Longitude Prize (1714)

“...for determining the longitude at sea, there have been several projects, true in theory but difficult to execute... one is by a watch...but by reason of the motion of the ship...variation of heat and cold...such a watch hath not yet been made...”

Issac Newton (1714)

±25 miles to West Indies required ±2 sec/day at sea!

“Association” Disaster (1707)
$3,000,000 Longitude Prize (1714)

“Association” Disaster (1707)

Won 45 years later by John Harrison (1759)
Coded as an Anagram

Solution revealed 29 years later by Hooke’s executor

“Ut pendet continuum flexile, sic stabit contiguum rigidum inversum”

“As a flexible cable hangs, thus, inverted, stand touching pieces of a rigid arch.
Pendulum-Clocks now used.

2. The true Mathematical and Mechanichal form of all manner of **Arches** for Building, with the true butment necessary to each of them. A Problem which no Architectonicke Writer hath ever yet attempted, much less performed. abcdddeeee fggiiiiiii llmmmmnnnnnoopqrrsssttttttuuuuuuux.

3. The true Theory of Elasticity or **Springiness**, and a particular Explication thereof in several Subjects in which it is to be found: And the way of computing the velocity of Bodies moved by them. ceiiinosssttuu.

4. A very plain and practical way of counterpoising Liquors, of great use in **Hydraulicks**. Discovered.

5. A new sort of **Object-Glasses** for Telescopes and Microscopes, much outdoing any yet used. Discovered.
6. A new **Selenoscope**, easy enough to be made and used, whereby the smallest inequality of the Moons surface and limb may be most plainly distinguished. Discovered.

7. A new sort of **Horizontal Sayls for a Mill**, performing the most that any Horizontal Sayls of that bigness are capable of; and the various use of that principle on divers other occasions. Discovered.

8. A new way of **Post-Charriot** for travelling far, without much wearying Horse or Rider. Discovered.


10. A new **Invention in Mechanicks of prodigious use**, exceeding the chimera's of perpetual motions for several uses.

"**Pondere praemit aer vacuum quod ab igne relictum est**"?

"**By its weight air presses on the vacuum left by fire**"
LECTURES
De Potentia Restitutiva,
OR OF
SPRING
Explaining the Power of Springing Bodies.
To which are added some
COLLECTIONS
Viz.
A Description of Dr. Pappins Wind-Fountain and Force-Pump.
Mr. Young's Remarks concerning natural Fountains.
Some other Considerations concerning that Subject.
Captain Sturmy's remarks of a Subterraneous Cave and Cistern.
Mr. G. T. Observations made on the Pike of Teneriff, 1674.
Some Reflections and Conjectures occasioned thereupon.
A Relation of a late Eruption in the Isle of Palma.

By ROBERT HOOKE, S.R.S.

LONDON,
Printed for John Martyn Printer to the Royal Society,
at the Bell in St. Paul's Church-Yard, 1678.
The Theory of Springs, though attempted by divers eminent Mathematicians of this Age has hitherto not been Published by any. It is now about eighteen years since I first found it out, but designing to apply it to some particular use, I omitted the publishing thereof.
About three years since His Majesty was pleased to see the Experiment that made out this Theory tried at White-Hall, as also my Spring Watch.
From this it will be easie to make a Philosophical Scale to examine the weight of any body without putting in weights, which was that which I mentioned at the end of my description of Helioscopes, the ground of which was veiled under this Anagram, cedi in noops sest tuu, namely, Ut pondus siten-vio. The fabrick of which see in the three first figures.

This Scale I contrived in order to examine the gravitation of bodies towards the Center of the Earth, viz. to examine whether bodies at a further distance from the Center of the Earth did not lose somewhat of their power or tendency towards it. And propounded it as one of the Experiments to be tried at the top of the Pike of Teneriff, and attempted the same at the top of the Tower of St. Pauls before the burning of it in the late great Fire; as also at the top and bottom of the Abby of St. Peters in Westminster though these being by but small distances removed from the Surface, I was not able certainly to perceive any manifest difference. I propounded the same also to be tried at severall stations of deep
It now remains, that I shew how the constitutions of springy bodies being such, the Vibrations of a Spring, or a Body moved by a Spring, equally and uniformly shall be of equal duration whether they be greater or less.
I have here already shewed then that the power of all Springs is proportionate to the degree of flexure, \textit{viz.} one degree of flexure, or one space bended hath one power, two hath two, and three hath three, and so forward. And every point of the space of flexure hath a peculiar power, and consequently there being infinite points of the space, there must be infinite degrees of power.

\[ E \propto d^2 \]
Now the comparative Velocities of any body moved are in subduplicate proportion to the aggregates or sums of the powers by which it is moved.

\[ V \propto \sqrt{E} \]

\( (E \propto V^2) \)
Stiffer Spring
First Use of Conservation of Energy!
Smaller Amplitude

"Let there be Light" (motion)
Shorter Time
Same Time

\[ \frac{t}{\sqrt{R}} = \frac{\sqrt{R}}{v} \]
\[ v \cdot t = R \]
Hooke made this correction *using only geometry* in 1685.

**Calculus**

Hooke made this correction using only geometry in 1685.
I am not ignorant that both heretofore, and not long since also, there have been some who have indeavoured to misrepresent me to you…but difference of opinion, if such there be (especially in philosophical matters where interest hath little concerne) methinks should not be the occasion of enmity…

I shall take it as a great favour if you shall please to communicate by letter your objections against any hypothesis or opinion of mine; and particularly…that of compounding the celestiall motions of the planetts of a direct motion…and an attractive motion towards the centrall body

I hope…that you will please to continue your former favours to the Society by communicating…you may be assured that whatever shall be soe communicated shall be noe otherwise further imparted or disposed of than you yourself shall praescribe.

I should be glad if by perpendicular observations, we could determine the difference of latitude between London and Cambridge…
I cannot but acknowledge my self every way by the kindness of your letter tempted to concur with your desires...heartily sorry I am that...I had for some years last been endeavouring to bend myself from philosophy to other studies ...unless it be perhaps at idle hours sometimes for a diversion.

...I did not, before the receipt of your last letter, so much as heare (that I remember) of your hypothesis of compounding the celestial motions of the planets, of a direct motion by the tangent to the curve and of the laws and causes of springyness, though these no doubt are well known to the philosophical world.

...my own short-sightedness and tenderness of health makes me something unfit [for perpendicular observations]

In requital of this advertisement I shall communicate to you a fancy of my own about discovering the earth's diurnal motion.
Newton Falling Body “Fancy” (11/28/79)

“opinion of the vulgar” (& Kepler) fall West

Hooke to Newton
Dec. 9, 1679

were as sure of your Correspondence and Communicating as I am of your Yet remaining affection to Philosophy
Newton Falling Body “Fancy” (11/28/79)

**Experiment**

<table>
<thead>
<tr>
<th>Year</th>
<th>South/East (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1680</td>
<td>&gt;100</td>
</tr>
<tr>
<td>1791</td>
<td>63</td>
</tr>
<tr>
<td>1802</td>
<td>37</td>
</tr>
<tr>
<td>1831</td>
<td>15</td>
</tr>
<tr>
<td>1902</td>
<td>3</td>
</tr>
</tbody>
</table>

*J. Lohne (1960)*

[Diagram of Earth showing SSE direction and 52°N London]
Newton Falling Body “Fancy” (11/28/79)

Newton to Hooke
Dec. 13, 1679

“opinion of the vulgar”
(& Kepler)
fall West

Newton fall East
in Spiral

Hooke Eineptueid
not Spiral

unless friction

52°N
London

SSE!
**Hooke to Newton January 1680**

**Jan 6:** Your calculation of the curve described by a body attracted by an aequall power at all distances from the center

**but** my supposition is that the attraction always is in duplicate proportion to the distance from the center. As I suppose, attraction at a considerable distance may be computed as from the very center."

“This will spoyle the universall standard by the pendulum and the equality of pendulum clocks caried from one climate to another.”

**Jan 17:** I doubt not that by your excellent method you will easily find out what that curve must be, and its proprietys, and suggest a physical reason of this proportion.

December 3, 1680

**Newton:** “I am indebted to you thanks.”
Halley to Newton  May 22, 1686

Mr. Hook has some pretensions upon the invention of ye rule of the decrease of Gravity, being reciprocally as the squares of the distances from the Center. He sais you had the notion from him, though he owns the Demonstration of the Curves generated thereby to be wholly your own.

whereas he should rather have excused himself by reason of his inability. For tis plain by his words he knew not how to go about it.

Now is not this very fine? Mathematicians that find out, settle & do all the business must content themselves with being nothing but dry calculators & drudges & another that does nothing but pretend & grasp at all things must carry away all the invention

Newton dropped some references to Hooke, and degraded others “Clarissimus Hookius”
we shall have to take in a motion of this body therefore on an ellipse. and shall describe equal areas in equal times.

M. Nauenberg (1994)
almost

Hooke Did It Geometrically!

and with a “physical reason” for $1/r^2$
1672

Aug. 1 (also 2,3,4) "Drank U [iron] and S [mercury]..."w...was ill"

Aug. 31 "Slept ill by reason of tart at noon. Gott up a little and rectifyd my stomach with white aniseed N [distillate]."

Sept. 1 "Drank steel. benummd my head..."

Sept. 2 "At Dr. Godderds tastd tincture of wormwood..."

Sept. 3 "took ,ii [2 oz.] of infusion of Crocus metall [Na₃SbS₃ ?], vomited."

Sept. 22 "took syrup of popys, slept little with sweat and wild frightfull dreames."

Oct. 1 "took spirit of urine and laudanum with milk for the three preceeding nights. Slept pretty well."

Oct. 25 "took conserves and flowers of Q [sulfur] after which I slept well, but had a bloody dysentery the next day soe that I swooned and was violently griped, but I judge it did me good for my Rhume."

Dec. 27 "made oyle of bitter almonds, put some in right ear...slept ill."
Lived another 31 years!

Died 1703 aged 67
with £10,000 estate
and no will

An illiterate distant cousin
soon went through his estate.
The Posthumous Works of Robert Hooke, M.D. S.R.S.

The Present Deficiency of Natural Philosophy is discoursed of, with the Methods of rendering it more certain and beneficial.

The Nature, Motion, and Effects of Light are treated of, particularly that of the Sun and Comets.

An Hypothetical Explication of Memory, how the Organs made use of by the Mind in its Operations may be Mechanically understood.

An Hypothetical Explication of the Cause of Gravity, or Gravitation, Magnetism, &c.

Discourses of Earthquakes, their Causes and Effects, and Histories of several, to which are annexed, Poetical Explications of several of the Fables in Ovid's Metamorphoses, very different from other Mythological Interpreters.

Lectures for improving Navigation and Astronomy, with the Descriptions of several new and useful Instruments and Contrivances; the whole full of curious Disquisitions and Experiments.

Illustrated with Sculptures.

To these Discourses is prefixed the Author's Life, giving an Account of his Studies and Employments, with an Enumeration of the many Experiments, Instruments, Contrivances and Inventions, by him made and produced as Curator of Experiments to the Royal Society.

Published by Richard Waller, R. S. Secr.

Printed by Sam. Smith and Hen. Waller, (Printers to the Royal Society) at the Prince's Arms in St. Paul's Church-yard. 1705.

To Sir Isaac Newton, Knt.

To the President, and to the Council and Fellows of the Royal Society of London, for the Advancement of Natural Knowledge.

These Posthumous Works of Dr. Robert Hooke

Are humbly Dedicated

By Richard Waller, S. R. Secr.
Hooke’s Mass Grave? (1892)
NatWest
Tower 42
↑
Gresham
College
Hooke’s List of his Works

- Theory of Motion
- of Light
- of Gravity
- of Magnets
- of Gunpowder
- of the Heavens

- Improving shipping
- of Ships
- of Navigation
- of Engines for War
- of Engines for Largesse

- Inquiry into the Figures of Bodies
- of the Qualities of Bodies
Thanks


John Heilbron, Ted Davis
Michael Cooper, Patri Pugliese
Michael Nauenberg

Beinecke Library

Yale Medical Historical Library

John F. Fulton (1899-1960)
The good success of all these great Men, and many others, and the now seemingly great obviousness of most of their and divers other Inventions, which from the beginning of the world have been, as 'twere, trod on, and yet not minded till these last inquisitive Ages (an Argument that there may be yet behind multitudes of the like) puts me in mind to recommend such Studies, and the prosecution of them by such methods, to the Gentlemen of our Nation, whose leisure makes them fit to undertake, and the plenty of their fortunes to accomplish, extraordinary things in this way. And I do not only propose this kind of Experimental Philosophy as a matter of high rapture and delight of the mind, but even as a material and sensible Pleasure. So vast is the variety of Objects which will come under their Inspections, so many different ways there are of handling them, so great is the satisfaction of finding out new things, that I dare compare the contentment which they will enjoy, not only to that of contemplation, but even to that which most men prefer of the very Senses themselves.