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**An Original Theory or New Hypothesis of the Universe,
Founded upon the Laws of Nature**

Although his yeoman father is said to have burnt his books to discourage excessive studiousness, Thomas Wright (1711–86) nevertheless acquired considerable knowledge in the fields of mathematics, navigation and astronomy. Later benefiting from the patronage of wealthy families, he also surveyed estates, designed gardens, and tutored aristocrats. He is best known, however, for his contribution to astronomy: this illustrated work of 1750 was his most famous publication. Written in the form of nine letters, the book quotes both poets and scientists in the opening discussion as Wright sets out to fuse, rather than separate, science and religion. Combining his observations of the Milky Way with his theological belief in a universe of perfect order, he notes, among other things, that our galaxy appears to be disc-shaped. While largely ignored by contemporary astronomers, Wright’s ideas can be seen as a forerunner to more sophisticated conceptions of our galaxy’s configuration.

Cambridge University Press

978-1-108-07374-5 - An Original Theory or New Hypothesis of the Universe, Founded upon the Laws of Nature:
And Solving by Mathematical Principles the General Phænomena of the Visible Creation, and Particularly
the Via Lactea

Thomas Wright

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*And Solving by Mathematical Principles
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THOMAS WRIGHT



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A N
ORIGINAL THEORY
O R
NEW HYPOTHESIS
O F T H E
U N I V E R S E.
Founded upon the
L A W S of N A T U R E,
AND SOLVING BY
MATHEMATICAL PRINCIPLES
T H E
General PHÆNOMENA of the VISIBLE CREATION;
AND PARTICULARLY
The V I A L A C T E A.
Compris'd in Nine Familiar LETTERS from the AUTHOR to his FRIEND.
And Illustrated with upwards of Thirty Graven and Mezzotinto Plates,
By the Best MASTERS.

By THOMAS WRIGHT, of DURHAM.

*One Sun by Day, by Night ten Thousand shine,
And light us deep into the DEITY.* Dr. YOUNG.

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T H E
P R E F A C E



THE Author of the following Letters having been flattered into a Belief, that they may probably prove of some Use, or at least Amusement to the World, he has ventured to give them, at the Request of his Friends, to the Publick. His chief Design will be found an Attempt towards solving the Phænomena of the *Via Lactea*, and in consequence of that Solution, the framing of a regular and rational Theory of the known Universe, before unattempted by any. But he is very sensible how difficult a Task it is to advance any new Doctrine with Success, those who have hitherto attempted to propagate astronomical Discoveries in all Ages, have been but ill rewarded for their Labours, tho' finally they have proved of the greatest Benefit and Advantage to Mankind. This ungrateful Lesson we learn from the Fate of those ingenious Men, who, in ignorant Times, have unjustly suffered for their superior Knowledge and Discoveries ; they who first conceived the Earth a Ball, were treated only with Contempt for their idle and ridiculous Supposition, as it was called ; and he who first attempted to explain the *Antipodes*, lost his Life by it ; but in this Age Philosophers have nothing to fear of this sort, the great Disadvantages attending Authors now, are of a widely different Nature,

Nature, rising from the infinite Number of Pretenders to Knowledge in this Science, and much is to be apprehended from improper Judges, tho' from real ones nothing; for nothing is more certain than this, as much as any Subject exceeds the common Capacity of Readers, so much will the Work in general be condemned; the Air of Knowledge is at least in finding Fault, and this vain Pretence generally leads People, who have no real Foundation for their Judgment to argue from, to ridicule what they are too sensible they do not understand. Thus the same Disadvantages too often attend both in publick and private an exceeding good Production equally the same as a very bad one: But the Author is not vain enough to think this Work without Faults, has rather Reason to fear, from the Weakness of his own Capacity, that there may be many; but he hopes the Design of the Whole will, in some measure, plead for the Imperfection of the Parts, if the Merits of the Plan should be found insufficient for his full Pardon, in attempting so extensive a Subject.

In a System thus naturally tending to propagate the Principles of Virtue, and vindicate the Laws of Providence, we may indeed say too little, but cannot surely say too much; and to make any further Apology for a Work of such Nature, where the Glory of the Divine Being of course must be the principal Object in View, would be too like rendering Virtue accountable to Vice for any Author to expect to benefit by such Excuse. The Motive which induces us to the Attempt of any Performance, where no good Reason can be supposed to be given for the Omission, or Neglect of it, will always be judged an unnecessary Promulgation, and consequently every Attempt towards the Discovery of Truth, the Enlargement of our Minds, and the Improvement of our Understandings will naturally become a Duty. If therefore this Undertaking falls short of being instrumental towards the advancing the Adoration of the Divine Being in his infinite Creation of higher Works, and proves unable to answer all Objections that may possibly arise against it, yet will its Imperfections appear of such a Nature to every candid Reader, as to afford the Author a sufficient Apology for producing them to the World: And it is to be hoped farther, that where a Work is entirely upon a new Plan, and the Beginning, as it were, of a new Science, before unattempted in any Language, the Author having dug all his Ideas from the Mines of Nature, is surely intitled to every kind of Indulgence.

To

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To those who are weak enough to think that such Enquiries as these are over-curious, vain, and presumptive, and would willingly, suitable to their own Ignorance and Comprehension, set Bounds to other People's Labours, I answer with Mr. *Huygens*, " That if our Forefathers had
" been at this Rate scrupulous, we might have been ignorant still of the
" Magnitude and Figure of the Earth ; or that there was such a Place as
" *America*. We should not have known that the Moon is enlightened by
" the Sun's Rays, nor what the Causes of the Eclipses of each of them
" are ; nor a Multitude of other Things brought to Light by the late
" Discoveries in Astronomy ; for what can a Man imagine more abstruse,
" or less likely to be known, than what is now as clear as the Sun."

Had we still paid that Homage to a Name,
Which only God and Nature justly claim ;
The western Seas had been our utmost Bound,
Where Poets still might dream the Sun was drown'd ;
And all the Stars that shine in Southern Skies,
Had been admir'd by none but savage Eyes.

DRYDEN.

Besides the Nobleness and Pleasure of these Studies, *Wisdom* and *Morality* are naturally advanced, and much benefited by them, and even Religion itself receives a double Lustre, " to the Confusion of those who
" would have the Earth, and all Things formed by the shuffling Concourse
" of Atoms, or to be without Beginning." In Astronomy, as well as in natural Philosophy, though we cannot positively affirm every thing we say to be Facts and Truth, yet in so noble and sublime a Study as that of *Nature*, it is glorious, as Mr. *Huygens* says, even to arrive at Probability.

Notwithstanding then the Disadvantages which ever have attended all new Discoveries, either thro' the Ignorance of the Age, or the universal Passion of Ridicule in such contented Creatures, as can't comprehend, yet ever attacking with a fool-hardy Resolution, the advancing Ensigns of Knowledge, if Ignorance was Virtue, and Wisdom Vice ; I say, regardless of this noisy Shore, it is sure our Duty to spring forward, and explore the secret Depths of Infinity, and the wonderful hidden Truths of this vast Ocean of Beings. But how the heavenly Bodies were made, when they were
made

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made, and what they are made of, and many other Things relating to their Entity, Nature, and Utility, seems in our present State not to be within the Reach of human Philosophy; but then that they do exist, have final Causes, and were ordained for some wise End, is evident beyond a Doubt, and in this Light most worthy of our Contemplation.

He who thro' vast Immensity can pierce,
See Worlds on Worlds compose one Universe,
Observe how System into System runs,
What other Planets, and what other Suns;
What varied Being peoples ev'ry Star;
May tell why Heav'n made all Things as they are.

P O P E.

To expect that so new an Hypothesis should meet with universal Approbation, would be an unpardonable Vanity; nor is it reasonable every Reader should think the Author obliged to remove all his Prejudices and Partialities, so far as to give him the perfect Picture of the Universe he likes best. In many Cases it would be so far from being better for the World, if all Men judged and thought alike, that Providence seems rather to have guarded against it as an Evil, than any how to have promoted it as a general Good: But the following Theory regards the Whole rather than Individuals: And the many worthy Authors cited in the Work, who have all greatly favoured this extensive Way of Thinking, will, I hope, be a sufficient Excuse for forming these obvious Conjectures into a Theory, especially where so great a Problem is attempted as the Solution of the *Via Lactæal* Phænomenon, which has hitherto been looked upon as an insurmountable Difficulty. How the Author has succeeded in this Point, is a Question of no great Consequence; he has certainly done his best; another, no Doubt, will do better, and a third perhaps, by some more rational Hypothesis, may perfect this Theory, and reduce the Whole to infallible Demonstration: The first System of the solar Planets was far from a true one, but it led the Way to Perfection, and the last we can never too much admire. It is well known, that the first System of the Planets was also but a Conjecture, yet none will deny that it was an happy one.

The

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P R E F A C E.

vii

The Discovery of the Magnet Poles; the Government of the Tides; proportional Distance and Periods of the Planets, &c. have all their Uses, and undoubtedly were designed to be known. Ignorance is the Disgrace of Mankind, and sinks human Nature almost to that of Reptiles. Knowledge is its Glory and the distinguishing Characteristic of rational Creatures.

To Enquiries of this sort, then sure we may say with *Milton*, That

GOD'S OWN EAR LISTENS DELIGHTED.

The Subject is, no Doubt, the noblest in Nature, and as such, will always merit the Attention of the thinking Part of Mankind. Men of Learning and Science, in all Ages, have ever made it their peculiar Study. Towards the latter End of the Republic, and afterwards in the more peaceable Times of *Trajan* and the *Plinys*, we have no Reason to doubt but that Astronomy was in the highest Reputation: And notwithstanding *Greece* had been the chief Seat of the Philosophers, yet may we suppose *Rome* in those Days little inferior in the Knowledge of the Stars, when we find Men * of the first Figure in Life become Authors upon the Subject.

We have many Instances to shew, that Astronomy was in the greatest Repute amongst the Antients of all Ranks, and almost every where looked upon as one of the greatest, if not as one of the first Qualifications of their best Men. As a Confirmation of which, we find in the historical Accounts of the *Argives*, a very warm Contest betwixt the two Sons of *Pelops* 1205 Years before *Christ*, thus testified by *Lucian*: When the *Argives*, by publick Consent, had decreed that the Kingdom should fall to him of the two, who should manifest himself the most learned in the Knowledge of the Stars, *Thyestes* thereupon is said to have made known to them, the Constellation, or Sign of the *Zodiack* call'd *Aries*: But *Atreus* at the same time discovering to them the Course of the Sun, with his various Rising and Setting, demonstrating his Motion to be * contrary to that of the Heavens, or diurnal Motion of the Stars, was thereupon elected King.

* *Cicero* translated the Phænomena of *Aratus* into Latin Verse. *Julius Cæsar*, as *Pliny* relates, wrote of Astronomy in *Greek*, and is said to have left several Books of the Motion of the Stars behind him, derived from the Doctrine of the *Egyptians*. *Ant. Chris.* 45. He with *Sofigenes* reformed the Roman Year, which was first invented by *Numa Pompilius*. *Germanicus Cæsar* also translated *Aratus's* Phænomena into Latin Verse *Anno Dom.* 15. *Tiberius* and *Hadrian* are also said to have wrote on Astronomy.

* Hence arose the Fable of the Sun's going backwards in the Days of *Atreus*, as if struck with Abhorrence of his bloody Banquet. *Vide Ovid's Metamorphosis.*

To

To recite more of the most eminent Patrons and Professors of this kind of Learning here, will carry me too far from my present Purpose; for farther Information therefore, I shall refer the inquisitive Reader, to that curious Catalogue in *Sherburn's Sphere of Manilius*, where so many ruling † Men of all Ages and Nations swell, and illustrate the Number.

In a Word, when we look upon the Universe as a vast Infinity of Worlds, acted upon by an eternal Agent, and crowded full of Beings, all tending through their various States to a final Perfection, and reflect upon the many illustrious Personages, who have, from time to time, thought it a kind of Duty to become Observers, and consequently Admirers of this stupendous Sphere of primary Bodies, and diligent Enquirers into the general Laws and Principles of Nature, who can avoid being filled with a kind of enthusiastic Ambition, to be acknowledged one of the Number, who, as it were, by thus adding his Atom to the Whole, humbly endeavours to contribute towards the due Adoration of its great and divine Author.

I judge it will be quite unnecessary to say any thing about the Order of the Work, since that would be only a Repetition of the Table of Contents, to which the Reader is referred, as to the properest Account that can here be given.

† Seven Emperors, nine Kings, and as many sovereign Princes. *Charlemagne* wrote *Ephemerides*, and named the Months and Winds in *High Dutch*, 770. *Rich. II. &c.*



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Some of the Principal E R R A T A.

Page	Line	the Words	Read.
2	<i>ult.</i>	to cease rela	ceasing to relate
4	3	Phænomena	Phænomena
16	15	incomfible	incomprehensible
21	12	comprehenc	comprehending
33	28	compared	is compared
34	37	form	from
43	20	volving	revolving
49	24	immoveable	moveable
61	19	much	much as
62	28	XXIII.	XXI.
65	4	where	any where
67	15	also	all so
69	29	one	our
Plate X. read the Characters of the Planets in this Order ♃ ♄ ♅ ♆ ♇ ♈			

T H E

A
L I S T
O F T H E
S U B S C R I B E R S.

A.
*L*ORD Anfon.
Hon. Mr. Archer.
Charles Ambler, *Esq;*
B.
Duke of Beaufort.
Duke of Bedford.
Dutchess of Beaufort.
Lord Berkely, of Straton.
Miles Barne, *Esq;*
Lancelot Barton, *Esq;*
Hon. Antoine Bentinck.
Hon. John Bentinck.
Norbone Berkely, *Esq;*
John Brown, *Esq;*
—— Blaman, *Esq;*
Thomas Brand, *Esq;*
J. Bevis, *M. D.*
Rev. T. Bonney, A. M.
C.
Countess of Cunengesby.
Lord Cornwallis.
Lady Cornwallis.
Edward Cave, *Esq;*
John Chamock, *Esq;*
Hon. and Rev. Dr. Cowper.
Mr. Richard Chad.
Mr. Henry Chapell.
If. Colepepper.
Mr. George Conyers.

D.
Rev. John Dealtary, A. M.
Mr. Samuel Dent.
F.
Charles Fitzrea Scudamore, *Esq;*
Kean Fitzgerald, *Esq;*
Thomas Fonnerau, *Esq;*
Robert Rakes Fulthorpe, *Esq;*
Mr. Samuel Farrant.
Mr. Paul Fourdrinier.
G.
Marchioness Grey.
Lord Glenorchy.
Francis Godolphin, *Esq;*
Roger Gale, *Esq;*
James Gibbon, *Esq;*
Ralph Goward, *Esq;*
Ralph Gowland, *Esq;*
Ralph Gowland, *Junior, Esq;*
Dr. Gregory.
Dr. Griffith.
Rev. John Griffith, A. M.
Rev. Middlemore Griffith.
H.
Lord Hardwick, Lord High Chan-
cellor of Great-Britain.
Hon. James Hamilton.
Mr. Thomas Heath.
Mr. Thomas Holt.
John Hughes, Esq;
Earl

A L I S T of the S U B S C R I B E R S.

I.	Mr. Dominick Pile.
Earl of Jerfey.	Mr. Powel, of Cambridge,
Richard Jackson, <i>Efq;</i>	R.
Rev. Mr. Jones.	<i>Dutcheſs</i> of Richmond, <i>Ec. Ec.</i>
K.	James Ralph, <i>Efq;</i>
—— Knowles, <i>Efq;</i>	Allan Ramſey, <i>Efq;</i>
Dr. Kendrick.	William Read, <i>Efq;</i> 2.
Mrs. Kennon, 4	Henry Reveley, <i>Efq;</i>
L.	William Reveley, <i>Efq;</i>
<i>Lady Vicounteſs</i> Limerick.	S.
Sir William Lee, <i>Bart.</i>	Sir George Savile.
William Leſter, <i>Efq;</i>	—— Serle, <i>Efq;</i>
Rev. Dr. Long, <i>Maſter</i> of Pem-	Rev. Dr. Smith, <i>Maſter</i> of Trinity
broke-hall, Cambridge.	College, Cambridge,
William Lloyd, <i>Efq;</i>	<i>Miſs</i> Stonehouſe.
Mr. Andrew Lawrence.	William Symonds, <i>Efq;</i>
M.	Mr. James Scot.
R. J. Mead, <i>M. D.</i>	Mr. James Stephens.
Richard Meyrick, <i>M. D.</i>	T.
Owen Meyrick, <i>Efq;</i>	<i>Lord Viſcount</i> Townſhend.
Pierce Meyrick, <i>Efq;</i>	John Temple, <i>Efq;</i>
N.	James Theobald, <i>Efq;</i>
<i>Duke</i> of Norfolk.	Charles Townſhend, <i>Efq;</i>
Lord North.	Mrs. Mary Trevor.
<i>Lord Biſhop</i> of Norwich.	Mr. James Thornton.
Richard Nicholls, <i>Efq;</i>	V.
Mrs. Norſa.	<i>Lord Viſcount</i> Villiers.
P.	W.
<i>Duke</i> of Portland.	<i>Lady Frances</i> Williams.
<i>Earl</i> of Pembroke, <i>Ec.</i> 2	<i>Miſs</i> Williams.
<i>Counteſs</i> of Pembroke, <i>Ec.</i>	<i>Miſs</i> Charlotta Williams.
<i>Lady</i> Palmerſton.	Rev. Thomas White, <i>A. M.</i>
Robert Money Penny, <i>Efq;</i>	—— White, <i>Efq;</i>
Sir Francis Pool.	Charles Louis Wiedmarkter, <i>Efq;</i>
Sir John Pool.	Mr. Ward. Y.
John Probyn, <i>Efq;</i>	Hon. Philip York.
Rev. Mr. Pierce.	Dr. Arthur Young, <i>Preb. of Cant.</i>