

## UN PRECURSOR DEL SISTEMA MÉTRICO.

Método para descubrir la diferencia de los diámetros de la Tierra; Demostración su razón verdadera no es menos variable que 45 es a 46, y la más corta en el eje de su polo 174 millas.... De igual modo, un método para arreglar un estándar universal para pesos y medidas. Por Thomas Williams. <sup>[380]</sup> Londres, 1788, 8vo.

El señor Williams era un paradojador en su época y proponía lo que era, no duda, algunos se burlaban de él. Propuso el tipo de plan que el El francés— independientemente, por supuesto—llevó a cabo algunos años después. Dividiría el grado 52 de latitud en 100.000 partes y cada parte un yard geográfico. La tonelería geográfica era ser el cubo de una yarda geográfica llena de agua de mar tomada algunas a leguas de tierra. Todos los múltiplos y subdivisiones debían ser decimal.

Empezaba a buscar a quienes habían hecho propuestas similares, cuando Un artículo erudito sobre la propuesta de un [172]llegó el sistema métrico bajo mi ojo en el *Times* del 15 de septiembre de 1863. El autor cita Mouton, <sup>[381]</sup> que sería que el minuto de un grado se divide en 10.000 *virgulas*; James Cassini, <sup>[382]</sup> cuyo pie debía ser seis milésimas de minuto; y Paucton, <sup>[383]</sup> cuyo pie fue el número 400.000 de una Título. He verificado la primera y tercera afirmación; seguramente la segunda debería ser la *sexta milésima*.

Una investigación sobre el sistema copernicano ... en el que se demuestra, en la la manera más clara, que la tierra solo tiene su movimiento diurno ... con un intenta señalar la única forma verdadera en que la humanidad puede recibir cualquier beneficio real del estudio de los cuerpos celestes. Por John Cunningham. <sup>[384]</sup> Londres, 1789, 8vo.

El "camino verdadero" parece ser el trato del cielo y la tierra como emblemático de la Trinidad.

Cosmología. Una investigación sobre la causa de lo que se llama gravitación o atracción, en la que los movimientos de los cuerpos celestes, y el la preservación y las operaciones de toda la naturaleza, se deducen de un universal Principio de eflujo y reflujo. Por T. Vivian, <sup>[385]</sup> vicario de Cornwood, Devon. Bath, 1792, 12 meses.

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Atracción, una afluencia de materia hacia el sol; fuerza centrífuga, la rayos solares; cohesión, la presión de la atmósfera. La confusión sobre *La fuerza* centrífuga, llamada como demanda de un agente externo, es Muy común.

## LOS DERECHOS DEL HOMBRE DE THOMAS PAINE.

Los derechos del hombre, siendo una respuesta al señor El ataque de Burke a la Revolución Francesa. <sup>[386]</sup> Por Thomas Paine. <sup>[387]</sup> En dos partes. 1791-1792. 8vo. (Varias ediciones.)<sup>[388]</sup>

Una reivindicación de los derechos de la Mujer, con restricciones sobre temas políticos y morales. Por Mary Wollstonecraft. <sup>[389]</sup> 1792. 8vo.

Un bosquejo de los derechos de Boys and Girls. Junto a Launcelot Light, de Westminster School; y Lætitia Lookaround, de Queen's Square, Bloomsbury. [Por el reverendo Samuel Parr, <sup>[390]</sup> LL.D.] 1792. 8vo. (pp.64).

¿Cuándo nos conocimos los tres antes? La primera obra ha caído en el olvido: Si hubiera merecido su título, podría haberlo hecho [174]Vivido. Es lo que el Los franceses llaman *pièce de circonstance*; pertenece en el tiempo a la Revolución Francesa, y en relación con la opinión de Burke sobre ese movimiento. Quienes solo conocen su nombre piensan que en realidad fue un intento de escribir un tratado filosófico sobre lo que ahora llamamos socialismo. Gobierno tonto La fiscalía le dio lo que nunca pudo haber conseguido para sí mismo.

Mary Wollstonecraft rara vez tiene su nombre bien escrito. Supongo que el O! O! El personaje que consiguió hizo su WooStonecraft. El watt da el doble insinuación, porque su referencia cruzada nos lleva a GooDwin. <sup>[391]</sup> Sin duda el título de el libro fue un acto de discipulado respecto a *Los derechos del hombre* de Paine; pero Este título está muy mal elegido. El libro se vio empañado por ello, especialmente cuando la autora y su marido asumieron el derecho de prescindir de sanción legal hasta que la llegada de los descendientes les llevó a un sentido de el interés de su hijo. <sup>[392]</sup> No se encuentra ni un indicio de tal afirmación en el libro, que trata principalmente sobre la educación femenina. La derecha reclamada para la mujer es tener la educación de un ser humano racional, y no Ser considerado solo como mujer durante la educación juvenil. El las máximas de Mary Wollstonecraft son ahora, aunque no derivadas de ella, En gran medida se siguió en la educación de las niñas, especialmente en la educación en casa: igual que muchos de los principios políticos de Tom Paine, de nuevo no derivados De él están las guías de nuestra legislación real. Lo recuerdo, cuarenta Hace años, una anciana solía decir que no le gustaban las chicas de la de

dieciséis a veinticinco años. "Están llenos", dijo ella, "de *femalidades*." Habló de su comportamiento hacia las mujeres, así como con hombres. Ella [175]se habría sorprendido al saber que ella era seguidora de Mary Wollstonecraft y había metido la mitad de su libro en Una frase.

La tercera obra es un ataque satírico a Mary Wollstonecraft y Tom Paine. Los detalles del ataque convencerían a cualquiera de que ninguno de los dos lo ha hecho cualquier cosa que ahora provocara reprobación. Es totalmente indigno de Dr. Parr, y ha desaparecido completamente de las listas de sus obras, si es que lo fuera. siempre ahí. Que fue escrito por él lo entiendo como evidente. Nichols, <sup>[393]</sup> que podría no dejo de saber, dice (*Anecd.*, vol. ix, p. 120): "Esto es un ensayo juguetón de un erudito de primer nivel, que es destacado en otros lugares en este pero cuyo nombre no mencionaré en tan trivial ocasión." Quién era el erudito queda claro porque el maestro Launcelot es hablando de Bellendenus. <sup>[394]</sup> Además, el mismo niño debe decir, "Que el doctor Parr ponga su mano sobre su corazón, si su conciencia lo permite él, y preguntarse cuántos miles de carretas de este artículo contiene [birch] Ha aplicado cruelmente mal." ¿Cómo podía aplicarse esto a Parr? su puñado de alumnos particulares<sup>[395]</sup> y sin reputación de severidad? Cualquiera uno, excepto él, habría visitado al director de Westminster o Eton. Dudo que el nombre de Parr pudiera relacionarse con la vara por nada impreso, salvo lo anterior y una anécdota de su alumno, Tom Sheridan. <sup>[396]</sup> El Doctor se había vestido para una cena de visita, y [176]estaba listo un cuarto de una hora demasiado pronto para salir. "Tom", dijo él, "creo que será mejor que me venga el látigo tú ahora; seguro que harás algo mientras yo no esté." —"Ojalá ¡lo haría, señor!" dijo el chico; "Sería una carta de licencia para todo el grupo buenas noches." El Doctor vio la fuerza de la réplica: mis dos tutelares Ya lo verás. Pagaban por adelantado; y he dado liberalidad interpretación de la orden.

La siguiente historia del Dr. Parr me fue contada a mí y a otros, sobre 1829, por el difunto Leonard Horner, <sup>[397]</sup> que lo conoció íntimamente. Parr fue viviendo en una casa llena de compañía, creo que en el norte de Inglaterra. Algunos caballeros de América estuvieron entre los invitados, y después de cenar disputó algunas de las afirmaciones o argumentos de Parr. Así que el Doctor se escapó con "¿Sabes de qué país vienes? Vienes del lugar para ¡que usamos para enviar a nuestros ladrones!" Esto enfadó al anfitrión, y cedió Parr fue una reprimenda tan severa que le hizo salir de la habitación de mal humor. El el resto caminaba por el césped, entreteniéndolo a los americanos con bocetos de la Doctor. Había una nube oscura sobre su cabeza, y de esa nube en ese momento se escuchó una voz que llamó *Tham* (Parr-lisp de *Sam*). El la compañía se sorprendió un momento, pero pensó que el Doctor llamaba su

sirviente en la casa, y que la dirección aparente era una ilusión surgiendo de la falta de atención. Pero pronto el sonido se repitió, Ciertamente desde la nube,

"And nearer, clearer, deadlier than before."

There was now a little alarm: where could the Doctor have got to? They ran to his bedroom, and there they discovered a sufficient rather than satisfactory explanation. The Doctor had taken his pipe into his bedroom, and had seated himself, in sulky mood, upon the higher bar of a large and deep old-fashioned grate with a high mantelshelf. Here he had [177]tumbled backwards, and doubled himself up between the bars and the back of the grate. He was fixed tight, and when he called for help, he could only throw his voice up the chimney. The echo from the cloud was the warning which brought his friends to the rescue.

#### ATTACKS ON RELIGIOUS CUSTOMS.

Days of political paradox were coming, at which we now stare. Cobbett<sup>[398]</sup> said, about 1830, in earnest, that in the country every man who did not take off his hat to the clergyman was suspected, and ran a fair chance of having something brought against him. I heard this assertion canvassed, when it was made, in a party of elderly persons. The Radicals backed it, the old Tories rather denied it, but in a way which satisfied me they ought to have denied it less if they could not deny it more. But it must be said that the Governments stopped far short of what their partisans would have had them do. All who know Robert Robinson's<sup>[399]</sup> very quiet assault on church-made festivals in his *History and Mystery of Good Friday* (1777)<sup>[400]</sup> will hear or remember with surprise that the *British Critic* pronounced it a direct, unprovoked, and malicious libel on the most [178]sacred institutions of the national Church. It was reprinted again and again: in 1811 it was in a cheap form at 6s. 6d. a hundred. When the Jacobin day came, the State was really in a fright: people thought twice before they published what would now be quite disregarded. I examined a quantity of letters addressed to George Dyer<sup>[401]</sup> (Charles Lamb's G.D.) and what between the autographs of Thelwall, Hardy, Horne Tooke, and all the rebels,<sup>[402]</sup> put together a packet which produced five guineas, or thereabouts, for the widow. Among them were the following verses, sent by the author—who would not put his name, even in a private letter, for fear of accidents—for consultation whether they could safely be sent to an editor: and they were *not* sent. The occasion was the public thanksgiving at St. Paul's for the naval victories, December 19, 1797.

"God bless me! what a thing!

Have you heard that the King

Goes to St. Paul's?

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Good Lord! and when he's there,

He'll roll his eyes in prayer,

To make poor Johnny stare

At this fine thing.

"No doubt the plan is wise

To blind poor Johnny's eyes

By this grand show;

For should he once suppose

That he's led by the nose,

Down the whole fabric goes,

Church, lords, and king.

"As he shouts Duncan's <sup>[403]</sup>praise,

Mind how supplies they'll raise

In wondrous haste.

For while upon the sea

We gain one victory,

John still a dupe will be

And taxes pay.

"Till from his little store

Three-fourths or even more

Goes to the Crown.

Ah, John! you little think

How fast we downward sink

And touch the fatal brink

At which we're slaves."

I would have indicted the author for not making his thirds and sevenths rhyme. As to the rhythm, it is not much better than what the French sang in the Calais theater when the Duke of Clarence<sup>[404]</sup> took over Louis XVIII in 1814.

"God save noble Clarence,

Who brings our king to France;

God save Clarence!

He maintains the glory

Of the British navy,

etc., etc."

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Perhaps had this been published, the Government would have assailed it as a libel on the church service. They got into the way of defending themselves by making libels on the Church, of what were libels, if on anything, on the rulers of the State; until the celebrated trials of Hone settled the point for ever, and established that juries will not convict for one offence, even though it have been committed, when they know the prosecution is directed at another offence and another intent.

#### HONE'S FAMOUS TRIALS.

The results of Hone's trials (William Hone, 1779-1842) are among the important constitutional victories of our century. He published parodies on the Creeds, the Lord's Prayer, the Catechism, etc., with intent to bring the Ministry into contempt: everybody knew that was his *purpose*. The Government indicted him for impious, profane, blasphemous intent, but not for seditious intent. They hoped to wear him out by proceeding day by day. December 18, 1817, they hid themselves under the Lord's Prayer, the Creed, and the Commandments; December 19, under the Litany; December 20, under the Athanasian Creed, an odd place for shelter when they could not find it in the previous places. Hone defended himself for six, seven, and eight hours on the several days: and the jury acquitted him in 15, 105, and 20 minutes. In the second trial the offense was laid both as profanity and as sedition, which seems to have made the jury hesitate. And they probably came to think that the second count

was false pretence: but the length of their deliberation is a satisfactory addition to the value of the whole. In the first trial the Attorney-General (Shepherd) had the impudence to say that the libel had nothing of a political tendency about it, but was *avowedly* set off against the religion and worship of the Church of England. The whole [181] is political in every sentence; neither more nor less political than the following, which is part of the parody on the Catechism: "What is thy duty towards the Minister? My duty towards the Minister is, to trust him as much as I can; to honor him with all my words, with all my bows, with all my scrapes, and with all my cringes; to flatter him; to give him thanks; to give up my whole soul to him; to idolize his name, and obey his word, and serve him blindly all the days of his political life." And the parody on the Creed begins, "I believe in George, the Regent almighty, maker of new streets and Knights of the Bath." This is what the Attorney-General said had nothing of a political tendency about it. But this was *on the first trial*: Hone was not known. The first day's trial was under Justice Abbott (afterwards C. J. Tenterden).<sup>[405]</sup> It was perfectly understood, when Chief Justice Ellenborough<sup>[406]</sup> appeared in Court on the second day, that he was very angry at the first result, and put his junior aside to try his own rougher dealing. But Hone tamed the lion. An eye-witness told me that when he implored of Hone not to detail his own father Bishop Law's<sup>[407]</sup> views on the Athanasian Creed, which humble petition Hone kindly granted, he held by the desk for support. And the same when—which is not reported—the Attorney-General appealed to the Court for protection against a [182]stinging attack which Hone made on the Bar: he *held on*, and said, "Mr. Attorney, what *can* I do!" I was a boy of twelve years old, but so strong was the feeling of exultation at the verdicts that boys at school were not prohibited from seeing the parodies, which would have been held at any other time quite unfit to meet their eyes. I was not able to comprehend all about the Lord Chief Justice until I read and heard again in after years. In the meantime, Joe Miller had given me the story of the leopard which was sent home on board a ship of war, and was in two days made as docile as a cat by the sailors.<sup>[408]</sup> "You have got that fellow well under," said an officer. "Lord bless your Honor!" said Jack, "if the Emperor of Marocky would send us a cock rhinoceros, we'd bring him to his bearings in no time!" When I came to the subject again, it pleased me to entertain the question whether, if the Emperor had sent a cock rhinoceros to preside on the third day in the King's Bench, Hone would have mastered *him*: I forget how I settled it. There grew up a story that Hone caused Lord Ellenborough's death, but this could not have been true. Lord Ellenborough resigned his seat in a few months, and died just a year after the trials; but sixty-eight years may have had more to do with it than his defeat.

A large subscription was raised for Hone, headed by the Duke of Bedford<sup>[409]</sup> for £105. Many of the leading anti-ministerialists joined: but there were many of the other side who avowed their disapprobation of the false pretense. Many could not venture their names. In the list I find: [183]A member of the House of Lords, an enemy to persecution, and especially to religious persecution employed for political purposes—No parodist, but an enemy to persecution—A juryman on the third day's trial—Ellen Borough—My name would ruin me—Oh! minions of Pitt—Oil for the Hone—The Ghosts of Jeffries<sup>[410]</sup> and Sir William Roy [Ghosts of Jeffries in abundance]—A conscientious Jury and a conscientious Attorney, £1 6s. 8d.—To Mr. Hone, for defending in his own person the freedom of the press, attacked for a political object, under the old pretense of supporting Religion—A cut at corruption—An Earldom for myself and a translation for my brother—One who disapproves of parodies, but abhors persecution—From a schoolboy who wishes Mr. Hone to have a very grand subscription—"For delicacy's sake forbear," and "Felix trembled"—"I will go myself to-morrow"—Judge Jeffries' works rebound in calf by Law—Keep us from Law, and from the Shepherd's paw—I must not give you my name, but God bless you!—As much like Judge Jeffries as the present times will permit—May Jeffries' fame and Jeffries' fate on every modern Jeffries wait—No parodist, but an admirer of the man who has proved the fallacy of the Lawyer's Law, that when a man is his own advocate he has a fool for his client—A Mussulman who thinks it would not be an impious libel to parody the Koran—May the suspenders of the Habeas Corpus Act be speedily suspended—Three times twelve for thrice-tried Hone, who cleared the cases himself alone, and won three heats by twelve to one, £1 16s.—A conscientious attorney, £1 6s. 8d.—Rev. T. B. Morris, rector of Shelfanger, who disapproves of the parodies, but abhors the making an affected zeal for religion the pretext for political persecution—A Lawyer opposed in principle to [184]Law—For the Hone that set the razor that shaved the rats—Rev. Dr. Samuel Parr, who most seriously disapproves of all parodies upon the hallowed language of Scripture and the contents of the Prayer-book, but acquits Mr. Hone of intentional impiety, admires his talents and fortitude, and applauds the good sense and integrity of his juries—Religion without hypocrisy, and Law without impartiality—O Law! O Law! O Law!

These are specimens of a great many allusive mottoes. The subscription was very large, and would have bought a handsome annuity, but Hone employed it in the bookselling trade, and did not thrive. His *Everyday Book*<sup>[411]</sup> and his *Apocryphal New Testament*,<sup>[412]</sup> are useful books. On an annuity he would have thriven as an antiquarian writer and collector. It is well that the attack upon the right to ridicule Ministers roused a dormant power which was equal to the occasion. Hone declared,

on his honor, that he had never addressed a meeting in his life, nor spoken a word before more than twelve persons. Had he—which however could not then be done—employed counsel and had a *guilty defense* made for him, he would very likely have been convicted, and the work would have been left to be done by another. No question that the parodies disgusted all who revered Christianity, and who could not separate the serious and the ludicrous, and prevent their existence in combination.

My extracts, etc., are from the nineteenth, seventeenth, and sixteenth editions of the three trials, which seem to have been contemporaneous (all in 1818) as they are made up into one book, with additional title over all, and the motto "Thrice the brindled cat hath mew'd." They are published by Hone himself, who I should have said was a publisher [185] as well as was to be. And though the trials only ended Dec. 20, 1817, the preface attached to this common title is dated Jan. 23, 1818. <sup>[413]</sup>

The spirit which was roused against the false dealing of the Government, i.e., the pretense of prosecuting for impiety when all the world knew the real offense was, if anything, sedition—was not got up at the moment: there had been previous exhibitions of it. For example, in the spring of 1818 Mr. Russell, a little printer in Birmingham, was indicted for publishing the Political Litany<sup>[414]</sup> on which Hone was afterwards tried. He took his witnesses to the summer Warwick assizes, and was told that the indictment had been removed by certiorari into the King's Bench. He had notice of trial for the spring assizes at Warwick: he took his witnesses there, and the trial was postponed by the Crown. He then had notice for the summer assizes at Warwick; and so on. The policy seems to have been to wear out the obnoxious parties, either by delays or by heaping on trials. The Government was odious, and knew it could *not* get verdicts against ridicule, and *could* get verdicts against impiety. No difficulty was found in convicting the sellers of Paine's works, and the like. When Hone was held to bail it was seen that a crisis was at hand. All parties in politics furnished him with parodies in proof of religious persons having made instruments of them. The parodies by Addison and Luther were contributed by a Tory lawyer, who was afterwards a judge.

Hone had published, in 1817, tracts of purely political ridicule: *Official Account of the Noble Lord's Bite*,<sup>[415]</sup> *Trial of the Dog for Biting the Noble Lord*, etc. These were not touched. After the trials, it is manifest that Hone was [186] to be unassailed, do what he might. *The Political House that Jack built*, in 1819; *The Man in the Moon*, 1820; *The Queen's Matrimonial Ladder*, *Non mi ricordo*, *The R—I Fowls*, 1820; *The Political Showman at Home*, with plates by G. Cruickshank,<sup>[416]</sup> 1821 [he did all the plates]; *The Spirit of Despotism*, 1821—would have been legitimate marks for prosecution in

previous years. The biting caricature of several of these works are remembered to this day. *The Spirit of Despotism* was a tract of 1795, of which a few copies had been privately circulated with great secrecy. Hone reprinted it, and prefixed the following address to "Robert Stewart, *alias* Lord Castlereagh"<sup>[417]</sup>: "It appears to me that if, unhappily, your counsels are allowed much longer to prevail in the Brunswick Cabinet, they will bring on a crisis, in which the king may be dethroned or the people enslaved. Experience has shown that the people will not be enslaved—the alternative is the affair of your employers." Hone might say this without notice.

In 1819 Mr. Murray<sup>[418]</sup> published Lord Byron's *Don Juan*,<sup>[419]</sup> and Hone followed it with *Don John, or Don Juan Unmasked*, a little account of what the publisher to the Admiralty was allowed to issue without prosecution. The parody on the Commandments was a case very much in point: and Hone makes a stinging allusion to the use of the "*unutterable Name*, with a profane levity unsurpassed by [187]any other two lines in the English language." The lines are

"'Tis strange—the Hebrew noun which means 'I am,'

The English always use to govern d——n."

Hone ends with: "Lord Byron's dedication of 'Don Juan' to Lord Castlereagh was suppressed by Mr. Murray from delicacy to Ministers. Q. Why did not Mr. Murray suppress Lord Byron's *parody* on the Ten Commandments? A. Because it contains nothing in ridicule of Ministers, and therefore nothing that *they* could suppose would lead to the displeasure of Almighty God."

The little matters on which I have dwelt will never appear in history from their political importance, except in a few words of result. As a mode of thought, silly evasions of all kinds belong to such a work as the present. Ignorance, which seats itself in the chair of knowledge, is a mother of revolutions in politics, and of unread pamphlets in circle-squaring. From 1815 to 1830 the question of revolution or no revolution lurked in all our English discussions. The high classes must govern; the high classes shall not govern; and thereupon issue was to be joined. In 1828-33 the question came to issue; and it was, Revolution with or without civil war; choose. The choice was wisely made; and the Reform Bill started a new system so well dovetailed into the old that the joinings are hardly visible. And now, in 1867, the thing is repeated with a marked subsidence of symptoms; and the party which has taken the place of the extinct Tories is carrying through Parliament a wider extension of the franchise than their opponents would have ventured. Napoleon used to say that a decided nose was a sign of power: on which it has been remarked that he had good reason to say so before

the play was done. And so had our country; it was saved from a religious war, and from a civil war, by the power of that nose over its colleagues. [188]

#### THOMAS TAYLOR, THE PLATONIST.

The Commentaries of Proclus. <sup>[420]</sup> Translated by Thomas Taylor. <sup>[421]</sup> London, 1792, 2 vols. 4to. <sup>[422]</sup>

The reputation of "the Platonist" begins to grow, and will continue to grow. The most authentic account is in the *Penny Cyclopædia*, written by one of the few persons who knew him well, and one of the fewer who possess all his works. At page lvi of the Introduction is Taylor's notion of the way to find the circumference. It is not geometrical, for it proceeds on the motion of a point: the words "on account of the simplicity of the impulsive motion, such a line must be either straight or circular" will suffice to show how Platonic it is. Taylor certainly professed a kind of heathenism. D'Israeli said, "Mr. T. Taylor, the Platonic philosopher and the modern Plethon, <sup>[423]</sup> consonant to that philosophy, professes polytheism." Taylor printed this in large type, in a page by itself after the dedication, without any disavowal. I have seen the following, Greek and translation both, in his handwriting: "Πᾶς ἀγαθὸς ἢ ἀγαθὸς ἐθνικός· καὶ πᾶς χριστιανὸς ἢ χριστιανὸς κακός. Every good man, so far as he is a good man, is a heathen; and every Christian, so far as he is a Christian, is a bad man." Whether Taylor had in his head the Christian of the New Testament, or whether he drew from those members of the "religious world" who make manifest the religious flesh and the religious devil, [189] cannot be decided by us, and perhaps was not known to himself. If a heathen, he was a virtuous one.

#### A NEW ERA IN FICTION.

(1795.) This is the date of a very remarkable paradox. The religious world—to use a name claimed by a doctrinal sect—had long set its face against amusing literature, and all works of imagination. Bunyan, Milton, and a few others were irresistible; but a long face was pulled at every attempt to produce something readable for poor people and *poor children*. In 1795, a benevolent association began to circulate the works of a lady who had been herself a dramatist, and had nourished a pleasant vein of satire in the society of Garrick and his friends; all which is carefully suppressed in some biographies. Hannah More's <sup>[424]</sup> *Cheap Repository Tracts*, <sup>[425]</sup> which were bought by millions of copies, destroyed the vicious publications with which the hawkers deluged

the country, by the simple process of furnishing the hawkers with something more saleable.

*Dramatic fiction*, in which the *characters* are drawn by themselves, was, at the middle of the last century, the monopoly of writers who required indecorum, such as Fielding and Smollett. All, or nearly all, which could be permitted to the young, was dry narrative, written by people who could not make their personages *talk character*; they all spoke [190]alike. The author of the *Rambler*<sup>[426]</sup> is ridiculed, because his young ladies talk Johnsonese; but the satirists forget that all the presentable novel-writers were equally incompetent; even the author of *Zeluco* (1789)<sup>[427]</sup> is the strongest possible case in point.

Dr. Moore,<sup>[428]</sup> the father of the hero of *Corunna*,<sup>[429]</sup> with good narrative power, some sly humor, and much observation of character, would have been, in our day, a writer of the *Peacock*<sup>[430]</sup> family. Nevertheless, to one who is accustomed to our style of things, it is comic to read the dialogue of a jealous husband, a suspected wife, a faithless maid-servant, a tool of a nurse, a wrong-headed pomposity of a priest, and a sensible physician, all talking Dr. Moore through their masks. Certainly an Irish soldier does say "by Jasus," and a cockney footman "this here" and "that there"; and this and the like is all the painting of characters which is effected out of the mouths of the bearers by a narrator of great power. I suspect that some novelists repressed their power under a rule that a narrative should narrate, and that the dramatic should be confined to the drama.

I make no exception in favor of Miss Burney;<sup>[431]</sup> though she was the forerunner of a new era. Suppose a country [191]in which dress is always of one color; suppose an importer who brings in cargoes of blue stuff, red stuff, green stuff, etc., and exhibits dresses of these several colors, that person is the similitude of Miss Burney. It would be a delightful change from a universal dull brown, to see one person all red, another all blue, etc.; but the real inventor of pleasant dress would be the one who could mix his colors and keep down the bright and gaudy. Miss Burney's introduction was so charming, by contrast, that she nailed such men as Johnson, Burke, Garrick, etc., to her books. But when a person who has read them with keen pleasure in boyhood, as I did, comes back to them after a long period, during which he has made acquaintance with the great novelists of our century, three-quarters of the pleasure is replaced by wonder that he had not seen he was at a puppet-show, not at a drama. Take some *labeled* characters out of our humorists, let them be put together into one piece, to speak only as labeled: let there be a Dominie with nothing but "Prodigious!" a Dick Swiveller with nothing but adapted quotations; a Dr. Folliott with nothing but

sneers at Lord Brougham;<sup>[432]</sup> and the whole will pack up into one of Miss Burney's novels.

Maria Edgeworth,<sup>[433]</sup> Sydney Owenson (Lady Morgan),<sup>[434]</sup> Jane Austen,<sup>[435]</sup> Walter Scott,<sup>[436]</sup> etc., are all of our century; as [192]are, I believe, all the Minerva Press novels, as they were called, which show some of the power in question. Perhaps dramatic talent found its best encouragement in the drama itself. But I cannot ascertain that any such power was directed at the multitude, whether educated or uneducated, with natural mixture of character, under the restraints of decorum, until the use of it by two religious writers of the school called "evangelical," Hannah More and Rowland Hill.<sup>[437]</sup> The *Village Dialogues*, though not equal to the *Repository Tracts*, are in many parts an approach, and perhaps a copy; there is frequently humorous satire, in that most effective form, self-display. They were published in 1800, and, partly at least, by the Religious Tract Society, the lineal successor of the *Repository* association, though knowing nothing about its predecessor. I think it right to add that Rowland Hill here mentioned is not the regenerator of the Post Office.<sup>[438]</sup> Some do not distinguish accurately; I have heard of more than one who took me to have had a logical controversy with a diplomatist who died some years before I was born.

#### THE RELIGIOUS TRACT SOCIETY.

A few years ago, an attempt was made by myself and others to collect some information about the *Cheap Repository* (see *Notes and Queries*, 3d Series, vi. 241, 290, 353; *Christian Observer*, Dec. 1864, pp. 944-49). It appeared that after the Religious Tract Society had existed more than fifty years, a friend presented it with a copy of the original prospectus of the *Repository*, a thing the existence of which was not known. In this prospectus it is announced that from the plan "will be carefully excluded whatever is enthusiastic, absurd, or superstitious." The "evangelical" [193]party had, from the foundation of the Religious Tract Society, regretted that the *Repository Tracts* "did not contain a fuller statement of the great evangelical principles"; while in the prospectus it is also stated that "no cause of any particular party is intended to be served by it, but general Christianity will be promoted upon practical principles." This explains what has often been noticed, that the tracts contain a mild form of "evangelical" doctrine, free from that more fervid dogmatism which appears in the *Village Dialogues*; and such as H. More's friend, Bishop Porteus<sup>[439]</sup>—a great promoter of the scheme—might approve. The Religious Tract Society (in 1863) republished some of H. More's tracts, with alterations,

additions, and omissions *ad libitum*. This is an improper way of dealing with the works of the dead; especially when the reprints are of popular works. A small type addition to the preface contains: "Some alterations and abridgements have been made to adapt them to the present times and the aim of the Religious Tract Society." I think every publicity ought to be given to the existence of such a practice; and I reprint what I said on the subject in *Notes and Queries*.

Alterations in works which the Society republishes are a necessary part of their plan, though such notes as they should judge to be corrective would be the best way of proceeding. But the fact of alteration should be very distinctly announced on the title of the work itself, not left to a little bit of small type at the end of the preface, in the place where trade advertisements, or directions to the binder, are often found. And the places in which alteration has been made should be pointed out, either by marks of omission, when omission is the alteration, or by putting the altered sentences in brackets, when change has been made. May any one alter the works of the dead at his own discretion? [194] We all know that readers in general will take each sentence to be that of the author whose name is on the title; so that a correcting republisher *makes use of his author's name to teach his own variation*. The tortuous logic of "the trade," which is content when "the world" is satisfied, is not easily answered, any more than an eel is easily caught; but the Religious Tract Society may be *convinced* [in the old sense] in a sentence. On which course would they feel most safe in giving their account to the God of truth? "In your own conscience, now?"

I have tracked out a good many of the variations made by the Religious Tract Society in the recently published volume of *Repository Tracts*. Most of them are doctrinal insertions or amplifications, to the matter of which Hannah More would not have objected—all that can be brought against them is the want of notice. But I have found two which the respect I have for the Religious Tract Society, in spite of much difference on various points, must not prevent my designating as paltry. In the story of Mary Wood, a kind-hearted clergyman converses with the poor girl who has ruined herself by lying. In the original, he "assisted her in the great work of repentance;" in the reprint it is to be shown in some detail how he did this. He is to begin by pointing out that "the heart is deceitful above all things and desperately wicked." Now the clergyman's name is *Heartwell*: so to prevent his name from contradicting his doctrine, he is actually cut down to *Harwell*. Hannah Moore meant this good man for one of those described in Acts xv. 8, 9, and his name was appropriate.

Again, Mr. Flatterwell, in persuasion of Parley the porter to let him into the castle, declares that the worst he will do is to "play an innocent game of cards just to keep you awake, or sing a cheerful song with the maids." Oh fie! Miss Hannah More! and you

a single lady too, and a contemporary of the virtuous Bowdler! <sup>[440]</sup> Though Flatterwell be an [195]allegory of the devil, this is really too indecorous, even for him. Out with the three last words! and out it is.

The Society cuts a poor figure before a literary tribunal. Nothing was wanted except an admission that the remarks made by me were unanswerable, and this was immediately furnished by the Secretary (*N. and Q.*, 3d S., vi. 290). In a reply of which six parts out of seven are a very amplified statement that the Society did not intend to reprint *all* Hannah More's tracts, the remaining seventh is as follows:

"I am not careful [perhaps this should be *careful not*] to notice Professor De Morgan's objections to the changes in 'Mary Wood' or 'Parley the Porter,' but would merely reiterate that the tracts were neither designed nor announced to be 'reprints' of the originals [design is only known to the designers; as to announcement, the title is 'Tis all for the best, The Shepherd of Salisbury Plain, and other narratives by Hannah More']; and much less [this must be *careful not*; further removed from answer than *not careful*] can I occupy your space by a treatise on the Professor's question: 'May any one alter the works of the dead at his own discretion?'"

To which I say: Thanks for help!

I predict that Hannah More's *Cheap Repository Tracts* will somewhat resemble the *Pilgrim's Progress* in their fate. Written for the cottage, and long remaining in their original position, they will become classical works of their kind. Most assuredly this will happen if my assertion cannot be upset, namely, that they contain the first specimens of fiction addressed to the world at large, and widely circulated, in which dramatic—as distinguished from puppet—power is shown, and without indecorum.

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According to some statements I have seen, but which I have not verified, other publishing bodies, such as the Christian Knowledge Society, have taken the same liberty with the names of the dead as the Religious Tract Society. If it be so, the impropriety is the work of the smaller spirits who have not been sufficiently overlooked. There must be an overwhelming majority in the higher councils to feel that, whenever *altered* works are published, *the fact of alteration should be made as prominent as the name of the author*. Everything short of this is suppression of truth, and will ultimately destroy the credit of the Society. Equally necessary is it that the alterations should be noted. When it comes to be known that the author before him is altered, he knows not where nor how nor by whom, the lowest reader will lose his interest.

## A TRIBUTE TO WILLIAM FREND.

The principles of Algebra. By William Frend. <sup>[441]</sup> London, 1796, 8vo. Second Part, 1799.

This Algebra, says Dr. Peacock, <sup>[442]</sup> shows "great distrust [197] of the results of algebraical science which were in existence at the time when it was written." Truly it does; for, as Dr. Peacock had shown by full citation, it makes war of extermination upon all that distinguishes algebra from arithmetic. Robert Simson <sup>[443]</sup> and Baron Maseres <sup>[444]</sup> were Mr. Frend's predecessors in this opinion.

The genuine respect which I entertained for my father-in-law did not prevent my canvassing with perfect freedom his anti-algebraical and anti-Newtonian opinions, in a long obituary memoir read at the Astronomical Society in February 1842, which was written by me. It was copied into the *Athenæum* of March 19. It must be said that if the manner in which algebra was presented to the learner had been true algebra, he would have been right: and if he had confined himself to protesting against the imposition of attraction as a fundamental part of the existence of matter, he would have been in unity with a great many, including Newton himself. I wish he had preferred amendment to rejection when he was a college tutor: he wrote and spoke English with a clearness which is seldom equaled.

His anti-Newtonian discussions are confined to the preliminary chapters of his *Evening Amusements*, <sup>[445]</sup> a series of astronomical lessons in nineteen volumes, following the moon through a period of the golden numbers.

There is a mistake about him which can never be destroyed. It is constantly said that, at his celebrated trial in 1792, for sedition and opposition to the Liturgy, etc., he was *expelled* from the University. He was *banished*. People cannot see the difference; but it made all the difference to [198] Mr. Frend. He held his fellowship and its profits till his marriage in 1808, and was a member of the University and of its Senate till his death in 1841, as any Cambridge Calendar up to 1841 will show. That they would have expelled him if they could, is perfectly true; and there is a funny story—also perfectly true—about their first proceedings being under a statute which would have given the power, had it not been discovered during the proceedings that the statute did not exist. It had come so near to existence as to be entered into the Vice-Chancellor's book for his signature, which it wanted, as was not seen till Mr. Frend exposed it: in fact, the statute had never actually passed.

There is an absurd mistake in Gunning's <sup>[446]</sup> *Reminiscences of Cambridge*. In quoting a passage of Mr. Frend's pamphlet, which was very obnoxious to the existing

Government, it is printed that the poor market-women complained that they were to be *scotched* a quarter of their wages by taxation; and attention is called to the word by its being three times printed in italics. In the pamphlet it is "sconced"; that very common old word for fined or mulcted.

Lord Lyndhurst, <sup>[447]</sup> who has [1863] just passed away under a load of years and honors, was Mr. Frend's private pupil at Cambridge. At the time of the celebrated trial, he and two others amused themselves, and vented the feeling which was very strong among the undergraduates, by chalking the walls of Cambridge with "Frend for ever!" While thus engaged in what, using the term legally, we are probably to call his first publication, he and his friends were surprised by the proctors. Flight and chase followed of course: Copley and one of the others, Serjeant Rough, <sup>[448]</sup> escaped: the [199]third, whose name I forget, but who afterwards, I have been told was a bishop, <sup>[449]</sup> being lame, was captured and imprisoned. Looking at the Cambridge Calendar to verify the fact that Copley was an undergraduate at the time, I find that there are but two other men in the list of honors of his year whose names are now widely remembered. And they were both celebrated schoolmasters; Butler<sup>[450]</sup> of Harrow, and Tate<sup>[451]</sup> of Richmond.

But Mr. Frend had another noted pupil. I once had a conversation with a very remarkable man, who was generally called "Place, <sup>[452]</sup> the tailor," but who was politician, political economist, etc., etc. He sat in the room above his shop—he was then a thriving master tailor at Charing Cross—surrounded by books enough for nine, to shame a proverb. The blue books alone, cut up into strips, would have measured Great Britain for oh-no-we-never-mention-'ems, the Highlands included. I cannot find a biography of this worthy and able man. I happened to mention William Frend, and he said, "Ah! my old master, as I always call him. Many and many a time, and year after year, did he come in every [200]now and then to give me instruction, while I was sitting on the board, working for my living, you know."

Place, who really was a sound economist, is joined with Cobbett, because they were together at one time, and because he was, in 1800, etc., a great Radical. But for Cobbett he had a great contempt. He told me the following story. He and others were advising with Cobbett about the defense he was to make on a trial for seditious libel which was coming on. Said Place, "You must put in the letters you have received from Ministers, members of the Commons from the Speaker downwards, etc., about your Register, and their wish to have subjects noted. You must then ask the jury whether a person so addressed must be considered as a common sower of sedition, etc. You will be acquitted; nay, if your intention should get about, very likely they will manage to stop proceedings." Cobbett was too much disturbed to listen; he walked about the

room ejaculating "D—— the prison!" and the like. He had not the sense to follow the advice, and was convicted.

Cobbett, to go on with the chain, was a political acrobat, ready for any kind of posture. A friend of mine gave me several times an account of a mission to him. A Tory member—those who know the old Tory world may look for his initials in initials of two consecutive words of "Pay his money with interest"—who was, of course, a political opponent, thought Cobbett had been hardly used, and determined to subscribe handsomely towards the expenses he was incurring as a candidate. My friend was commissioned to hand over the money—a bag of sovereigns, that notes might not be traced. He went into Cobbett's committee-room, told the patriot his errand, and put the money on the table. "And to whom, sir, am I indebted?" said Cobbett. "The donor," was the answer, "is Mr. Andrew Theophilus Smith," or some such unlikely pair of baptisms. "Ah!" said Cobbett, "I have known Mr. A. T. S. a long time! he was always a true friend of his country!"[201]

To return to Place. He is a noted instance of the advantage of our jury system, which never asks a man's politics, etc. The late King of Hanover, when Duke of Cumberland, being unpopular, was brought under unjust suspicions by the suicide of his valet: he must have seduced the wife and murdered the husband. The charges were as absurd as those brought against the Englishman in the Frenchman's attempt at satirical verses upon him:

"The Englishman is a very bad man;

He drink the beer and he steal the can:

He kiss the wife and he beat the man;

And the Englishman is a very G—— d——."

The charges were revived in a much later day, and the defense might have given some trouble. But Place, who had been the foreman at the inquest, came forward, and settled the question in a few lines. Every one knew that the old Radical was quite free of all disposition to suppress truth from wish to curry favor with royalty.

John Speed, <sup>[453]</sup> the author of the *English History*, <sup>[454]</sup> (1632) which Bishop Nicolson<sup>[455]</sup> calls the best chronicle extant, was a man, like Place, of no education, but what he gave himself. The bishop says he would have done better if he had a better training: but what, he adds, could have been expected from a tailor! This Speed was, as well as Place. But he was [202]released from manual labor by Sir Fulk Grevil, <sup>[456]</sup> who enabled him to study.

## A STORY ON SIMSON.

I have elsewhere noticed that those who oppose the mysteries of algebra do not ridicule them; this I want the cyclometers to do. Of the three who wrote against the great point, the negative quantity, and the uses of 0 which are connected with it, only one could fire a squib. That Robert Simson<sup>[457]</sup> should do such a thing will be judged impossible by all who admit tradition. I do not vouch for the following; I give it as a proof of the impression which prevailed about him:

He used to sit at his open window on the ground floor, as deep in geometry as a Robert Simson ought to be. Here he would be accosted by beggars, to whom he generally gave a trifle, he roused himself to hear a few words of the story, made his donation, and instantly dropped down into his depths. Some wags one day stopped a mendicant who was on his way to the window with "Now, my man, do as we tell you, and you will get something from that gentleman, and a shilling from us besides. You will go and say you are in distress, he will ask you who you are, and you will say you are Robert Simson, son of John Simson of Kirktonhill." The man did as he was told; Simson quietly gave him a coin, and dropped off. The wags watched a little, and saw him rouse himself again, and exclaim "Robert Simson, son of John Simson of Kirktonhill! why, that is myself. That man must be an impostor." Lord Brougham tells the same story, with some difference of details.

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## BARON MASERES.

Baron Maseres<sup>[458]</sup> was, as a writer, dry; those who knew his writings will feel that he seldom could have taken in a joke or issued a pun. Maseres was the fourth wrangler of 1752, and first Chancellor's medallist (or highest in classics); his second was Porteus<sup>[459]</sup> (afterward Bishop of London). Waring<sup>[460]</sup> came five years after him: he could not get Maseres through the second page of his first book on algebra; a negative quantity stood like a lion in the way. In 1758 he published his *Dissertation on the Use of the Negative Sign*,<sup>[461]</sup> 4to. There are some who care little about + and -, who would give it house-room for the sake of the four words "Printed by Samuel Richardson."

Maseres speaks as follows: "A single quantity can never be marked with either of those signs, or considered as either affirmative or negative; for if any single quantity, as  $b$ , is marked either with the sign + or with the sign - without assigning some other

quantity, as  $a$ , to which it is to be added, or from which it is to be subtracted, the mark will have no meaning or signification: thus if it be said that the square of  $-5$ , or the product of  $-5$  into  $-5$ , is equal to  $+25$ , such an assertion must either signify no more than that  $5$  times  $5$  is equal to  $25$  without any regard to the signs, or it must be mere nonsense and unintelligible jargon. I speak according to the foregoing definition, by which the affirmativeness or negativeness of any quantity implies a relation to another quantity of the same kind to which it [204] is added, or from which it is subtracted; for it may perhaps be very clear and intelligible to those who have formed to themselves some other idea of affirmative and negative quantities different from that above defined."

Nothing can be more correct, or more identically logical:  $+5$  and  $-5$ , standing alone, are jargon if  $+5$  and  $-5$  are to be understood as without reference to another quantity. But those who have "formed to themselves some other idea" see meaning enough. The great difficulty of the opponents of algebra lay in want of power or will to see extension of terms. Maseres is right when he implies that extension, accompanied by its refusal, makes jargon. One of my paradoxers was present at a meeting of the Royal Society (in 1864, I think) and asked permission to make some remarks upon a paper. He rambled into other things, and, naming me, said that I had written a book in which two sides of a triangle are pronounced *equal* to the third. <sup>[462]</sup> So they are, in the sense in which the word is used in complete algebra; in which  $A + B = C$  makes  $A$ ,  $B$ ,  $C$ , three sides of a triangle, and declares that going over  $A$  and  $B$ , one after the other, is equivalent, in change of place, to going over  $C$  at once. My critic, who might, if he pleased, have objected to extension, insisted upon reading me in unextended meaning.

On the other hand, it must be said that those who wrote on the other idea wrote very obscurely about it and justified Des Cartes (*De Methodo*) <sup>[463]</sup> when he said: "Algebram vero, ut solet doceri, animadverti certis regulis et numerandi formulis ita esse contentam, ut videatur potius ars quædam confusa, cujus usu ingenium quodam modo turbatur et obscuratur, quam scientia qua excolatur et perspicacius [205] reddatur." <sup>[464]</sup> Maseres wrote this sentence on the title of his own work, now before me; he would have made it his motto if he had found it earlier.

There is, I believe, in Cobbett's *Annual Register*, <sup>[465]</sup> an account of an interview between Maseres and Cobbett when in prison.

The conversation of Maseres was lively, and full of serious anecdote: but only one attempt at humorous satire is recorded of him; it is an instructive one. He was born in 1731 (Dec. 15), and his father was a refugee. French was the language of the house,

with the pronunciation of the time of Louis XIV. He lived until 1824 (May 19), and saw the race of refugees who were driven out by the first Revolution. Their pronunciation differed greatly from his own; and he used to amuse himself by mimicking them. Those who heard him and then had the two schools of pronunciation before them at once; a thing which seldom happens. It might even yet be worth while to examine the Canadian pronunciation.

Maseres went as Attorney-General to Quebec; and was appointed Cursitor Baron of our Exchequer in 1773. There is a curious story about his mission to Canada, which I have heard as good tradition, but have never seen in print. The reader shall have it as cheap as I; and I confess I rather believe it. Maseres was inveterately honest; he could not, at the bar, bear to see his own client victorious, when he knew his cause was a bad one. On a certain occasion he was in a cause which he knew would go against him if a certain case were quoted. Neither the judge nor the opposite counsel seemed to remember this case, and Maseres could not help dropping an allusion which brought it out. [206]His business as a barrister fell off, of course. Some time after, Mr. Pitt (Chatham) wanted a lawyer to send to Canada on a private mission, and wanted a *very honest man*. Some one mentioned Maseres, and told the above story: Pitt saw that he had got the man he wanted. The mission was satisfactorily performed, and Maseres remained as Attorney-General.

The *Doctrine of Life Annuities*<sup>[466]</sup> (4to, 726 pages, 1783) is a strange paradox. Its size, the heavy dissertations on the national debt, and the depth of algebra supposed known, put it out of the question as an elementary work, and it is unfitted for the higher student by its elaborate attempt at elementary character, shown in its rejection of forms derived from chances in favor of *the average*, and its exhibition of the separate values of the years of an annuity, as arithmetical illustrations. It is a climax of unsaleability, unreadability, and inutility. For intrinsic nullity of interest, and dilution of little matter with much ink, I can compare this book to nothing but that of Claude de St. Martin, elsewhere mentioned, or the lectures *On the Nature and Properties of Logarithms*, by James Little,<sup>[467]</sup> Dublin, 1830, 8vo. (254 heavy pages of many words and few symbols), a wonderful weight of weariness.

The stock of this work on annuities, very little diminished, was given by the author to William Frend, who paid warehouse room for it until about 1835, when he consulted me as to its disposal. As no publisher could be found who would take it as a gift, for any purpose of sale, it was consigned, all but a few copies, to a buyer of waste paper.

Baron Maseres's republications are well known: the *Scriptores Logarithmici*<sup>[468]</sup> is a set of valuable reprints, mixed [207]with much which might better have entered into

another collection. It is not so well known that there is a volume of optical reprints, *Scriptores Optici*, London, 1823, 4to, edited for the veteran of ninety-two by Mr. Babbage<sup>[469]</sup> at twenty-nine. This excellent volume contains James Gregory, Des Cartes, Halley, Barrow, and the optical writings of Huyghens, the *Principia* of the undulatory theory. It also contains, by the sort of whim in which such men as Maseres, myself, and some others are apt to indulge, a reprint of "The great new Art of weighing Vanity,"<sup>[470]</sup> by M. Patrick Mathers, Arch-Bedel to the University of St. Andrews, Glasgow, 1672. Professor Sinclair,<sup>[471]</sup> of Glasgow, a good man at clearing mines of the water which they did not want, and furnishing cities with water which they did want, seems to have written absurdly about hydrostatics, and to have attacked a certain Sanders,<sup>[472]</sup> M.A. So Sanders, assisted by James Gregory, published a heavy bit of jocosity about him. This story of the authorship rested on a note made in his [208]copy by Robert Gray, M.D.; but it has since been fully confirmed by a letter of James Gregory to Collins, in the Macclesfield Correspondence. "There is one Master Sinclair, who did write the *Ars Magna et Nova*,<sup>[473]</sup> a pitiful ignorant fellow, who hath lately written horrid nonsense in the hydrostatics, and hath abused a master in the University, one Mr. Sanders, in print. This Mr. Sanders ... is resolved to cause the Bedel of the University to write against him.... We resolve to make excellent sport with him."

On this I make two remarks: First, I have learned from experience that old notes, made in books by their possessors, are statements of high authority: they are almost always confirmed. I do not receive them without hesitation; but I believe that of all the statements about books which rest on one authority, there is a larger percentage of truth in the written word than in the printed word. Secondly, I mourn to think that when the New Zealander picks up his old copy of this book, and reads it by the associations of his own day, he may, in spite of the many assurances I have received that my *Athenæum Budget* was amusing, feel me to be as heavy as I feel James Gregory and Sanders. But he will see that I knew what was coming, which Gregory did not.

#### MR. FREND'S BURLESQUE.

It was left for Mr. Frend to prove that an impugner of algebra could attempt ridicule. He was, in 1803, editor of a periodical *The Gentleman's Monthly Miscellany*, which lasted a few months.<sup>[474]</sup> To this, among other things, he contributed the following, in burlesque of the use made of 0, to which he objected.<sup>[475]</sup> The imitation of Rabelais, a writer [209]in whom he delighted, is good: to those who have never dipped, it may give such a notion as they would not easily get elsewhere. The point of the satire is not so good. But in truth it is not easy to make pungent scoffs upon what is common sense to

all mankind. Who can laugh with effect at six times nothing is nothing, as false or unintelligible? In an article intended for that undistinguishing know-nothing "general reader," there would have been no force of satire, if *division* by 0 had been separated from multiplication by the same.

I have followed the above by another squib, by the same author, on the English language. The satire is covertly aimed at theological phraseology; and any one who watches this subject will see that it is a very just observation that the Greek words are not boiled enough.

Pantagruel's Decision of the Question about Nothing.

"Pantagruel determined to have a snug afternoon with Epistemon and Panurge. Dinner was ordered to be set in a small parlor, and a particular batch of Hermitage with some choice Burgundy to be drawn from a remote corner of the cellar upon the occasion. By way of lunch, about an hour before dinner, Pantagruel was composing his stomach with German sausages, reindeer's tongues, oysters, brawn, and half a dozen different sorts of English beer just come into fashion, when a most thundering knocking was heard at the great gate, and from the noise they expected it to announce the arrival at least of the First Consul, or king Gargantua. Panurge was sent to reconnoiter, and after a quarter of an hour's absence, returned with the news that the University of Pontemaca was waiting his highness's leisure in the great hall, to propound a question which [210] had turned the brains of thirty-nine students, and had flung twenty-seven more into a high fever. With all my heart, says Pantagruel, and swallowed down three quarts of Burton ale; but remember, it wants but an hour of dinner time, and the question must be asked in as few words as possible; for I cannot deprive myself of the pleasure I expected to enjoy in the company of my good friends for a set of mad-headed masters. I wish brother John was here to settle these matters with the black gentry.

"Having said or rather growled this, he proceeded to the hall of ceremony, and mounted his throne; Epistemon and Panurge standing on each side, but two steps below him. Then advanced to the throne the three beadles of the University of Pontemaca with their silver staves on their shoulders, and velvet caps on their heads, and they were followed by three times three doctors, and thrice three times three masters of art; for everything was done in Pontemaca by the number three, and on this account the address was written on parchment, one foot in breadth, and thrice three times thrice three feet in length. The beadles struck the ground with their heads and their staves three times in approaching the throne; the doctors struck the ground with their heads thrice three times, and the masters did the same thrice each time, beating

the ground with their heads thrice three times. This was the accustomed form of approaching the throne, time out of mind, and it was said to be emblematic of the usual prostration of science to the throne of greatness.

"The mathematical professor, after having spit, and hawked, and cleared his throat, and blown his nose on a handkerchief lent to him, for he had forgotten to bring his own, began to read the address. In this he was assisted by three masters of arts, one of whom, with a silver pen, pointed out the stops; the second with a small stick rapped his knuckles when he was to raise or lower his voice; and a third pulled his hair behind when he was to look Pantagruel in the face. Pantagruel began to chafe like a lion: [211]he turned first on one side, then on the other: he listened and groaned, and groaned and listened, and was in the utmost cogitabundity of cogitation. His countenance began to brighten, when, at the end of an hour, the reader stammered out these words:

"It has therefore been most clearly proved that as all matter may be divided into parts infinitely smaller than the infinitely smallest part of the infinitesimal of nothing, so nothing has all the properties of something, and may become, by just and lawful right, susceptible of addition, subtraction, multiplication, division, squaring, and cubing: that it is to all intents and purposes as good as anything that has been, is, or can be taught in the nine universities of the land, and to deprive it of its rights is a most cruel innovation and usurpation, tending to destroy all just subordination in the world, making all universities superfluous, leveling vice-chancellors, doctors, and proctors, masters, bachelors, and scholars, to the mean and contemptible state of butchers and tallow-chandlers, bricklayers and chimney-sweepers, who, if it were not for these learned mysteries, might think that they knew as much as their betters. Every one then, who has the good of science at heart, must pray for the interference of his highness to put a stop to all the disputes about nothing, and by his decision to convince all gainsayers that the science of nothing is taught in the best manner in the universities, to the great edification and improvement of all the youth in the land.'

"Here Pantagruel whispered in the ear of Panurge, who nodded to Epistemon, and they two left the assembly, and did not return for an hour, till the orator had finished his task. The three beadles had thrice struck the ground with their heads and staves, the doctors had finished their compliments, and the masters were making their twenty-seven prostrations. Epistemon and Panurge went up to Pantagruel, whom they found fast asleep and snoring; nor could he be roused but by as many tugs as there had been [212]bowings from the corps of learning. At last he opened his eyes, gave a good stretch, made half a dozen yawns, and called for a stoup of wine. I thank you, my masters, says he; so sound a nap I have not had since I came from the island of

Priestfolly. Have you dined, my masters? They answered the question by as many bows as at entrance; but his highness left them to the care of Panurge, and retired to the little parlor with Epistemon, where they burst into a fit of laughter, declaring that this learned Baragouin about nothing was just as intelligible as the lawyer's Galimathias. Panurge conducted the learned body into a large saloon, and each in his way hearing a clattering of plates and glasses, congratulated himself on his approaching good cheer. There they were left by Panurge, who took his chair by Pantagruel just as the soup was removed, but he made up for the want of that part of his dinner by a pint of champagne. The learning of the university had whetted their appetites; what they each ate it is needless to recite; good wine, good stories, and hearty laughs went round, and three hours elapsed before one soul of them recollected the hungry students of Pontemaca.

"Epistemon reminded them of the business in hand, and orders were given for a fresh dozen of hermitage to be put upon table, and the royal attendants to get ready. As soon as the dozen bottles were emptied, Pantagruel rose from table, the royal trumpets sounded, and he was accompanied by the great officers of his court into the large dining hall, where was a table with forty-two covers. Pantagruel sat at the head, Epistemon at the bottom, and Panurge in the middle, opposite an immense silver tureen, which would hold fifty gallons of soup. The wise men of Pontemaca then took their seats according to seniority. Every countenance glistened with delight; the music struck up; the dishes were uncovered. Panurge had enough to do to handle the immense silver ladle: Pantagruel and Epistemon had no time for eating, they were fully employed in carving. The bill [213] of fare announced the names of a hundred different dishes. From Panurge's ladle came into the soup plate as much as he took every time out of the tureen; and as it was the rule of the court that every one should appear to eat, as long as he sat at table, there was the clattering of nine and thirty spoons against the silver soup-plates for a quarter of an hour. They were then removed, and knives and forks were in motion for half an hour. Glasses were continually handed round in the mean time, and then everything was removed, except the great tureen of soup. The second course was now served up, in dispatching which half an hour was consumed; and at the conclusion the wise men of Pontemaca had just as much in their stomachs as Pantagruel in his head from their address: for nothing was cooked up for them in every possible shape that Panurge could devise.

"Wine-glasses, large decanters, fruit dishes, and plates were now set on. Pantagruel and Epistemon alternately gave bumper toasts: the University of Pontemaca, the eye of the world, the mother of taste and good sense and universal learning, the patroness of utility, and the second only to Pantagruel in wisdom and virtue (for these were her

titles), was drank standing with thrice three times three, and huzzas and clattering of glasses; but to such wine the wise men of Pontemaca had not been accustomed; and though Pantagruel did not suffer one to rise from table till the eighty-first glass had been emptied, not even the weakest headed master of arts felt his head in the least indisposed. The decanters indeed were often removed, but they were brought back replenished, filled always with nothing.

"Silence was now proclaimed, and in a trice Panurge leaped into the large silver tureen. Thence he made his bows to Pantagruel and the whole company, and commenced an oration of signs, which lasted an hour and a half, and in which he went over all the matter contained in the Pontemaca address; and though the wise men looked very serious during the whole time, Pantagruel himself and his whole [214]court could not help indulging in repeated bursts of laughter. It was universally acknowledged that he excelled himself, and that the arguments by which he beat the English masters of arts at Paris were nothing to the exquisite selection of attitudes which he this day assumed. The greatest shouts of applause were excited when he was running thrice round the tureen on its rim, with his left hand holding his nose, and the other exercising itself nine and thirty times on his back. In this attitude he concluded with his back to the professor of mathematics; and at the instant he gave his last flap, by a sudden jump, and turning heels over head in the air, he presented himself face to face to the professor, and standing on his left leg, with his left hand holding his nose, he presented to him, in a white satin bag, Pantagruel's royal decree. Then advancing his right leg, he fixed it on the professor's head, and after three turns, in which he clapped his sides with both hands thrice three times, down he leaped, and Pantagruel, Epistemon, and himself took their leaves of the wise men of Pontemaca.

"The wise men now retired, and by royal orders were accompanied by a guard, and according to the etiquette of the court, no one having a royal order could stop at any public house till it was delivered. The procession arrived at Pontemaca at nine o'clock the next morning, and the sound of bells from every church and college announced their arrival. The congregation was assembled; the royal decree was saluted in the same manner as if his highness had been there in person; and after the proper ceremonies had been performed, the satin bag was opened exactly at twelve o'clock. A finely emblazoned roll was drawn forth, and the public orator read to the gaping assembly the following words:

"'They who can make something out of nothing shall have nothing to eat at the court of—Pantagruel.'"[215]

Origin of *the* English Language, *related by a Swede*.

"Some months ago in a party in Holland, consisting of natives of various countries, the merit of their respective languages became a topic of conversation. A Swede, who had been a great traveler, and could converse in most of the modern languages of Europe, laughed very heartily at an Englishman, who had ventured to speak in praise of the tongue of his dear country. I never had any trouble, says he, in learning English. To my very great surprise, the moment I set foot on shore at Gravesend, I found out, that I could understand, with very little trouble, every word that was said. It was a mere jargon, made up of German, French, and Italian, with now and then a word from the Spanish, Latin or Greek. I had only to bring my mouth to their mode of speaking, which was done with ease in less than a week, and I was everywhere taken for a true-born Englishman; a privilege by the way of no small importance in a country, where each man, God knows why, thinks his foggy island superior to any other part of the world: and though his door is never free from some dun or other coming for a tax, and if he steps out of it he is sure to be knocked down or to have his pocket picked, yet he has the insolence to think every foreigner a miserable slave, and his country the seat of everything wretched. They may talk of liberty as they please, but Spain or Turkey for my money: barring the bowstring and the inquisition, they are the most comfortable countries under heaven, and you need not be afraid of either, if you do not talk of religion and politics. I do not see much difference too in this respect in England, for when I was there, one of their most eminent men for learning was put in prison for a couple of years, and got his death for translating one of Æsop's fables into English, which every child in Spain and Turkey is taught, as soon as he comes out of his leading strings. Here all the company unanimously cried out against the Swede, that it was [216]impossible: for in England, the land of liberty, the only thing its worst enemies could say against it, was, that they paid for their liberty a much greater price than it was worth.—Every man there had a fair trial according to laws, which everybody could understand; and the judges were cool, patient, discerning men, who never took the part of the crown against the prisoner, but gave him every assistance possible for his defense.

"The Swede was borne down, but not convinced; and he seemed determined to spit out all his venom. Well, says he, at any rate you will not deny that the English have not got a language of their own, and that they came by it in a very odd way. Of this at least I am certain, for the whole history was related to me by a witch in Lapland, whilst I was bargaining for a wind. Here the company were all in unison again for the story.

"In ancient times, said the old hag, the English occupied a spot in Tartary, where they lived sulkily by themselves, unknowing and unknown. By a great convulsion that took

place in China, the inhabitants of that and the adjoining parts of Tartary were driven from their seats, and after various wanderings took up their abode in Germany. During this time nobody could understand the English, for they did not talk, but hissed like so many snakes. The poor people felt uneasy under this circumstance, and in one of their parliaments, or rather hissing meetings, it was determined to seek a remedy: and an embassy was sent to some of our sisterhood then living on Mount Hecla. They were put to a nonplus, and summoned the Devil to their relief. To him the English presented their petitions, and explained their sad case; and he, upon certain conditions, promised to befriend them, and to give them a language. The poor Devil was little aware of what he had promised; but he is, as all the world knows, a man of too much honor to break his word. Up and down the world then he went in quest of this new language: visited all the universities, and all [217]the schools, and all the courts of law, and all the play-houses, and all the prisons; never was poor devil so fagged. It would have made your heart bleed to see him. Thrice did he go round the earth in every parallel of latitude; and at last, wearied and jaded out, back came he to Hecla in despair, and would have thrown himself into the volcano, if he had been made of combustible materials. Luckily at that time our sisters were engaged in settling the balance of Europe; and whilst they were looking over projects, and counter-projects, and ultimatums, and post ultimatums, the poor Devil, unable to assist them was groaning in a corner and ruminating over his sad condition.

"On a sudden, a hellish joy overspread his countenance; up he jumped, and, like Archimedes of old, ran like a madman amongst the throng, turning over tables, and papers, and witches, roaring out for a full hour together nothing else but 'tis found, 'tis found! Away were sent the sisterhood in every direction, some to traverse all the corners of the earth, and others to prepare a larger caldron than had ever yet been set upon Hecla. The affairs of Europe were at a stand: its balance was thrown aside; prime ministers and ambassadors were everywhere in the utmost confusion; and, by the way, they have never been able to find the balance since that time, and all the fine speeches upon the subject, with which your newspapers are every now and then filled, are all mere hocus-pocus and rhodomontade. However, the caldron was soon set on, and the air was darkened by witches riding on broomsticks, bringing a couple of folios under each arm, and across each shoulder. I remember the time exactly: it was just as the council of Nice had broken up, so that they got books and papers there dog cheap; but it was a bad thing for the poor English, as these were the worst materials that entered into the caldron. Besides, as the Devil wanted some amusement, and had not seen an account of the transactions of this famous council, he had all the books brought from it laid before him, and split his sides

almost [218]with laughing, whilst he was reading the speeches and decrees of so many of his old friends and acquaintances. All this while the witches were depositing their loads in the great caldron. There were books from the Dalai Lama, and from China: there were books from the Hindoos, and tallies from the Caffres: there were paintings from Mexico, and rocks of hieroglyphics from Egypt: the last country supplied besides the swathings of two thousand mummies, and four-fifths of the famed library of Alexandria. Bubble! bubble! toil and trouble! never was a day of more labor and anxiety; and if our good master had but flung in the Greek books at the proper time, they would have made a complete job of it. He was a little too impatient: as the caldron frothed up, he skimmed it off with a great ladle, and filled some thousands of our wind-bags with the froth, which the English with great joy carried back to their own country. These bags were sent to every district: the chiefs first took their fill, and then the common people; hence they now speak a language which no foreigner can understand, unless he has learned half a dozen other languages; and the poor people, not one in ten, understand a third part of what is said to them. The hissing, however, they have not entirely got rid of, and every seven years, when the Devil, according to agreement, pays them a visit, they entertain him at their common halls and county meetings with their original language.

"The good-natured old hag told me several other circumstances, relative to this curious transaction, which, as there is an Englishman in company, it will be prudent to pass over in silence: but I cannot help mentioning one thing which she told me as a very great secret. You know, says she to me, that the English have more religions among them than any other nation in Europe, and that there is more teaching and sermonizing with them than in any other country. The fact is this; it matters not who gets up to teach them, the hard words of the Greek were not sufficiently [219]boiled, and whenever they get into a sentence, the poor people's brains are turned, and they know no more what the preacher is talking about, than if he harangued them in Arabic. Take my word for it if you please; but if not, when you get to England, desire the bettermost sort of people that you are acquainted with to read to you an act of parliament, which of course is written in the clearest and plainest style in which anything can be written, and you will find that not one in ten will be able to make tolerable sense of it. The language would have been an excellent language, if it had not been for the council of Nice, and the words had been well boiled.

"Here the company burst out into a fit of laughter. The Englishman got up and shook hands with the Swede: *si non è vero*, said he, *è ben trovato*.<sup>[476]</sup> But, however I may laugh at it here, I would not advise you to tell this story on the other side of the water. So here's a bumper to Old England for ever, and God save the king."

## ON YOUTHFUL PRODIGES.

The accounts given of extraordinary children and adolescents frequently defy credence.<sup>[477]</sup> I will give two well-attested instances.

The celebrated mathematician Alexis Claude Clairault (now Clairaut)<sup>[478]</sup> was certainly born in May, 1713. His treatise on curves of double curvature (printed in 1731)<sup>[479]</sup> received [220]the approbation of the Academy of Sciences, August 23, 1729. Fontenelle, in his certificate of this, calls the author sixteen years of age, and does not strive to exaggerate the wonder, as he might have done, by reminding his readers that this work, of original and sustained mathematical investigation, must have been coming from the pen at the ages of fourteen and fifteen. The truth was, as attested by De Molières,<sup>[480]</sup> Clairaut had given public proofs of his power at twelve years old. His age being thus publicly certified, all doubt is removed: say he had been—though great wonder would still have been left—twenty-one instead of sixteen, his appearance, and the remembrances of his friends, schoolfellows, etc., would have made it utterly hopeless to knock off five years of that age while he was on view in Paris as a young lion. De Molières, who examined the work officially for the *Garde des Sceaux*, is transported beyond the bounds of official gravity, and says that it "ne mérite pas seulement d'être imprimé, mais d'être admiré comme un prodige d'imagination, de conception, et de capacité."<sup>[481]</sup>

That Blaise Pascal was born in June, 1623, is perfectly well established and uncontested.<sup>[482]</sup> That he wrote his conic sections at the age of sixteen might be difficult to establish, though tolerably well attested, if it were not for [221]one circumstance, for the book was not published. The celebrated theorem, "Pascal's hexagram,"<sup>[483]</sup> makes all the rest come very easy. Now Curabelle,<sup>[484]</sup> in a work published in 1644, sneers at Desargues,<sup>[485]</sup> whom he quotes, for having, in 1642, deferred a discussion until "cette grande proposition nommée le Pascale verra le jour."<sup>[486]</sup> That is, by the time Pascal was nineteen, the *hexagram* was circulating under a name derived from the author. The common story about Pascal, given by his sister,<sup>[487]</sup> is an absurdity which no doubt has prejudiced many against tales of early proficiency. He is made, when quite a boy, to invent geometry *in the order of Euclid's propositions*: as if that order were natural sequence of investigation. The hexagram at ten years old would be a hundred times less unlikely.

The instances named are painfully astonishing: I give one which has fallen out of sight, because it will preserve an imperfect biography. John Wilson<sup>[488]</sup> is Wilson of that [222]ilk, that is, of "Wilson's Theorem." It is this: if  $p$  be a prime number, the

product of all the numbers up to  $p-1$ , increased by 1, is divisible without remainder by  $p$ . All mathematicians know this as Wilson's theorem, but few know who Wilson was. He was born August 6, 1741, at the Howe in Applethwaite, and he was heir to a small estate at Troutbeck in Westmoreland. He was sent to Peterhouse, at Cambridge, and while an undergraduate was considered stronger in algebra than any one in the University, except Professor Waring, one of the most powerful algebraists of the century.<sup>[489]</sup> He was the senior wrangler of 1761, and was then for some time a private tutor. When Paley,<sup>[490]</sup> then in his third year, determined to make a push for the senior wranglership, which he got, Wilson was recommended to him as a tutor. Both were ardent in their work, except that sometimes Paley, when he came for his lesson, would find "Gone a fishing" written on his tutor's outer door: which was insult added to injury, for Paley was very fond of fishing. Wilson soon left Cambridge, and went to the bar. He practised on the northern circuit with great success; and, one day, while passing his vacation on his little property at Troutbeck, he received information, to his great surprise, that Lord Thurlow,<sup>[491]</sup> with whom he had [223]no acquaintance, had recommended him to be a Judge of the Court of Common Pleas. He died, Oct. 18, 1793, with a very high reputation as a lawyer and a Judge. These facts are partly from Meadley's *Life of Paley*,<sup>[492]</sup> no doubt from Paley himself, partly from the *Gentleman's Magazine*, and from an epitaph written by Bishop Watson.<sup>[493]</sup> Wilson did not publish anything: the theorem by which he has cut his name in the theory of numbers was communicated to Waring, by whom it was published. He married, in 1788, a daughter of Serjeant Adair,<sup>[494]</sup> and left issue. *Had a family*, many will say: but a man and his wife are a family, even without children. An actuary may be allowed to be accurate in this matter, of which I was reminded by what an actuary wrote of another actuary. William Morgan,<sup>[495]</sup> in the life of his uncle Dr. Richard Price,<sup>[496]</sup> says that the Doctor and his [224]wife were "never blessed with an addition to their family." I never met with such accuracy elsewhere. Of William Morgan I add that my surname and pursuits have sometimes, to my credit be it said, made a confusion between him and me. Dates are nothing to the mistaken; the last three years of Morgan's life were the first three years of my actuary-life (1830-33). The mistake was to my advantage as well as to my credit. I owe to it the acquaintance of one of the noblest of the human race, I mean Elizabeth Fry,<sup>[497]</sup> who came to me for advice about a philanthropic design, which involved life questions, under a general impression that some Morgan had attended to such things.<sup>[498]</sup>

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NEWTON AGAIN OVERTHROWN.

A treatise on the sublime science of heliography, satisfactorily demonstrating our great orb of light, the sun, to be absolutely no other than a body of ice! Overturning all the received systems of the universe hitherto extant; proving the celebrated and indefatigable Sir Isaac Newton, in his theory of the solar system, to be as far distant from the truth, as many of the heathen authors of Greece and Rome. By Charles Palmer,<sup>[499]</sup> Gent. London, 1798, 8vo.

Mr. Palmer burned some tobacco with a burning glass, saw that a lens of ice would do as well, and then says:

"If we admit that the sun could be removed, and a terrestrial body of ice placed in its stead, it would produce the same effect. The sun is a crystalline body receiving the radiance of God, and operates on this earth in a similar manner as the light of the sun does when applied to a convex mirror or glass."

Nov. 10, 1801. The Rev. Thomas Cormouls,<sup>[500]</sup> minister of Tettenhall, addressed a letter to Sir Wm. Herschel, from which I extract the following:

"Here it may be asked, then, how came the doctrines of Newton to solve all astronomic Phenomina, and all problems concerning the same, both *a parte ante* and *a parte post*.<sup>[501]</sup> It is answered that he certainly wrought the principles he made use of into strickt analogy with the real Phenomina of the heavens, and that the rules and results arising from them [226]agree with them and resolve accurately all questions concerning them. Though they are not fact and true, or nature, but analogous to it, in the manner of the artificial numbers of logarithms, sines, &c. A very important question arises here, Did Newton mean to impose upon the world? By no means: he received and used the doctrines redly formed; he did a little extend and contract his principles when wanted, and commit a few oversights of consequences. But when he was very much advanced in life, he suspected the fundamental nullity of them: but I have from a certain anecdote strong ground to believe that he knew it before his decease and intended to have retracted his error. But, however, somebody did deceive, if not wilfully, negligently at least. That was a man to whom the world has great obligations too. It was no less a philosopher than Galileo."

That Newton wanted to retract before his death, is a notion not uncommon among paradoxers. Nevertheless, there is no retraction in the third edition of the *Principia*, published when Newton was eighty-four years old! The moral of the above is, that a gentleman who prefers instructing William Herschel to learning how to spell, may find a proper niche in a proper place, for warning to others. It seems that gravitation is not truth, but only the logarithm of it.

## BISHOPS AS PARADOXERS.

The mathematical and philosophical works of the Right Rev. John Wilkins<sup>[502]</sup>.... In two volumes. London, 1802, 8vo.

This work, or at least part of the edition—all for aught I know—is printed on wood; that is, on paper made from wood-pulp. It has a rough surface; and when held before a candle is of very unequal transparency. There is in it a reprint of the works on the earth and moon. The discourse on the possibility of going to the moon, in this and the edition of 1640, is incorporated: but from the account in the [227]life prefixed, and a mention by D'Israeli, I should suppose that it had originally a separate title-page, and some circulation as a separate tract. Wilkins treats this subject half seriously, half jocosely; he has evidently not quite made up his mind. He is clear that "arts are not yet come to their solstice," and that posterity will bring hidden things to light. As to the difficulty of carrying food, he thinks, scoffing Puritan that he is, the Papists may be trained to fast the voyage, or may find the bread of their Eucharist "serve well enough for their *viaticum*."<sup>[503]</sup> He also puts the case that the story of Domingo Gonsales may be realized, namely, that wild geese find their way to the moon. It will be remembered—to use the usual substitute for, It has been forgotten—that the posthumous work of Bishop Francis Godwin<sup>[504]</sup> of Llandaff was published in 1638, the very year of Wilkins's first edition, in time for him to mention it at the end. Godwin makes Domingo Gonsales get to the moon in a chariot drawn by wild geese, and, as old books would say, discourses fully on that head. It is not a little amusing that Wilkins should have been seriously accused of plagiarizing Godwin, Wilkins writing in earnest, or nearly so, and Godwin writing fiction. It may serve to show philosophers how very near pure speculation comes to fable. From the sublime to the ridiculous is but a step: which is the sublime, and which the ridiculous, every one must settle for himself. With me, good fiction is the sublime, and bad speculation the ridiculous. The number of bishops in my list is small. I might, had I possessed the book, have opened the list of quadrators with an Archbishop of Canterbury, or at least with a divine who was not wholly not archbishop. Thomas Bradwardine<sup>[505]</sup> (Bragvardinus, Bragadinus) was elected in [228]1348; the Pope put in another, who died unconsecrated; and Bradwardine was again elected in 1349, and lived five weeks longer, dying, I suppose, unconfirmed and unconsecrated.<sup>[506]</sup> Leland says he held the see a year, *unus tantum annulus*,<sup>[507]</sup> which seems to be a confusion: the whole business, from the first election, took about a year. He squared the circle, and his performance was printed at Paris in 1494. I have never seen it, nor any work of the author, except a tract on proportion.

As Bradwardine's works are very scarce indeed, I give two titles from one of the Libri catalogues.

"Arithmetic. Brauardini (Thomæ) Arithmetica speculativa revisa et correcta a Petro Sanchez Ciruelo Aragonesi, black letter, *elegant woodcut title-page*, VERY RARE, *folio. Parisiis, per Thomam Anguelast (pro Olivier Senant), s. a. circa 1510.*<sup>[508]</sup>

"This book, by Thomas Bradwardine, Archbishop of Canterbury must be exceedingly scarce as it has escaped the notice of Professor De Morgan, who, in his *Arithmetical Books*, speaks of a treatise of the same author on proportions,<sup>[509]</sup> printed at Vienna in 1515, but does not mention the present work.

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"Bradwardine (Archbp. T.). Brauardini (Thomæ) Geometria speculativa, com Tractato de Quadratura Circuli bene revisa a Petro Sanchez Ciruelo, SCARCE, *folio. Parisiis, J. Petit, 1511.*<sup>[510]</sup>

"In this work we find the *polygones étoilés*,<sup>[511]</sup> see Chasles (*Aperçu*, pp. 480, 487, 521, 523, &c.) on the merit of the discoveries of this English mathematician, who was Archbishop of Canterbury in the XIVth Century (*tempore* Edward III. A.D. 1349); and who applied geometry to theology. M. Chasles says that the present work of Bradwardine contains 'Une théorie nouvelle qui doit faire honneur au XIVe Siècle.'<sup>[512]</sup>

The titles do not make it quite sure that Bradwardine is the quadrator; it may be Peter Sanchez after all.<sup>[513]</sup>

## THE QUESTION OF PARALLELS.

Nouvelle théorie des parallèles. Par Adolphe Kircher<sup>[514]</sup> [so signed at the end of the appendix]. Paris, 1803, 8vo.

An alleged emendation of Legendre.<sup>[515]</sup> The author refers [230]to attempts by Hoffman,<sup>[516]</sup> 1801, by Hauff,<sup>[517]</sup> 1799, and to a work of Karsten,<sup>[518]</sup> or at least a theory of Karsten, contained in "Tentamen novæ parallelarum theoriæ notione situs fundatæ; auctore G. C. Schwal,<sup>[519]</sup> Stuttgartæ, 1801, en 8 volumes." Surely this is a misprint; *eight* volumes on the theory of parallels? If there be such a work, I trust I and it may never meet, though ever so far produced.

[231]

Soluzione ... della quadratura del Circolo. By Gaetano Rossi. <sup>[520]</sup> London, 1804, 8vo.

The three remarkable points of this book are, that the household of the Prince of Wales took ten copies, Signora Grassini<sup>[521]</sup> sixteen, and that the circumference is  $3\frac{1}{5}$  diameters. That is, the appetite of Grassini for quadrature exceeded that of the whole household (*loggia*) of the Prince of Wales in the ratio in which the semi-circumference exceeds the diameter. And these are the first two in the list of subscribers. Did the author see this theorem?

#### A PATRIOTIC PARADOX.

Britain independent of commerce; or proofs, deduced from an investigation into the true cause of the wealth of nations, that our riches, prosperity, and power are derived from sources inherent in ourselves, and would not be affected, even though our commerce were annihilated. By Wm. Spence. <sup>[522]</sup> 4th edition, 1808, 8vo.

A patriotic paradox, being in alleviation of the Commerce panic which the measures of Napoleon I.—who *felt* our Commerce, while Mr. Spence only *saw* it—had awakened. In this very month (August, 1866), the Pres. Brit. Assoc. has applied a similar salve to the coal panic; it is fit that science, which rubbed the sore, should find a plaster. We ought to have an iron panic and a timber panic; and [232]a solemn embassy to the Americans, to beg them not to whittle, would be desirable. There was a gold panic beginning, before the new fields were discovered. For myself, I am the unknown and unpitied victim of a chronic gutta-percha panic: I never could get on without it; to me, gutta percha and Rowland Hill are the great discoveries of our day; and not unconnected either, gutta percha being to the submarine post what Rowland Hill is to the superterrene. I should be sorry to lose cow-choke—I gave up trying to spell it many years ago—but if gutta percha go, I go too. I think, that perhaps when, five hundred years hence, the people say to the Brit. Assoc. (if it then exist) "Pray gentlemen, is it not time for the coal to be exhausted?" they will be answered out of Molière (who will certainly then exist): "*Cela était autrefois ainsi, mais nous avons changé tout cela.*"<sup>[523]</sup> A great many people think that if the coal be used up, it will be announced some unexpected morning by all the yards being shut up and written notice outside, "Coal all gone!" just like the "Please, ma'am, there ain't no more sugar," with which the maid servant damps her mistress just at breakfast-time. But these persons should be informed that there is every reason to think that there will be time, as the city gentleman said, to *venienti* the *occurrite morbo*.<sup>[524]</sup>

## SOME SCIENTIFIC PARADOXES.

An appeal to the republic of letters in behalf of injured science, from the opinions and proceedings of some modern authors of elements of geometry. By George Douglas.<sup>[525]</sup> Edinburgh, 1810, 8vo.

Mr. Douglas was the author of a very good set of [233]mathematical tables, and of other works. He criticizes Simson,<sup>[526]</sup> Playfair,<sup>[527]</sup> and others,—sometimes, I think, very justly. There is a curious phrase which occurs more than once. When he wants to say that something or other was done before Simson or another was born, he says "before he existed, at least as an author." He seems to reserve the possibility of Simson's *pre-existence*, but at the same time to assume that he never wrote anything in his previous state. Tell me that Simson pre-existed in any other way than as editor of some pre-existent Euclid? Tell Apella!<sup>[528]</sup>

1810. In this year Jean Wood, Professor of Mathematics in the University of Virginia (Richmond),<sup>[529]</sup> addressed a printed circular to "Dr. Herschel, Astronomer, Greenwich Observatory." No mistake was more common than the natural one of imagining that the *Private Astronomer* of the king was the *Astronomer Royal*. The letter was on the [234]difference of velocities of the two sides of the earth, arising from the composition of the rotation and the orbital motion. The *paradox* is a fair one, and deserving of investigation; but, perhaps it would not be easy to deduce from it tides, trade-winds, aerolithes, &c., as Mr. Wood thought he had done in a work from which he gives an extract, and which he describes as published. The composition of rotations, &c., is not for the world at large: the paradox of the non-rotation of the moon about her axis is an instance. How many persons know that when a wheel rolls on the ground, the lowest point is moving upwards, the highest point forwards, and the intermediate points in all degrees of betwixt and between? This is too short an explanation, with some good difficulties.

The Elements of Geometry. In 2 vols. [By the Rev. J. Dobson,<sup>[530]</sup> B.D.] Cambridge, 1815. 4to.

Of this unpunctuating paradoxer I shall give an account in his own way: he would not stop for any one; why should I stop for him? It is worth while to try how unpunctuated sentences will read.

The reverend J Dobson BD late fellow of saint Johns college Cambridge was rector of Brandesburton in Yorkshire he was seventh wrangler in 1798 and died in 1847 he was of that sort of eccentricity which permits account of his private life if we may not

rather say that in such cases private life becomes public there is a tradition that he was called Death Dobson on account of his head and aspect of countenance being not very unlike the ordinary pictures of a human skull his mode of life is reported to have been very singular whenever he visited Cambridge he was never known to go twice to the same inn he never would sleep at the rectory with another person in the house some ancient charwoman used to attend to the house but never slept in it he has been known in the time of coach travelling to have [235]deferred his return to Yorkshire on account of his disinclination to travel with a lady in the coach he continued his mathematical studies until his death and till his executors sold the type all his tracts to the number of five were kept in type at the university press none of these tracts had any stops except full stops at the end of paragraphs only neither had they capitals except one at the beginning of a paragraph so that a full stop was generally followed by some white as there is not a single proper name in the whole of the book I have I am not able to say whether he would have used capitals before proper names I have inserted them as usual for which I hope his spirit will forgive me if I be wrong he also published the elements of geometry in two volumes quarto Cambridge 1815 this book had also no stops except when a comma was wanted between letters as in the straight lines AB, BC I should also say that though the title is unpunctuated in the author's part it seems the publishers would not stand it in their imprint this imprint is punctuated as usual and Deighton and Sons to prove the completeness of their allegiance have managed that comma semicolon and period shall all appear in it why could they not have contrived interrogation and exclamation this is a good precedent to establish the separate right of the publisher over the imprint it is said that only twenty of the tracts were printed and very few indeed of the book on geometry it is doubtful whether any were sold there is a copy of the geometry in the university library at Cambridge and I have one myself the matter of the geometry differs entirely from Euclid and is so fearfully prolix that I am sure no mortal except the author ever read it the man went on without stops and without stop save for a period at the end of a paragraph this is the unpunctuated account of the unpunctuating geometer *suum cuique tribuito*<sup>[531]</sup> Mrs Thrale<sup>[532]</sup> would have been amused [236]at a Dobson who managed to come to a full stop without either of the three warnings.

I do not find any difficulty in reading Dobson's geometry; and I have read more of it to try reading without stops than I should have done had it been printed in the usual way. Those who dip into the middle of my paragraph may be surprised for a moment to see "on account of his disinclination to travel with a lady in the coach he continued his mathematical studies until his death and [further, of course] until his executors sold the type." But a person reading straight through would hardly take it so. I should add

that, in order to give a fair trial, I did not compose as I wrote, but copied the words of the correspondent who gave me the facts, so far as they went.

#### A RELIGIOUS PARADOX.

*Philosophia Sacra, or the principles of natural Philosophy. Extracted from Divine Revelation.* By the Rev. Samuel Pike.<sup>[533]</sup> Edited by the Rev. Samuel Kittle.<sup>[534]</sup> Edinburgh, 1815, 8vo.

This is a work of modified Hutchinsonianism, which I have seen cited by several. Though rather dark on the subject, it seems not to contradict the motion of the earth, or the doctrine of gravitation. Mr. Kittle gives a list of some Hutchinsonians, —as Bishop Horne,<sup>[535]</sup> Dr. Stukeley,<sup>[536]</sup> the Rev. [237]W. Jones,<sup>[537]</sup> author of *Physiological Disquisitions*; Mr. Spearman,<sup>[538]</sup> author of *Letters on the Septuagint* and editor of Hutchinson; Mr. Barker,<sup>[539]</sup> author of *Reflexions on Learning*; Dr. Catcott,<sup>[540]</sup> author of a work on the creation, &c.; Dr. Robertson,<sup>[541]</sup> author of a *Treatise on the Hebrew Language*; Dr. Holloway,<sup>[542]</sup> author of *Originals, Physical and Theological*; Dr. Walter Hodges,<sup>[543]</sup> author of a work on *Elohim*; Lord President Forbes (*ob.* 1747).<sup>[544]</sup>

The Rev. William Jones, above mentioned (1726-1800), the friend and biographer of Bishop Horne and his stout [238]defender, is best known as William Jones of Nayland, who (1757)<sup>[545]</sup> published the *Catholic Doctrine of the Trinity*; he was also strong for the Hutchinsonian physical trinity of fire, light, and spirit. This well-known work was generally recommended, as the defence of the orthodox system, to those who could not go into the learning of the subject. There is now a work more suited to our time: *The Rock of Ages*, by the Rev. E. H. Bickersteth,<sup>[546]</sup> now published by the Religious Tract Society, without date, answered by the Rev. Dr. Sadler,<sup>[547]</sup> in a work (1859) entitled *Gloria Patri*, in which, says Mr. Bickersteth, "the author has not even attempted to grapple with my main propositions." I have read largely on the controversy, and I think I know what this means. Moreover, when I see the note "There are two other passages to which Unitarians sometimes refer, but the deduction they draw from them is, in each case, refuted by the context"—I think I see why the two texts are not named. Nevertheless, the author is a little more disposed to yield to criticism than his foregoers; he does not insist on texts and readings which the greatest editors have rejected. And he writes with courtesy, both direct and oblique, towards his antagonists; which, on his side of this subject, is like letting in fresh air. So that I suspect the two books will together make a tolerably good introduction to the subject for those who cannot go deep. Mr. Bickersteth's book is well arranged and indexed, which is a point of superiority to Jones of Nayland. There is a point which I

should gravely recommend to writers on the orthodox side. The Unitarians in [239]England have frequently contended that the method of proving the divinity of Jesus Christ from the New Testament would equally prove the divinity of Moses. I have not fallen in the way of any orthodox answers specially directed at the repeated tracts written by Unitarians in proof of their assertion. If there be any, they should be more known; if there be none, some should be written. Which ever side may be right, the treatment of this point would be indeed coming to close quarters. The heterodox assertion was first supported, it is said, by John Bidle or Biddle (1615-1662) of Magdalen College, Oxford, the earliest of the English Unitarian writers, previously known by a translation of part of Virgil and part of Juvenal. <sup>[548]</sup> But I cannot find that he wrote on it. <sup>[549]</sup> It is the subject of "αἰρεσεων ἀνασταςις, or a new way of deciding old controversies. By Basanistes. Third edition, enlarged," London, 1815, 8vo. <sup>[550]</sup> It is the appendix to the amusing, "Six more letters to Granville Sharp, Esq., ... By Gregory Blunt, Esq." London, 8vo., 1803. <sup>[551]</sup> This much I can confidently say, that the study of these tracts would prevent orthodox writers from some curious slips, which are slips obvious to all sides of opinion. The lower defenders of orthodoxy frequently vex the spirits of the higher ones.

Since writing the above I have procured Dr. Sadler's answer. I thought I knew what the challenger meant when he said the respondent had not grappled with his main [240]propositions. I should say that he is clung on to from beginning to end. But perhaps Mr. B. has his own meaning of logical terms, such as "proposition": he certainly has his own meaning of "cumulative." He says his evidence is cumulative; not a catena, the strength of which is in its weakest part, but distinct and independent lines, each of which corroborates the other. This is the very opposite of *cumulative*: it is *distributive*. When different arguments are each necessary to a conclusion, the evidence is *cumulative*; when any one will do, even though they strengthen each other, it is *distributive*. The word "cumulative" is a synonym of the law word "constructive"; a whole which will do made out of parts which separately will not. Lord Strafford <sup>[552]</sup> opens his defence with the use of both words: "They have invented a kind of *accumulated* or *constructive* evidence; by which many actions, either totally innocent in themselves, or criminal in a much inferior degree, shall, when united, *amount* to treason." The conclusion is, that Mr. B. is a Cambridge man; the Oxford men do not confuse the elementary terms of logic. O dear old Cambridge! when the New Zealander comes let him find among the relics of your later sons some proof of attention to the elementary laws of thought. A little-go of logic, please!

Mr. B., though apparently not a Hutchinsonian, has a nibble at a physical Trinity. "If, as we gaze on the sun shining in the firmament, we see any faint adumbration of the

doctrine of the Trinity in the fontal orb, the light ever generated, and the heat proceeding from the sun and its beams—threefold and yet one, the sun, its light, and its [241]heat,—that luminous globe, and the radiance ever flowing from it, are both evident to the eye; but the vital warmth is felt, not seen, and is only manifested in the life it transfuses through creation. The proof of its real existence is self-demonstrating."

We shall see how Revilo<sup>[553]</sup> illustrates orthodoxy by mathematics. It was my duty to have found one of the many illustrations from physics; but perhaps I should have forgotten it if this instance had not come in my way. It is very bad physics. The sun, apart from its light, evident to the eye! Heat more self-demonstrating than light, because *felt*! Heat only manifested by the life it diffuses! Light implied not necessary to life! But the theology is worse than Sabellianism<sup>[554]</sup>. To adumbrate—i.e., make a picture of—the orthodox doctrine, the sun must be heavenly body, the light heavenly body, the heat heavenly body; and yet, not three heavenly bodies, but one heavenly body. The truth is, that this illustration and many others most strikingly illustrate the Trinity of fundamental doctrine held by the Unitarians, in all its differences from the Trinity of persons held by the Orthodox. Be right which may, the right or wrong of the Unitarians shines out in the comparison. Dr. Sadler confirms me—by which I mean that I wrote the above before I saw what he says—in the following words: "The sun is one object with two *properties*, and these properties have a parallel not in the second and third persons of the Trinity, but in the attributes of Deity."

The letting light alone, as self-evident, and making heat self-demonstrating, because felt—i.e., perceptible now and then—has the character of the Irishman's astronomy:  
[242]

"Long life to the moon, for a dear noble cratur,  
Which serves us for lamplight all night in the dark,  
While the sun only shines in the day, which by natur,  
Wants no light at all, as ye all may remark."

SIR RICHARD PHILLIPS.

*Sir Richard Phillips*<sup>[555]</sup> (born 1768) was conspicuous in 1793, when he was sentenced to a year's imprisonment<sup>[556]</sup> for selling Paine's *Rights of Man*; and again when, in 1807<sup>[557]</sup>, he was knighted as Sheriff of London. As a bookseller, he was able to enforce

his opinions in more ways than others. For instance, in James Mitchell's <sup>[558]</sup> *Dictionary of the Mathematical and Physical Sciences*, 1823, 12mo, which, though he was not technically a publisher, was printed for him—a book I should recommend to the collector of works of reference—there is a temperate description of his doctrines, which one may almost swear was one of his conditions previous to undertaking the work. Phillips himself was not only an anti-Newtonian, but carried to a fearful excess the notion that statesmen and Newtonians were in league to deceive the world. He saw this plot in Mrs. Airy's <sup>[559]</sup> pension, and in Mrs. Somerville's <sup>[560]</sup>. In 1836, he [243] did me the honor to attempt my conversion. In his first letter he says:

"Sir Richard Phillips has an inveterate abhorrence of all the pretended wisdom of philosophy derived from the monks and doctors of the middle ages, and not less of those of higher name who merely sought to make the monkish philosophy more plausible, or so to disguise it as to mystify the mob of small thinkers."

So little did his writings show any knowledge of antiquity, that I strongly suspect, if required to name one of the monkish doctors, he would have answered—Aristotle. These schoolmen, and the "philosophical trinity of gravitating force, projectile force, and void space," were the bogies of his life.

I think he began to publish speculations in the *Monthly Magazine* (of which he was editor) in July 1817: these he republished separately in 1818. In the Preface, perhaps judging the feelings of others by his own, he says that he "fully expects to be vilified, reviled, and anathematized, for many years to come." Poor man! he was let alone. He appeals with confidence to the "impartial decision of posterity"; but posterity does not appoint a hearing for one per cent. of the appeals which are made; and it is much to be feared that an article in such a work of reference as this will furnish nearly all her materials fifty years hence. The following, addressed to M. Arago, <sup>[561]</sup> in 1835, will give posterity as good a notion as she will probably need:

"Even the present year has afforded EVER-MEMORABLE examples, paralleled only by that of the Romish Conclave which persecuted Galileo. Policy has adopted that maxim of Machiavel which teaches that it is *more prudent* to reward [244] partisans than to persecute opponents. Hence, a bigotted party had influence enough with the late short-lived administration [I think he is wrong as to the administration] of Wellington, Peel, &c., to confer munificent royal pensions on three writers whose sole distinction was their advocacy of the Newtonian philosophy. A Cambridge professor last year published an elaborate volume in illustration of *Gravitation*, and on him has been conferred a pension of 300*l.* per annum. A lady has written a light popular view of the Newtonian Dogmas, and she has been complimented by a pension of 200*l.* per

annum. And another writer, who has recently published a volume to prove that the only true philosophy is that of Moses, has been endowed with a pension of 200*l.* per annum. Neither of them were needy persons, and the political and ecclesiastical bearing of the whole was indicated by another pension of 300*l.* bestowed on a political writer, the advocate of all abuses and prejudices. Whether the conduct of the Romish Conclave was more base for visiting with legal penalties the promulgation of the doctrines that the Earth turns on its axis and revolves around the Sun; or that of the British Court, for its craft in conferring pensions on the opponents of the plain corollary, that all the motions of the Earth are 'part and parcel' of these great motions, and those again and all like them consecutive displays of still greater motions in equality of action and reaction, is A QUESTION which must be reserved for the casuists of other generations.... I cannot expect that on a sudden you and your friends will come to my conclusion, that the present philosophy of the Schools and Universities of Europe, based on faith in witchcraft, magic, &c., is a system of execrable nonsense, *by which quacks live on the faith of fools*; but I desire a free and fair examination of my Aphorisms, and if a few are admitted to be true, merely as courteous concessions to arithmetic, my purpose will be effected, for men will thus be led to think; and if they think, then the fabric [245]of false assumptions, and degrading superstitions will soon tumble in ruins."

This for posterity. For the present time I ground the fame of Sir R. Phillips on his having squared the circle without knowing it, or intending to do it. In the *Protest* presently noted he discovered that "the force taken as 1 is equal to the sum of all its fractions ... thus  $1 = 1/4 + 1/9 + 1/16 + 1/25$ , &c., carried to infinity." This the mathematician instantly sees is equivalent to the theorem that the circumference of any circle is double of the diagonal of the cube on its diameter. [\[562\]](#)

I have examined the following works of Sir R. Phillips, and heard of many others:

Essays on the proximate mechanical causes of the general phenomena of the Universe, 1818, 12mo. [\[563\]](#)

Protest against the prevailing principles of natural philosophy, with the development of a common sense system (no date, 8vo, pp. 16). [\[564\]](#)

Four dialogues between an Oxford Tutor and a disciple of the common-sense philosophy, relative to the proximate causes of material phenomena. 8vo, 1824.

A century of original aphorisms on the proximate causes of the phenomena of nature, 1835, 12mo.

Sir Richard Phillips had four valuable qualities; honesty, zeal, ability, and courage. He applied them all to teaching [246]matters about which he knew nothing; and gained himself an uncomfortable life and a ridiculous memory.

Astronomy made plain; or only way the true perpendicular distance of the Sun, Moon, or Stars, from this earth, can be obtained. By Wm. Wood. [565] Chatham, 1819, 12mo.

If this theory be true, it will follow, of course, that this earth is the only one God made, and that it does not whirl round the sun, but *vice versa*, the sun round it.

#### WHATELY'S FAMOUS PARADOX.

Historic doubts relative to Napoleon Buonaparte. London, 1819, 8vo.

This tract has since been acknowledged by Archbishop Whately [566] and reprinted. It is certainly a paradox: but differs from most of those in my list as being a joke, and a satire upon the reasoning of those who cannot receive narrative, no matter what the evidence, which is to them utterly improbable *a priori*. But had it been serious earnest, it would not have been so absurd as many of those which I have brought forward. The next on the list is not a joke.

The idea of the satire is not new. Dr. King, [567] in the dispute on the genuineness of Phalaris, proved with humor that Bentley did not write his own dissertation. An attempt has lately been made, for the honor of Moses, to prove, [247]without humor, that Bishop Colenso did not write his own book. This is intolerable: anybody who tries to use such a weapon without banter, plenty and good, and of form suited to the subject, should get the drubbing which the poor man got in the Oriental tale for striking the dervishes with the wrong hand.

The excellent and distinguished author of this tract has ceased to live. I call him the Paley of our day: with more learning and more purpose than his predecessor; but perhaps they might have changed places if they had changed centuries. The clever satire above named is not the only work which he published without his name. The following was attributed to him, I believe rightly: "Considerations on the Law of Libel, as relating to Publications on the subject of Religion, by John Search." London, 1833, 8vo. This tract excited little attention: for those who should have answered, could not. Moreover, it wanted a prosecution to call attention to it: the fear of calling such attention may have prevented prosecutions. Those who have read it will have seen why.

The theological review elsewhere mentioned attributes the pamphlet of John Search on blasphemous libel to Lord Brougham. This is quite absurd: the writer states points of law on credence where the judge must have spoken with authority. Besides which, a hundred points of style are decisive between the two. I think any one who knows Whately's writing will soon arrive at my conclusion. Lord Brougham himself informs me that he has no knowledge whatever of the pamphlet.

It is stated in *Notes and Queries* (3 S. xi. 511) that Search was answered by the Bishop of Ferns<sup>[568]</sup> as S. N., with [248]a rejoinder by Blanco White.<sup>[569]</sup> These circumstances increase the probability that Whately was written against and for.

#### VOLTAIRE A CHRISTIAN.

Voltaire Chrétien; preuves tirées de ses ouvrages. Paris, 1820, 12mo.

If Voltaire have not succeeded in proving himself a strong theist and a strong anti-revelationist, who is to succeed in proving himself one thing or the other in any matter whatsoever? By occasional confusion between theism and Christianity; by taking advantage of the formal phrases of adhesion to the Roman Church, which very often occur, and are often the happiest bits of irony in an ironical production; by citations of his morality, which is decidedly Christian, though often attributed to Brahmins; and so on—the author makes a fair case for his paradox, in the eyes of those who know no more than he tells them. If he had said that Voltaire was a better Christian than himself knew of, towards all mankind except men of letters, I for one should have agreed with him.

*Christian!* the word has degenerated into a synonym of *man*, in what are called Christian countries. So we have the parrot who "swore for all the world like a Christian," and the two dogs who "hated each other just like Christians." When the Irish duellist of the last century, whose name may be spared in consideration of its historic fame [249]and the worthy people who bear it, was (June 12, 1786) about to take the consequence of his last brutal murder, the rope broke, and the criminal got up, and exclaimed, "By —— Mr. Sheriff, you ought to be ashamed of yourself! this rope is not strong enough to hang a dog, far less a Christian!" But such things as this are far from the worst depravations. As to a word so defiled by usage, it is well to know that there is a way of escape from it, without renouncing the New Testament. I suppose any one may assume for himself what I have sometimes heard contended for, that no New Testament word is to be used in religion in any sense except that of the New Testament. This granted, the question is settled. The word *Christian*, which occurs

three times, is never recognized as anything but a term of contempt from those without the pale to those within. Thus, Herod Agrippa, who was deep in Jewish literature, and a correspondent of Josephus, says to Paul (Acts xxvi. 28), "Almost thou persuadest me to be (what I and other followers of the state religion despise under the name) a Christian." Again (Acts xi. 26), "The disciples (as they called *themselves*) were called (by the surrounding heathens) Christians first in Antioch." Thirdly (1 Peter iv. 16), "Let none of you suffer as a *murderer*.... But if as a *Christian* (as the heathen call it by whom the suffering comes), let him not be ashamed." That is to say, no *disciple* ever called *himself* a Christian, or applied the name, as from himself, to another disciple, from one end of the New Testament to the other; and no disciple need apply that name to himself in our day, if he dislike the associations with which the conduct of Christians has clothed it.

#### WRONSKI ON THE LONGITUDE PROBLEM.

Address of M. Hoene Wronski to the British Board of Longitude, upon the actual state of the mathematics, their reform, [250]and upon the new celestial mechanics, giving the definitive solution of the problem of longitude. <sup>[570]</sup> London, 1820, 8vo.

M. Wronski<sup>[571]</sup> was the author of seven quartos on mathematics, showing very great power of generalization. He was also deep in the transcendental philosophy, <sup>[572]</sup> and had the Absolute at his fingers' ends. All this knowledge was rendered useless by a persuasion that he had greatly advanced beyond the whole world, with many hints that the Absolute would not be forthcoming, unless prepaid. He was a man of the widest extremes. At one time he desired people to see all possible mathematics in

$$Fx = A_0\Omega_0 + A_1\Omega_1 + A_2\Omega_2 + A_3\Omega_3 + \&c.$$

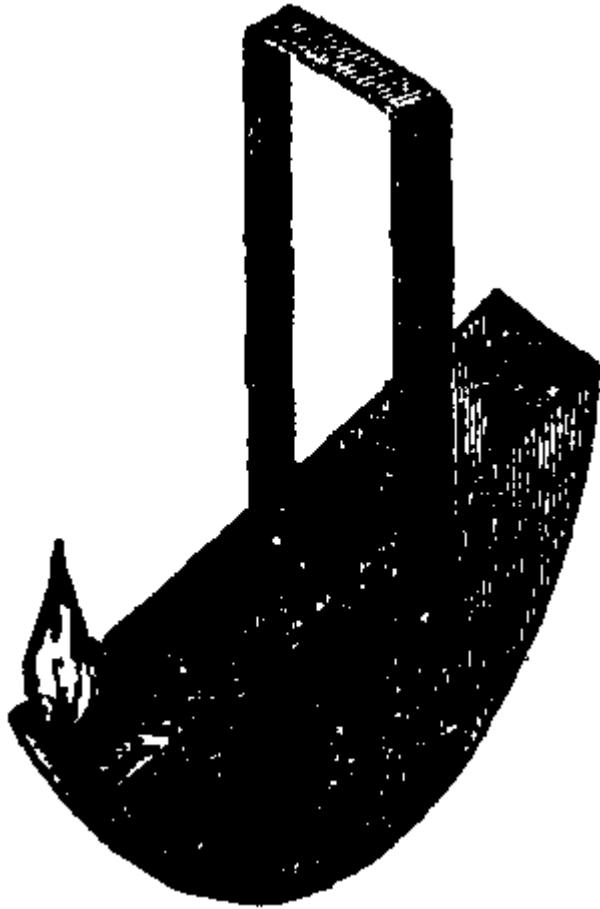
which he did not explain, though there is meaning to it in the quartos. At another time he was proposing the general solution of the<sup>[573]</sup> fifth degree by help of 625 independent equations of one form and 125 of another. The first separate memoir from any Transactions that I ever possessed was given to me when at Cambridge; the refutation (1819) of this asserted solution, presented to the Academy of Lisbon by Evangelista Torriano. I cannot say I read it. The tract above is an attack on modern mathematicians in general, and on the Board of Longitude, and Dr. Young. <sup>[574]</sup>

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#### DR. MILNER'S PARADOXES.

1820. In this year died Dr. Isaac Milner,<sup>[575]</sup> President of Queens' College, Cambridge, one of the class of rational paradoxers. Under this name I include all who, in private life, and in matters which concern themselves, take their own course, and suit their own notions, no matter what other people may think of them. These men will put things to uses they were never intended for, to the great distress and disgust of their gregarious friends. I am one of the class, and I could write a little book of cases in which I have incurred absolute reproach for not "doing as other people do." I will name two of my atrocities: I took one of those butter-dishes which have for a top a dome with holes in it, which is turned inward, out of reach of accident, when not in use. Turning the dome inwards, I filled the dish with water, and put a sponge in the dome: the holes let it fill with water, and I had a penwiper, always moist, and worth its price five times over. "Why! what do you mean? It was made to hold butter. You are always at some queer thing or other!" I bought a leaden comb, intended to dye the hair, it being supposed that the application of lead will have this effect. I did not try: but I divided the comb into two, separated the part of closed prongs from the other; and thus I had two ruling machines. The lead marks paper, and by drawing the end of one of the machines along a ruler, I could rule twenty lines at a time, quite fit to write on. I thought I should have killed a friend to whom I explained it: he could not for the life of him understand how leaden *lines* on paper would dye the hair.

But Dr. Milner went beyond me. He wanted a seat suited to his shape, and he defied opinion to a fearful point. [252]He spread a thick block of putty over a wooden chair and sat in it until it had taken a ceroplast copy of the proper seat. This he gave to a carpenter to be imitated in wood. One of the few now living who knew him—my friend, General Perronet Thompson<sup>[576]</sup>—answers for the wood, which was shown him by Milner himself; but he does not vouch for the material being putty, which was in the story told me at Cambridge; William Frend<sup>[577]</sup> also remembered it. Perhaps the Doctor took off his great seal in green wax, like the Crown; but some soft material he certainly adopted; and very comfortable he found the wooden copy.



The same gentleman vouches for Milner's lamp: but this had visible *science* in it; the vulgar see no science in the construction of the chair. A hollow semi-cylinder, but not with a circular curve, revolved on pivots. The curve was calculated on the law that, whatever quantity of oil might be in the lamp, the position of equilibrium just brought the oil up to the edge of the cylinder, at which a bit of wick was placed. As the wick exhausted the oil, the cylinder slowly revolved about the pivots so as to keep the oil always touching the wick.

Great discoveries are always laughed at; but it is very often not the laugh of incredulity; it is a mode of distorting the sense of inferiority into a sense of superiority, or a mimicry of superiority interposed between the laugh and his feeling of inferiority. Two persons in conversation [253] agreed that it was often a nuisance not to be able to lay hands on a bit of paper to mark the place in a book, every bit of paper on the table was sure to contain something not to be spared. I very quietly said that I always had a stock of bookmarkers ready cut, with a proper place for them: my readers owe many of my anecdotes to this absurd practice. My two colloquials burst into a fit of laughter; about what? Incredulity was out of the question; and there could

be nothing foolish in my taking measures to avoid what they knew was an inconvenience. I was in this matter obviously their superior, and so they laughed at me. Much more candid was the Royal Duke of the last century, who was noted for slow ideas. "The rain comes into my mouth," said he, while riding. "Had not your Royal Highness better shut your mouth?" said the equerry. The Prince did so, and ought, by rule, to have laughed heartily at his adviser; instead of this, he said quietly, "It doesn't come in now."

#### HERBART'S MATHEMATICAL PSYCHOLOGY.

De Attentionis mensura causisque primariis. By J. F. Herbart. <sup>[578]</sup> Koenigsberg, 1822, 4to.

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This celebrated philosopher maintained that mathematics ought to be applied to psychology, in a separate tract, published also in 1822: the one above seems, therefore, to be his challenge on the subject. It is on *attention*, and I think it will hardly support Herbart's thesis. As a specimen of his formula, let  $t$  be the time elapsed since the consideration began,  $\beta$  the whole perceptive intensity of the individual,  $\phi$  the whole of his mental force, and  $z$  the force given to a notion by attention during the time  $t$ . Then,

$$z = \phi (1 - \varepsilon^{-\beta t})$$

Now for a test. There is a *jactura*,  $v$ , the meaning of which I do not comprehend. If there be anything in it, my mathematical readers ought to interpret it from the formula

$$v = \pi\phi\beta/(1 - \beta)\varepsilon^{-\beta t} + C\varepsilon^{-t}$$

and to this task I leave them, wishing them better luck than mine. The time may come when other manifestations of mind, besides *belief*, shall be submitted to calculation: at that time, should it arrive, a final decision may be passed upon Herbart.

#### ON THE WHIZGIG.

The theory of the Whizgig considered; in as much as it mechanically exemplifies the three working properties of nature; which are now set forth under the guise of this toy, for children of all ages. London, 1822, 12mo (pp. 24, B. McMillan, Bow Street, Covent Garden).

The toy called the *whizgig* will be remembered by many. The writer is a follower of Jacob Behmen, <sup>[579]</sup> William Law, <sup>[580]</sup> [255] Richard Clarke, <sup>[581]</sup> and Eugenius Philalethes. <sup>[582]</sup> Jacob Behmen first announced the three working properties of nature, which Newton stole, as described in the *Gentleman's Magazine*, July, 1782, p. 329. These laws are illustrated in the whizgig. There is the harsh astringent, attractive compression; the bitter compunction, repulsive expansion; and the stinging anguish, duplex motion. The author hints that he has written other works, to which he gives no clue. I have heard that Behmen was pillaged by Newton, and Swedenborg <sup>[583]</sup> by Laplace, <sup>[584]</sup> and Pythagoras by Copernicus, <sup>[585]</sup> and Epicurus by Dalton, <sup>[586]</sup> &c. I do not think this mention will revive Behmen; but it may the whizgig, a very pretty toy, and philosophical withal, for few of those who used it could explain it.

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#### SOME MYTHOLOGICAL PARADOXES.

A Grammar of infinite forms; or the mathematical elements of ancient philosophy and mythology. By Wm. Howison. <sup>[587]</sup> Edinburgh, 1823, 8vo.

A curius combination of geometry and mythology. Perseus, for instance, is treated under the head, "the evolution of diminishing hyperbolic branches."

The Mythological Astronomy of the Ancients; part the second: or the key of Urania, the words of which will unlock all the mysteries of antiquity. Norwich, 1823, 12mo.

A Companion to the Mythological Astronomy, &c., containing remarks on recent publications.... Norwich, 1824, 12mo.

A new Theory of the Earth and of planetary motion; in which it is demonstrated that the Sun is vicegerent of his own system. Norwich, 1825, 12mo.

The analyzation of the writings of the Jews, so far as they are found to have any connection with the sublime science of astronomy. [This is pp. 97-180 of some other work, being all I have seen.]

These works are all by Sampson Arnold Mackey, <sup>[588]</sup> for whom see *Notes and Queries*, 1st S. viii. 468, 565, ix. 89, 179. Had it not been for actual quotations given by one correspondent only (1st S. viii. 565), that journal would have handed him down as a man of some real learning. An extraordinary man he certainly was: it is not one illiterate shoemaker in a thousand who could work upon such a singular mass of

Sanskrit and Greek words, without showing [257]evidence of being able to read a line in any language but his own, or to spell that correctly. He was an uneducated Godfrey Higgins.<sup>[589]</sup> A few extracts will put this in a strong light: one for history of science, one for astronomy, and one for philology:

"Sir Isaac Newton was of opinion that 'the atmosphere of the earth was the sensory of God; by which he was enabled to see quite round the earth:' which proves that Sir Isaac had no idea that God could see through the earth.

"Sir Richard [Phillips] has given the most rational explanation of the cause of the earth's elliptical orbit that I have ever seen in print. It is because the earth presents its watery hemisphere to the sun at one time and that of solid land the other; but why has he made his Oxonian astonished at the coincidence? It is what I taught in my attic twelve years before.

"Again, admitting that the Eloim were powerful and intelligent beings that managed these things, we would accuse *them* of being the authors of all the sufferings of Chrisna. And as they and the constellation of Leo were below the horizon, and consequently cut off from the end of the zodiac, there were but eleven constellations of the zodiac to be seen; the three at the end were wanted, but those three would be accused of bringing Chrisna into the troubles which at last ended in his death. All this would be expressed in the Eastern language by saying that Chrisna was persecuted by those Judoth Ishcarioth!!!! [the five notes of exclamation are the author's]. But the astronomy of those distant ages, when the sun was at the south pole in winter, would leave five of those Decans cut off from our view, in the latitude of twenty-eight degrees; hence Chrisna died of [258]wounds from five Decans, but the whole five may be included in Judoth Ishcarioth! for the phrase means 'the men that are wanted at the extreme parts.' Ishcarioth is a compound of *ish*, a man, and *carat* wanted or taken away, and oth the plural termination, more ancient than *im*...."

I might show at length how Michael is the sun, and the D'-ev-'l in French Di-ob-al, also 'L-evi-ath-an—the evi being the radical part both of *devil* and *leviathan*—is the Nile, which the sun dried up for Moses to pass: a battle celebrated by Jude. Also how *Moses*, the same name as *Muses*, is from *mesha*, drawn out of the water, "and hence we called our land which is saved from the water by the name of *marsh*." But it will be of more use to collect the character of S. A. M. from such correspondents of *Notes and Queries* as have written after superficial examination. Great astronomical and philological attainments, much ability and learning; had evidently read and studied deeply; remarkable for the originality of his views upon the very abstruse subject of mythological astronomy, in which he exhibited great sagacity.

Certainly his views were *original*; but their sagacity, if it be allowable to copy his own mode of etymologizing, is of an *ori-gin-ale* cast, resembling that of a person who puts to his mouth liquors both distilled and fermented.

#### A KANTESIAN JEWELER.

Principles of the Kantesian, or transcendental philosophy. By Thomas Wirgman. <sup>[590]</sup> London, 1824, 8vo.

Mr. Wirgman's mind was somewhat attuned to psychology; but he was cracky and vagarious. He had been a fashionable jeweler in St. James's Street, no doubt the son or grandson of Wirgman at "the well-known toy-shop in [259]St. James's Street," where Sam Johnson smartened himself with silver buckles. (Boswell, *æt.* 69). He would not have the ridiculous large ones in fashion; and he would give no more than a guinea a pair; such, says Boswell, in Italics, were the *principles* of the business: and I think this may be the first place in which the philosophical word was brought down from heaven to mix with men. However this may be, *my* Wirgman sold snuff-boxes, among other things, and fifty years ago a fashionable snuff-boxer would be under inducement, if not positively obliged, to have a stock with very objectionable pictures. So it happened that Wirgman—by reason of a trifle too much candor—came under the notice of the *Suppression* Society, and ran considerable risk. Mr. Brougham was his counsel; and managed to get him acquitted. Years and years after this, when Mr. Brougham was deep in the formation of the London University (now University College), Mr. Wirgman called on him. "What now?" said Mr. B. with his most sarcastic look—a very perfect thing of its kind—"you're in a scrape again, I suppose!" "No! indeed!" said W., "my present object is to ask your interest for the chair of Moral Philosophy in the new University!" He had taken up Kant!

Mr. Wirgman, an itinerant paradoxer, called on me in 1831: he came to convert me. "I assure you," said he, "I am nothing but an old brute of a jeweler;" and his eye and manner were of the extreme of jocosity, as good in their way, as the satire of his former counsel. I mention him as one of that class who go away quite satisfied that they have wrought conviction. "Now," said he, "I'll make it clear to you! Suppose a number of gold-fishes in a glass bowl,—you understand? Well! I come with my cigar and go puff, puff, puff, over the bowl, until there is a little cloud of smoke: now, tell me, what will the gold-fishes say to that?" "I should imagine," said I, "That they would not know what to make of it." "By Jove! you're a Kantian;" said he, and with this and the like, he left me, vowing that [260]it was delightful to talk to so intelligent a person. The greatest compliment Wirgman ever received was from James Mill, who used to say he did

not *understand* Kant. That such a man as Mill should think this worth saying is a feather in the cap of the jocose jeweler.

Some of my readers will stare at my supposing that Boswell may have been the first down-bringer of the word *principles* into common life; the best answer will be a prior instance of the word as true vernacular; it has never happened to me to notice one. Many words have very common uses which are not old. Take the following from Nichols (*Anecd.* ix. 263): "Lord Thurlow presents his best respects to Mr. and Mrs. Thicknesse, and assures them that he knows of no cause to complain of any part of Mr. Thicknesse's carriage; least of all the circumstance of sending the head to Ormond Street." Surely Mr. T. had lent Lord T. a satisfactory carriage with a movable head, and the above is a polite answer to inquiries. Not a bit of it! *carriage* is here *conduct*, and the *head* is a *bust*. The vehicles of the rich, at the time, were coaches, chariots, chaises, etc., never carriages, which were rather *carts*. Gibbon has the word for baggage-wagons. In Jane Austen's novels the word carriage is established.

#### WALSH'S DELUSIONS.

*John Walsh*, <sup>[591]</sup> of Cork (1786-1847). This discoverer has had the honor of a biography from Professor Boole, who, at my request, collected information about him on the scene of his labors. It is in the *Philosophical Magazine* for November, 1851, and will, I hope, be transferred to some biographical collection where it may find a larger class of readers. It is the best biography of a single hero of the kind that I know. Mr. Walsh introduced himself to me, [261] as he did to many others, in the anterowlandian days of the Post-office; his unpaid letters were double, treble, &c. They contained his pamphlets, and cost their weight in silver: all have the name of the author, and all are in octavo or in quarto letter-form: most are in four pages, and all dated from Cork. I have the following by me:

The Geometric Base, 1825.—The theory of plane angles. 1827.—Three Letters to Dr. Francis Sadleir. 1838.—The invention of polar geometry. By Irelandus. 1839.—The theory of partial functions. Letter to Lord Brougham. 1839.—On the invention of polar geometry. 1839.—Letter to the Editor of the Edinburgh Review. 1840.—Irish Manufacture. A new method of tangents. 1841.—The normal diameter in curves. 1843.—Letter to Sir R. Peel. 1845.—[Hints that Government should compel the introduction of Walsh's Geometry into Universities.]—Solution of Equations of the higher orders. 1845.

Besides these, there is a *Metalogia*, and I know not how many others.

Mr. Boole, <sup>[592]</sup> who has taken the moral and social features of Walsh's delusions from the commiserating point of view, which makes ridicule out of place, has been obliged to treat Walsh as Scott's Alan Fairford treated his client Peter Peebles; namely, keep the scarecrow out of court while the case was argued. My plan requires me to bring him in: and when he comes in at the door, pity and sympathy fly out at the window. Let the reader remember that he was not an ignoramus in mathematics: he might have won his spurs if he could have first served as an esquire. Though so illiterate that even in Ireland he never picked up anything more Latin than *Irelandus*, he was a very pretty mathematician spoiled in the making by intense self-opinion.

This is part of a private letter to me at the back of a page of print: I had never addressed a word to him:

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"There are no limits in mathematics, and those that assert there are, are infinite ruffians, ignorant, lying blackguards. There is no differential calculus, no Taylor's theorem, no calculus of variations, &c. in mathematics. There is no quackery whatever in mathematics; no % equal to anything. What sheer ignorant blackguardism that!

"In mechanics the parallelogram of forces is quackery, and is dangerous; for nothing is at rest, or in uniform, or in rectilinear motion, in the universe. Variable motion is an essential property of matter. Laplace's demonstration of the parallelogram of forces is a begging of the question; and the attempts of them all to show that the difference of twenty minutes between the sidereal and actual revolution of the earth round the sun arises from the tugging of the Sun and Moon at the pot-belly of the earth, without being sure even that the earth has a pot-belly at all, is perfect quackery. The said difference arising from and demonstrating the revolution of the Sun itself round some distant center."

In the letter to Lord Brougham we read as follows:

"I ask the Royal Society of London, I ask the Saxon crew of that crazy hulk, where is the dogma of their philosophic god now?... When the Royal Society of London, and the Academy of Sciences of Paris, shall have read this memorandum, how will they appear? Like two cur dogs in the paws of the noblest beast of the forest.... Just as this note was going to press, a volume lately published by you was put into my hands, wherein you attempt to defend the fluxions and *Principia* of Newton. Man! what are you about? You come forward now with your special pleading, and fraught with

national prejudice, to defend, like the philosopher Grassi, <sup>[593]</sup> the persecutor of Galileo, principles [263] and reasoning which, unless you are actually insane, or an ignorant quack in mathematics, you know are mathematically false. What a moral lesson this for the students of the University of London from its head! Man! demonstrate corollary 3, in this note, by the lying dogma of Newton, or turn your thoughts to something you understand.

"Walsh Irelandus."

Mr. Walsh—honor to his memory—once had the consideration to save me postage by addressing a pamphlet under cover to a Member of Parliament, with an explanatory letter. In that letter he gives a candid opinion of himself:

(1838.) "Mr. Walsh takes leave to send the enclosed corrected copy to Mr. Hutton as one of the Council of the University of London, and to save postage for the Professor of Mathematics there. He will find in it geometry more deep and subtle, and at the same time more simple and elegant, than it was ever contemplated human genius could invent."

He then proceeds to set forth that a certain "tomfoolery lemma," with its "tomfoolery" superstructure, "never had existence outside the shallow brains of its inventor," Euclid. He then proceeds thus:

"The same spirit that animated those philosophers who sent Galileo to the Inquisition animates all the philosophers of the present day without exception. If anything can free them from the yoke of error, it is the [Walsh] problem of double tangence. But free them it will, how deeply soever they may be sunk into mental slavery—and God knows that is deeply enough; and they bear it with an admirable grace; for none bear slavery with a better grace than tyrants. The lads must adopt my theory.... It will be a sad reverse for all our great professors to be compelled to become schoolboys in their gray years. But the sore scratch is to be compelled, as they had before been compelled one thousand years ago, to have recourse to Ireland for instruction." [264]

The following "Impromptu" is no doubt by Walsh himself: he was more of a poet than of an astronomer:

"Through ages unfriended,

With sophistry blended,

Deep science in Chaos had slept;

Its limits were fettered,

Its voters unlettered,  
Its students in movements but crept.  
Till, despite of great foes,  
Great Walsh first arose,  
And with logical might did unravel  
Those mazes of knowledge,  
Ne'er known in a college,  
Though sought for with unceasing travail.  
With cheers we now hail him,  
May success never fail him,  
In Polar Geometrical mining;  
Till his foes be as tamed  
As his works are far-famed  
For true philosophic refining."

Walsh's system is, that all mathematics and physics are wrong: there is hardly one proposition in Euclid which is demonstrated. His example ought to warn all who rely on their own evidence to their own success. He was not, properly speaking, insane; he only spoke his mind more freely than many others of his class. The poor fellow died in the Cork union, during the famine. He had lived a happy life, contemplating his own perfections, like Brahma on the lotus-leaf. <sup>[594]</sup>

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## GROWTH OF FREEDOM OF OPINION.

The year 1825 brings me to about the middle of my *Athenæum* list: that is, so far as mere number of names mentioned is concerned. Freedom of opinion, beyond a doubt, is gaining ground, for good or for evil, according to what the speaker happens to think: admission of authority is no longer made in the old way. If we take soul-cure and body-cure, divinity and medicine, it is manifest that a change has come over us. Time was when it was enough that dose or dogma should be certified by "Il a été

ordonné, Monsieur, il a été ordonné,"<sup>[595]</sup> as the apothecary said when he wanted to operate upon poor de Porceaugnac. Very much changed: but whether for good or for evil does not now matter; the question is, whether contempt of *demonstration* such as our paradoxers show has augmented with the rejection of *dogmatic authority*. It ought to be just the other way: for the worship of reason is the system on which, if we trust them, the deniers of guidance ground their plan of life. The following attempt at an experiment on this point is the best which I can make; and, so far as I know, the first that ever was made.

Say that my list of paradoxers divides in 1825: this of itself proves nothing, because so many of the earlier books are lost, or not likely to be come at. It would be a fearful rate of increase which would make the number of paradoxes since 1825 equal to the whole number before that date. Let us turn now to another collection of mine, arithmetical books, of which I have published a list. The two collections are similarly circumstanced as to new and old books; the paradoxes had no care given to the collection of either; the arithmetical books equal care to both. The list of arithmetical books, published in 1847, divides at 1735; the paradoxes, up to 1863, divide at 1825. If we take the process which is most against the distinction, and allow every year [266] from 1847 to 1863 to add a year to 1735, we should say that the arithmetical writers divide at 1751. This rough process may serve, with sufficient certainty, to show that the proportion of paradoxes to books of sober demonstration is on the increase; and probably, quite as much as the proportion of heterodoxes to books of orthodox adherence. So that divinity and medicine may say to geometry, Don't *you* sneer: if rationalism, homœopathy, and their congeners are on the rise among us, your enemies are increasing quite as fast. But geometry replies—Dear friends, content yourselves with the rational inference that the rise of heterodoxy within your pales is not conclusive against you, taken alone; for it rises at the same time within mine. Store within your garners the precious argument that you are not proved wrong by increase of dissent; because there is increase of dissent against exact science. But do not therefore *even* yourselves to me: remember that you, Dame Divinity, have inflicted every kind of penalty, from the stake to the stocks, in aid of your reasoning; remember that you, Mother Medicine, have not many years ago applied to Parliament for increase of forcible hindrance of antipharmacopœal drenches, pills, and powders. Who ever heard of my asking the legislature to fine blundering circle-squarers? Remember that the D in dogma is the D in decay; but the D in demonstration is the D in durability.

THE STATUS OF MEDICINE.

I have known a medical man—a young one—who was seriously of the opinion that the country ought to be divided into medical parishes, with a practitioner appointed to each, and a penalty for calling in any but the incumbent curer. How should people know how to choose? The hair-dressers once petitioned Parliament for an act to compel people to wear wigs. My own opinion is of the opposite extreme, as in the following letter (*Examiner*, April 5, 1856); which, to my surprise, I saw reprinted in a medical journal, as a [267] plan not absolutely to be rejected. I am perfectly satisfied that it would greatly promote true medical orthodoxy, the predominance of well educated thinkers, and the development of their desirable differences.

"Sir. The Medical Bill and the medical question generally is one on which experience would teach, if people would be taught.

"The great soul question took three hundred years to settle: the little body question might be settled in thirty years, if the decisions in the former question were studied.

"Time was when the State believed, as honestly as ever it believed anything, that it *might, could, and should* find out the true doctrine for the poor ignorant community; to which, like a worthy honest state, it added *would*. Accordingly, by the assistance of the Church, which undertook the physic, the surgery, and the pharmacy of sound doctrine all by itself, it sent forth its legally qualified teachers into every parish, and woe to the man who called in any other. They burnt that man, they whipped him, they imprisoned him, they did everything but what was Christian to him, all for his soul's health and the amendment of his excesses.

"But men would not submit. To the argument that the State was a father to the ignorant, they replied that it was at best the ignorant father of an ignorant son, and that a blind man could find his way into a ditch without another blind man to help him. And when the State said—But here we have the Church, which knows all about it, the ignorant community declared that it had a right to judge that question, and that it would judge it. It also said that the Church was never one thing long, and that it progressed, on the whole, rather more slowly than the ignorant community.

"The end of it was, in this country, that every one who chose taught all who chose to let him teach, on condition only of an open and true registration. The State was [268] allowed to patronize one particular Church, so that no one need trouble himself to choose a pastor from the mere necessity of choosing. But every church is allowed its colleges, its studies, its diplomas; and every man is allowed his choice.

There is no proof that our souls are worse off than in the sixteenth century; and, judging by fruits, there is much reason to hope they are better off.

"Now the little body question is a perfect parallel to the great soul question in all its circumstances. The only things in which the parallel fails are the following: Every one who believes in a future state sees that the soul question is incomparably more important than the body question, and every one can try the body question by experiment to a larger extent than the soul question. The proverb, which always has a spark of truth at the bottom, says that every man of forty is either a fool or a physician; but did even the proverb maker ever dare to say that every man is at any age either a fool or a fit teacher of religion?

"Common sense points out the following settlement of the medical question: and to this it will come sooner or later.

"Let every man who chooses—subject to one common law of manslaughter for all the *crass* cases—doctor the bodies of all who choose to trust him, and recover payment according to agreement in the courts of law. Provided always that every person practising should be registered at a moderate fee in a register to be republished every six months.

"Let the register give the name, address, and asserted qualification of each candidate—as licentiate, or doctor, or what not, of this or that college, hall, university, &c., home or foreign. Let it be competent to any man to describe himself as qualified by study in public schools without a diploma, or by private study, or even by intuition or divine inspiration, if he please. But whatever he holds his qualification to be, that let him declare. Let all qualification [269]which of its own nature admits of proof be proved, as by the diploma or certificate, &c., leaving things which cannot be proved, as asserted private study, intuition, inspiration, &c., to work their own way.

"Let it be highly penal to assert to the patient any qualification which is not in the register, and let the register be sold very cheap. Let the registrar give each registered practitioner a copy of the register in his own case; let any patient have the power to demand a sight of this copy; and let no money for attendance be recoverable in any case in which there has been false representation.

"Let any party in any suit have a right to produce what medical testimony he pleases. Let the medical witness produce his register, and let his evidence be for the jury, as is that of an engineer or a practitioner of any art which is not attested by diplomas.

"Let any man who practises without venturing to put his name on the register be liable to fine and imprisonment.

"The consequence would be that, as now, anybody who pleases might practise; for the medical world is well aware that there is no power of preventing what they call quacks from practising. But very different from what is now, every man who practises would be obliged to tell the whole world what his claim is, and would run a great risk if he dared to tell his patient in private anything different from what he had told the whole world.

"The consequence would be that a real education in anatomy, physiology, chemistry, surgery, and what is known of the thing called medicine, would acquire more importance than it now has.

"It is curious to see how completely the medical man of the nineteenth century squares with the priest of the sixteenth century. The clergy of all sects are now better divines and better men than they ever were. They have lost Bacon's reproach that they took a smaller measure of things than any other educated men; and the physicians are now [270]in this particular the rearguard of the learned world; though it may be true that the rear in our day is further on in the march than the van of Bacon's day. Nor will they ever recover the lost position until medicine is as free as religion.

"To this it must come. To this the public, which will decide for itself, has determined it shall come. To this the public has, in fact, brought it, but on a plan which it is not desirable to make permanent. We will be as free to take care of our bodies as of our souls and of our goods. This is the profession of all who sign as I do, and the practice of most of those who would not like the name

"Heteropath."

The motion of the Sun in the Ecliptic, proved to be uniform in a circular orbit ... with preliminary observations on the fallacy of the Solar System. By Bartholomew Prescott, [\[596\]](#) 1825, 8vo.

The author had published, in 1803, a *Defence of the Divine System*, which I never saw; also, *On the inverted scheme of Copernicus*. The above work is clever in its satire.

#### THE CHRISTIAN EVIDENCE SOCIETY.

Manifesto of the Christian Evidence Society, established Nov. 12, 1824. Twenty-four plain questions to honest men.

These are two broadsides of August and November, 1826, signed by Robert Taylor, <sup>[597]</sup>A.B., Orator of the Christian Evidence Society. This gentleman was a clergyman, [271]and was convicted of blasphemy in 1827, for which he suffered imprisonment, and got the name of the *Devil's Chaplain*. The following are quotations:

"For the book of Revelation, there was no original Greek at all, but *Erasmus* wrote it himself in Switzerland, in the year 1516. Bishop Marsh, <sup>[598]</sup>vol. i. p. 320."—"Is not God the author of your reason? Can he then be the author of anything which is contrary to your reason? If reason be a sufficient guide, why should God give you any other? if it be not a sufficient guide, why has he given you *that*?"

I remember a votary of the Society being asked to substitute for *reason* "the right leg," and for *guide* "support," and to answer the two last questions: he said there must be a quibble, but he did not see what. It is pleasant to reflect that the *argumentum à carcere* <sup>[599]</sup>is obsolete. One great defect of it was that it did not go far enough: there should have been laws against subscriptions for blasphemers, against dealing at their shops, and against rich widows marrying them.

Had I taken in theology, I must have entered books against Christianity. I mention the above, and Paine's *Age of Reason*, simply because they are the only English modern works that ever came in my way without my asking for them. The three parts of the *Age of Reason* were published in Paris 1793, Paris 1795, and New York 1807.

Carlile's <sup>[600]</sup>edition is of London, 1818, 8vo. It must be republished when the time comes, to show what stuff governments and clergy were afraid of at the beginning of this century. I should never have seen the book, if it [272]had not been prohibited: a bookseller put it under my nose with a fearful look round him; and I could do no less, in common curiosity, than buy a work which had been so complimented by church and state. And when I had read it, I said in my mind to church and state,—Confound you! you have taken me in worse than any reviewer I ever met with. I forget what I gave for the book, but I ought to have been able to claim compensation somewhere.

## THE CABBALA.

Cabbala Algebraica. Auctore Gul. Lud. Christmann. <sup>[601]</sup>Stuttgard, 1827, 4to.

Eighty closely printed pages of an attempt to solve equations of every degree, which has a process called by the author *cabbala*. An anonymous correspondent spells *cabbala* as follows, χαββαλλ, and makes 666 out of its letters. This gentleman has sent me since my Budget commenced, a little heap of satirical communications, each having a 666 or two; for instance, alluding to my remarks on the spelling

of *chemistry*, he finds the fated number in χημεία. With these are challenges to explain them, and hints about the end of the world. All these letters have different fantastic seals; one of them with the legend "keep your temper,"—another bearing "bank token five pence." The only signature is a triangle with a little circle in it, which I interpret to mean that the writer confesses himself to be the round man stuck in the three-cornered hole, to be explained as in Sydney Smith's joke.

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There is a kind of Cabbala Alphabetica which the investigators of the numerals in words would do well to take up: it is the formation of sentences which contain all the letters of the alphabet, and each only once. No one has done it with *v* and *j* treated as consonants; but you and I can do it. Dr. Whewell<sup>[602]</sup> and I amused ourselves, some years ago, with attempts. He could not make sense, though he joined words: he gave me

Phiz, styx, wrong, buck, flame, quid.

I gave him the following, which he agreed was "admirable sense": I certainly think the words would never have come together except in this way:

I, quartz pyx, who fling muck beds.

I long thought that no human being could say this under any circumstances. At last I happened to be reading a religious writer—as he thought himself—who threw aspersions on his opponents thick and threefold. Heyday! came into my head, this fellow flings muck beds; he must be a quartz pyx. And then I remembered that a pyx is a sacred vessel, and quartz is a hard stone, as hard as the heart of a religious foe-cursor. So that the line is the motto of the ferocious sectarian, who turns his religious vessels into mudholders, for the benefit of those who will not see what he sees.

I can find no circumstances for the following, which I received from another:

Fritz! quick! land! hew gypsum box.

From other quarters I have the following:

Dumpy quiz! whirl back fogs next.

This might be said in time of haze to the queer little figure in the Dutch weather-toy, which comes out or goes in with the change in the atmosphere. Again,

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Export my fund! Quiz black whigs.

This Squire Western might have said, who was always afraid of the whigs sending the sinking-fund over to Hanover. But the following is the best: it is good advice to a young man, very well expressed under the circumstances:

Get nymph; quiz sad brow; fix luck.

Which in more sober English would be, Marry; be cheerful; watch your business. There is more edification, more religion in this than in all the 666-interpretations put together.

Such things would make excellent writing copies, for they secure attention to every letter; *v* and *j* might be placed at the end.

ON GODFREY HIGGINS.

The Celtic Druids. By Godfrey Higgins, <sup>[603]</sup> Esq. of Skellow Grange, near Doncaster. London, 1827, 4to.

Anacalypsis, or an attempt to draw aside the veil of the Saitic Isis: or an inquiry into the origin of languages, nations, and religions. By Godfrey Higgins, &c..., London, 1836, 2 vols. 4to.

The first work had an additional preface and a new index in 1829. Possibly, in future time, will be found bound up with copies of the second work two sheets which Mr. Higgins circulated among his friends in 1831: the first a "Recapitulation," the second "Book vi. ch. 1."

The system of these works is that—

"The Buddhists of Upper India (of whom the Phenician Canaanite, Melchizedek, was a priest), who built the Pyramids, Stonehenge, Carnac, &c. will be shown to have founded all the ancient mythologies of the world, which, however varied and corrupted in recent times, were originally one, and that one founded on principles sublime, beautiful, and true."

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These works contain an immense quantity of learning, very honestly put together. I presume the enormous number of facts, and the goodness of the index, to be the reasons why the *Anacalypsis* found a permanent place in the *old* reading-room of the British Museum, even before the change which greatly increased the number of books left free to the reader in that room.

Mr. Higgins, whom I knew well in the last six years of his life, and respected as a good, learned, and (in his own way) *pious* man, was thoroughly and completely the man of a system. He had that sort of mental connection with his theory that made his statements of his authorities trustworthy: for, besides perfect integrity, he had no bias towards alteration of facts: he saw his system in the way the fact was presented to him by his authority, be that what it might.

He was very sure of a fact which he got from any of his authorities: nothing could shake him. Imagine a conversation between him and an Indian officer who had paid long attention to Hindoo antiquities and their remains: a third person was present, *ego qui scribo*. G. H. "You know that in the temples of I-forget-who the Ceres is always sculptured precisely as in Greece." Col. —, "I really do not remember it, and I have seen most of these temples." G. H. "It is so, I assure you, especially at I-forget-where." Col. —, "Well, I am sure! I was encamped for six weeks at the gate of that very temple, and, except a little shooting, had nothing to do but to examine its details, which I did, day after day, and I found nothing of the kind." It was of no use at all.

Godfrey Higgins began life by exposing and conquering, at the expense of two years of his studies, some shocking abuses which existed in the York Lunatic Asylum. This was a proceeding which called much attention to the treatment of the insane, and produced much good effect. He was very resolute and energetic. The magistracy of his [276]time had such scruples about using the severity of law to people of such station as well-to-do farmers, &c.: they would allow a great deal of resistance, and endeavor to mollify the rebels into obedience. A young farmer flatly refused to pay under an order of affiliation made upon him by Godfrey Higgins. He was duly warned; and persisted: he shortly found himself in gaol. He went there sure to conquer the Justice, and the first thing he did was to demand to see his lawyer. He was told, to his horror, that as soon as he had been cropped and prison-dressed, he might see as many lawyers as he pleased, to be looked at, laughed at, and advised that there was but one way out of the scrape. Higgins was, in his speculations, a regular counterpart of Bailly; but the celebrated Mayor of Paris had not his nerve. It was impossible to say, if their characters had been changed, whether the unfortunate crisis in which Bailly was not equal to the occasion would have led to very different results if Higgins had been in his place: but assuredly constitutional liberty would have had one chance more. There are two works of his by which he was known, apart from his paradoxes. First, *An apology for the life and character of the celebrated prophet of Arabia, called Mohamed, or the Illustrious*. London, 8vo. 1829. The reader will look at this writing of our English Buddhist with suspicious eye, but he will not be able to avoid confessing that the Arabian prophet has some reparation to demand at the hands of Christians.

Next, *Horæ Sabaticæ; or an attempt to correct certain superstitions and vulgar errors respecting the Sabbath*. Second edition, with a large appendix. London, 12mo. 1833. This book was very heterodox at the time, but it has furnished material for some of the clergy of our day.

I never could quite make out whether Godfrey Higgins took that system which he traced to the Buddhists to have a Divine origin, or to be the result of good men's meditations. Himself a strong theist, and believer in a future [277]state, one would suppose that he would refer a *universal* religion, spread in different forms over the whole earth from one source, directly to the universal Parent. And this I suspect he did, whether he knew it or not. The external evidence is balanced. In his preface he says:

"I cannot help smiling when I consider that the priests have objected to admit my former book, *The Celtic Druids*, into libraries, because it was antichristian; and it has been attacked by Deists, because it was superfluously religious. The learned Deist, the Rev. R. Taylor [already mentioned], has designated me as the *religious* Mr. Higgins."

The time will come when some profound historian of literature will make himself much clearer on the point than I am.

#### ON POPE'S DIPPING NEEDLE.

The triumphal Chariot of Friction: or a familiar elucidation of the origin of magnetic attraction, &c. &c. By William Pope. <sup>[604]</sup> London, 1829, 4to.

Part of this work is on a dipping-needle of the author's construction. It must have been under the impression that a book of naval magnetism was proposed, that a great many officers, the Royal Naval Club, etc. lent their names to the subscription list. How must they have been surprised to find, right opposite to the list of subscribers, the plate presenting "the three emphatic letters, J. A. O." And how much more when they saw it set forth that if a square be inscribed in a circle, a circle within that, then a square again, &c., it is impossible to have more than fourteen circles, let the first circle be as large as you please. From this the seven attributes of God are unfolded; and further, that all matter was *moral*, until Lucifer *churned* it into *physical* "as far as the third circle in Deity": this Lucifer, called Leviathan in Job, being thus the moving cause of [278]chaos. I shall say no more, except that the friction of the air is the cause of magnetism.

Remarks on the Architecture, Sculpture, and Zodiac of Palmyra; with a Key to the Inscriptions. By B. Prescott.<sup>[605]</sup> London, 1830, 8vo.

Mr. Prescott gives the signs of the zodiac a Hebrew origin.

#### THE JACOTOT METHOD.

Epitomé de mathématiques. Par F. Jacotot,<sup>[606]</sup> Avocat. 3ième edition, Paris, 1830, 8vo. (pp. 18).

Méthode Jacotot. Choix de propositions mathématiques. Par P. Y. Séprés.<sup>[607]</sup> 2nde édition. Paris, 1830, 8vo. (pp. 82).

Of Jacotot's method, which had some vogue in Paris, the principle was *Tout est dans tout*,<sup>[608]</sup> and the process *Apprendre quelque chose, et à y rapporter tout le reste*.<sup>[609]</sup> The first tract has a proposition in conic sections and its preliminaries: the second has twenty exercises, of which the first is finding the greatest common measure of two numbers, and the last is the motion of a point on a surface, acted on by given forces. This is topped up with the problem of sound in a tube, and a slice of Laplace's theory of the tides. All to be studied until known by heart, and all the rest will come, or at least join on easily when it comes. There is much truth in the assertion that new knowledge [279] hooks on easily to a little of the old, thoroughly mastered. The day is coming when it will be found out that crammed erudition, got up for examinations, does not cast out any hooks for more.

Lettre à MM. les Membres de l'Académie Royale des Sciences, contenant un développement de la réfutation du système de la gravitation universelle, qui leur a été présentée le 30 août, 1830. Par Félix Passot.<sup>[610]</sup> Paris, 1830, 8vo.

Works of this sort are less common in France than in England. In France there is only the Academy of Sciences to go to: in England there is a reading public out of the Royal Society, &c.

#### A DISCOURSE ON PROBABILITY.

About 1830 was published, in the *Library of Useful Knowledge*, the tract on *Probability*, the joint work of the late Sir John Lubbock<sup>[611]</sup> and Mr. Drinkwater (Bethune).<sup>[612]</sup> It is one of the best elementary openings of the subject. A binder put my name on the

outside (the work was anonymous) and the consequence was that nothing could drive out of people's heads that it was written by me. I do not know how many denials I have made, from a passage in one of my own works to a letter in the *Times*: and I am not sure that I have succeeded in establishing the truth, even now. I accordingly note the fact once more. But as a book has no right here unless it contain a paradox—or thing counter to general opinion or practice—I will produce two small ones. Sir John Lubbock, with whom lay the executive arrangement, had a strong objection to the last word in "Theory of Probabilities," he maintained that the singular *probability*, should be used; and I hold him quite right.

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The second case was this: My friend Sir J. L., with a large cluster of intellectual qualities, and another of social qualities, had one point of character which I will not call bad and cannot call good; he never used a slang expression. To such a length did he carry his dislike, that he could not bear *head* and *tail*, even in a work on games of chance: so he used *obverse* and *reverse*. I stared when I first saw this: but, to my delight, I found that the force of circumstances beat him at last. He was obliged to take an example from the race-course, and the name of one of the horses was *Bessy Bedlam*! And he did not put her down as *Elizabeth Bethlehem*, but forced himself to follow the jockeys.

[Almanach Romain sur la Loterie Royale de France, ou les Etreannes nécessaires aux Actionnaires et Receveurs de la dite Loterie. Par M. Menut de St.-Mesmin. Paris, 1830. 12mo.

This book contains all the drawings of the French lottery (two or three, each month) from 1758 to 1830. It is intended for those who thought they could predict the future drawings from the past: and various sets of *sympathetic* numbers are given to help them. The principle is, that anything which has not happened for a long time must be soon to come. At *rouge et noir*, for example, when the red has won five times running, sagacious gamblers stake on the black, for they think the turn which must come at last is nearer than it was. So it is: but observation would have shown that if a large number of those cases had been registered which show a run of five for the red, the next game would just as often have made the run into six as have turned in favor of the black. But the gambling reasoner is incorrigible: if he would but take to squaring the circle, what a load of misery would be saved. A writer of 1823, who appeared to be thoroughly acquainted with the gambling of Paris and London, says that the gamblers by [281]profession are haunted by a secret foreboding of their future

destruction, and seem as if they said to the banker at the table, as the gladiators said to the emperor, *Morituri te salutant*.<sup>[613]</sup>

In the French lottery, five numbers out of ninety were drawn at a time. Any person, in any part of the country, might stake any sum upon any event he pleased, as that 27 should be drawn; that 42 and 81 should be drawn; that 42 and 81 should be drawn, and 42 first; and so on up to a *quine déterminé*, if he chose, which is betting on five given numbers in a given order. Thus, in July, 1821, one of the drawings was

8 46 16 64 13.

A gambler had actually predicted the five numbers (but not their order), and won 131,350 francs on a trifling stake. M. Menut seems to insinuate that the hint what numbers to choose was given at his own office. Another won 20,852 francs on the quaterne, 8, 16, 46, 64, in this very drawing. These gains, of course, were widely advertised: of the multitudes who lost nothing was said. The enormous number of those who played is proved to all who have studied chances arithmetically by the numbers of simple quaternes which were gained: in 1822, fourteen; in 1823, six; in 1824, sixteen; in 1825, nine, &c.

The paradoxes of what is called chance, or hazard, might themselves make a small volume. All the world understands that there is a long run, a general average; but great part of the world is surprised that this general average should be computed and predicted. There are many remarkable cases of verification; and one of them relates to the quadrature of the circle. I give some account of this and another. Throw a penny time after time until *head* arrives, which it will do before long: let this be called a *set*. Accordingly, H is the smallest set, TH the next smallest, then TTH, &c. For abbreviation, let a set in which seven *tails* [282] occur before *head* turns up be T<sup>7</sup>H. In an immense number of trials of sets, about half will be H; about a quarter TH; about an eighth, T<sup>2</sup>H. Buffon<sup>[614]</sup> tried 2,048 sets; and several have followed him. It will tend to illustrate the principle if I give all the results; namely, that many trials will with moral certainty show an approach—and the greater the greater the number of trials—to that average which sober reasoning predicts. In the first column is the most likely number of the theory: the next column gives Buffon's result; the three next are results obtained from trial by correspondents of mine. In each case the number of trials is 2,048.

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| H | 1,024 | 1,061 | 1,048 | 1,017 | 1,039 |
|---|-------|-------|-------|-------|-------|

|    |     |     |     |     |     |
|----|-----|-----|-----|-----|-----|
| TH | 512 | 494 | 507 | 547 | 480 |
|----|-----|-----|-----|-----|-----|

|                   |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|
| T <sup>2</sup> H  | 256   | 232   | 248   | 235   | 267   |
| T <sup>3</sup> H  | 128   | 137   | 99    | 118   | 126   |
| T <sup>4</sup> H  | 64    | 56    | 71    | 72    | 67    |
| T <sup>5</sup> H  | 32    | 29    | 38    | 32    | 33    |
| T <sup>6</sup> H  | 16    | 25    | 17    | 10    | 19    |
| T <sup>7</sup> H  | 8     | 8     | 9     | 9     | 10    |
| T <sup>8</sup> H  | 4     | 6     | 5     | 3     | 3     |
| T <sup>9</sup> H  | 2     |       | 3     | 2     | 4     |
| T <sup>10</sup> H | 1     |       | 1     | 1     |       |
| T <sup>11</sup> H |       |       | 0     | 1     |       |
| T <sup>12</sup> H |       |       | 0     | 0     |       |
| T <sup>13</sup> H | 1     |       | 1     | 0     |       |
| T <sup>14</sup> H |       |       | 0     | 0     |       |
| T <sup>15</sup> H |       |       | 1     | 1     |       |
| &c.               |       |       | 0     | 0     |       |
|                   | ——    | ——    | ——    | ——    | ——    |
|                   | 2,048 | 2,048 | 2,048 | 2,048 | 2,048 |

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In very many trials, then, we may depend upon something like the predicted average. Conversely, from many trials we may form a guess at what the average will be. Thus, in Buffon's experiment the 2,048 first throws of the sets gave *head* in 1,061 cases: we have a right to infer that in the long run something like 1,061 out of 2,048 is the proportion of heads, even before we know the reasons for the equality of chance, which tell us that 1,024 out of 2,048 is the real truth. I now come to the way in which such considerations have led to a mode in which mere pitch-and-toss has given a more accurate approach to the quadrature of the circle than has been reached by

some of my paradoxers. What would my friend<sup>[615]</sup> in No. 14 have said to this? The method is as follows: Suppose a planked floor of the usual kind, with thin visible seams between the planks. Let there be a thin straight rod, or wire, not so long as the breadth of the plank. This rod, being tossed up at hazard, will either fall quite clear of the seams, or will lay across one seam. Now Buffon, and after him Laplace, proved the following: That in the long run the fraction of the whole number of trials in which a seam is intersected will be the fraction which twice the length of the rod is of the circumference of the circle having the breadth of a plank for its diameter. In 1855 Mr. *Ambrose* Smith, of Aberdeen, made 3,204 trials with a rod three-fifths of the distance between the planks: there were 1,213 clear intersections, and 11 contacts on which it was difficult to decide. Divide these contacts equally, and we have 1,218½ to 3,204 for the ratio of 6 to 5π, presuming that the greatness of the number of trials gives something near to the final average, or result in the long run: this gives  $\pi = 3.1553$ . If all the 11 contacts had been treated as intersections, the result would have been  $[284]\pi = 3.1412$ , exceedingly near. A pupil of mine made 600 trials with a rod of the length between the seams, and got  $\pi = 3.137$ .

This method will hardly be believed until it has been repeated so often that "there never could have been any doubt about it."

The first experiment strongly illustrates a truth of the theory, well confirmed by practice: whatever can happen will happen if we make trials enough. Who would undertake to throw tail eight times running? Nevertheless, in the 8,192 sets tail 8 times running occurred 17 times; 9 times running, 9 times; 10 times running, twice; 11 times and 13 times, each once; and 15 times twice.]

## ON CURIOSITIES OF $\pi$ .

1830. The celebrated interminable fraction 3.14159..., which the mathematician calls  $\pi$ , is the ratio of the circumference to the diameter. But it is thousands of things besides. It is constantly turning up in mathematics: and if arithmetic and algebra had been studied without geometry,  $\pi$  must have come in somehow, though at what stage or under what name must have depended upon the casualties of algebraical invention. This will readily be seen when it is stated that  $\pi$  is nothing but four times the series

$$1 - 1/3 + 1/5 - 1/7 + 1/9 - 1/11 + \dots$$

*ad infinitum*.<sup>[616]</sup> It would be wonderful if so simple a series [285] had but one kind of occurrence. As it is, our trigonometry being founded on the circle,  $\pi$  first appears as

the ratio stated. If, for instance, a deep study of probable fluctuation from average had preceded,  $\pi$  might have emerged as a number perfectly indispensable in such problems as: What is the chance of the number of aces lying between a million +  $x$  and a million -  $x$ , when six million of throws are made with a die? I have not gone into any detail of all those cases in which the paradoxer finds out, by his unassisted acumen, that results of mathematical investigation *cannot be*: in fact, this discovery is only an accompaniment, though a necessary one, of his paradoxical statement of that which *must be*. Logicians are beginning to see that the notion of *horse* is inseparably connected with that of *non-horse*: that the first without the second would be no notion at all. And it is clear that the positive affirmation of that which contradicts mathematical demonstration cannot but be accompanied by a declaration, mostly overtly made, that demonstration is false. If the mathematician were interested in punishing this indiscretion, he could make his denier ridiculous by inventing asserted results which would completely take him in.

More than thirty years ago I had a friend, now long gone, who was a mathematician, but not of the higher branches: he was, *inter alia*, thoroughly up in all that relates to mortality, life assurance, &c. One day, explaining to him how it should be ascertained what the chance is of the survivors of a large number of persons now alive lying between given limits of number at the end of a certain time, I came, of course upon the introduction of  $\pi$ , which I could only describe as the ratio of the circumference of a circle to its diameter. "Oh, my dear friend! that must be a delusion; what can the circle have to do with the numbers alive at the end of a given time?"—"I cannot demonstrate it to you; but it is demonstrated."—"Oh! stuff! I think you can prove anything with your differential calculus: figment, [286]depend upon it." I said no more; but, a few days afterwards, I went to him and very gravely told him that I had discovered the law of human mortality in the Carlisle Table, of which he thought very highly. I told him that the law was involved in this circumstance. Take the table of expectation of life, choose any age, take its expectation and make the nearest integer a new age, do the same with that, and so on; begin at what age you like, you are sure to end at the place where the age past is equal, or most nearly equal, to the expectation to come. "You don't mean that this always happens?"—"Try it." He did try, again and again; and found it as I said. "This is, indeed, a curious thing; this *is* a discovery." I might have sent him about trumpeting the law of life: but I contented myself with informing him that the same thing would happen with any table whatsoever in which the first column goes up and the second goes down; and that if a proficient in the higher mathematics chose to palm a figment upon him, he could do without the circle: *à corsaire, corsaire et demi*, [617] the French proverb says. "Oh!" it was remarked, "I see, this was Milne!" [618] It

was *not* Milne: I remember well showing the formula to him some time afterwards. He raised no difficulty about  $\pi$ ; he knew the forms of Laplace's results, and he was much interested. Besides, Milne never said stuff! and figment! And he would not have been taken in: he would have quietly tried it with the Northampton and all the other tables, and would have got at the truth.

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#### EUCLID WITHOUT AXIOMS.

The first book of Euclid's Elements. With alterations and familiar notes. Being an attempt to get rid of axioms altogether; and to establish the theory of parallel lines, without the introduction of any principle not common to other parts of the elements. By a member of the University of Cambridge. Third edition. In usum serenissimæ filiolæ. London, 1830.

The author was Lieut. Col. (now General) Perronet Thompson, <sup>[619]</sup> the author of the "Catechism on the Corn Laws." I reviewed the fourth edition—which had the name of "Geometry without Axioms," 1833—in the quarterly *Journal of Education* for January, 1834. Col. Thompson, who then was a contributor to—if not editor of—the *Westminster Review*, replied in an article the authorship of which could not be mistaken.

Some more attempts upon the problem, by the same author, will be found in the sequel. They are all of acute and legitimate speculation; but they do not conquer the difficulty in the manner demanded by the conditions of the problem. The paradox of parallels does not contribute much to my pages: its cases are to be found for the most part in geometrical systems, or in notes to them. Most of them consist in the proposal of additional postulates; some are attempts to do without any new postulate. Gen. Perronet Thompson, whose paradoxes are always constructed on much study of previous writers, has collected in the work above named, a budget of attempts, the heads of which are in the *Penny* and *English Cyclopædias*, at "Parallels." He has given thirty instances, selected from what he had found. <sup>[620]</sup>

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Lagrange, <sup>[621]</sup> in one of the later years of his life, imagined that he had overcome the difficulty. He went so far as to write a paper, which he took with him to the Institute, and began to read it. But in the first paragraph something struck him which he had not observed: he muttered *Il faut que j'y songe encore*, <sup>[622]</sup> and put the paper in his pocket.

## THE LUNAR CAUSTIC JOKE.

The following paragraph appeared in the *Morning Post*, May 4, 1831:

"We understand that although, owing to circumstances with which the public are not concerned, Mr. Goulburn<sup>[623]</sup> declined becoming a candidate for University honors, that his scientific attainments are far from inconsiderable. He is well known to be the author of an essay in the Philosophical Transactions on the accurate rectification of a circular arc, and of an investigation of the equation of a lunar caustic—a problem likely to become of great use in nautical astronomy."

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This hoax—which would probably have succeeded with any journal—was palmed upon the *Morning Post*, which supported Mr. Goulburn, by some Cambridge wags who supported Mr. Lubbock, the other candidate for the University of Cambridge. Putting on the usual concealment, I may say that I always suspected Dr-nkw-t-r B-th-n<sup>[624]</sup> of having a share in the matter. The skill of the hoax lies in avoiding the words "quadrature of the circle," which all know, and speaking of "the accurate rectification of a circular arc," which all do not know for its synonyme. The *Morning Post* next day gave a reproof to hoaxers in general, without referring to any particular case. It must be added, that although there are *caustics* in mathematics, there is no *lunar* caustic.

So far as Mr. Goulburn was concerned, the above was poetic justice. He was the minister who, in old time, told a deputation from the Astronomical Society that the Government "did not care twopence for all the science in the country." There may be some still alive who remember this: I heard it from more than one of those who were present, and are now gone. Matters are much changed. I was thirty years in office at the Astronomical Society; and, to my certain knowledge, every Government of that period, Whig and Tory, showed itself ready to help with influence when wanted, and with money whenever there was an answer for the House of Commons. The following correction subsequently appeared. Referring to the hoax about Mr. Goulburn, Messrs. C. H. and Thompson Cooper<sup>[625]</sup> have corrected an error, by stating that the election which gave rise to the hoax was that in which Messrs. Goulburn [290] and Yates Peel<sup>[626]</sup> defeated Lord Palmerston<sup>[627]</sup> and Mr. Cavendish.<sup>[628]</sup> They add that Mr. Gunning, the well-known Esquire Bedell of the University, attributed the hoax to the late Rev. R. Sheepshanks, to whom, they state, are also attributed certain clever fictitious biographies—of public men, as I understand it—which were palmed upon the editor of the *Cambridge Chronicle*, who never suspected their genuineness to the

day of his death. Being in most confidential intercourse with Mr. Sheepshanks,<sup>[629]</sup> both at the time and all the rest of his life (twenty-five years), and never heard him allude to any such things—which were not in his line, though he had satirical power of quite another [291]kind—I feel satisfied he had nothing to do with them. I may add that others, his nearest friends, and also members of his family, never heard him allude to these hoaxes as their author, and disbelieve his authorship as much as I do myself. I say this not as imputing any blame to the true author, such hoaxes being fair election jokes in all time, but merely to put the saddle off the wrong horse, and to give one more instance of the insecurity of imputed authorship. Had Mr. Sheepshanks ever told me that he had perpetrated the hoax, I should have had no hesitation in giving it to him. I consider all clever election squibs, free from bitterness and personal imputation, as giving the multitude good channels for the vent of feelings which but for them would certainly find bad ones.

[But I now suspect that Mr. Babbage<sup>[630]</sup> had some hand in the hoax. He gives it in his "Passages, &c." and is evidently writing from memory, for he gives the wrong year. But he has given the paragraph, though not accurately, yet with such a recollection of the points as brings suspicion of the authorship upon him, perhaps in conjunction with D. B.<sup>[631]</sup> Both were on Cavendish's committee. Mr. Babbage adds, that "late one evening a cab drove up in hot haste to the office of the *Morning Post*, delivered the copy as coming from Mr. Goulburn's committee, and at the same time ordered fifty extra copies of the *Post* to be sent next morning to their committee-room." I think the man—the only one I ever heard of—who knew all about the cab and the extra copies must have known more.]

#### ON M. DEMONVILLE.

*Demonville.*—A Frenchman's Christian name is his own secret, unless there be two of the surname. M. Demonville is a very good instance of the difference between a [292]French and English discoverer. In England there is a public to listen to discoveries in mathematical subjects made without mathematics: a public which will hear, and wonder, and think it possible that the pretensions of the discoverer have some foundation. The unnoticed man may possibly be right: and the old country-town reputation which I once heard of, attaching to a man who "had written a book about the signs of the zodiac which all the philosophers in London could not answer," is fame as far as it goes. Accordingly, we have plenty of discoverers who, even in astronomy, pronounce the learned in error because of mathematics. In France, beyond the sphere of influence of the Academy of Sciences, there is no one to cast a

thought upon the matter: all who take the least interest repose entire faith in the Institute. Hence the French discoverer turns all his thoughts to the Institute, and looks for his only hearing in that quarter. He therefore throws no slur upon the means of knowledge, but would say, with M. Demonville: "A l'égard de M. Poisson, <sup>[632]</sup> j'envie loyalement la milliè<sup>me</sup> partie de ses connaissances mathématiques, pour prouver mon système d'astronomie aux plus incrédules." <sup>[633]</sup> This system is that the only bodies of our system are the earth, the sun, and the moon; all the others being illusions, caused by reflection of the sun and moon from the ice of the polar regions. In mathematics, addition and subtraction are for men; multiplication and division, which are in truth creation and destruction, are prerogatives of deity. But *nothing* multiplied by *nothing* is *one*. M. Demonville obtained an introduction to William the Fourth, who desired the opinion of the Royal Society upon his system: the [293] answer was very brief. The King was quite right; so was the Society: the fault lay with those who advised His Majesty on a matter they knew nothing about. The writings of M. Demonville in my possession are as follows. <sup>[634]</sup> The dates—which were only on covers torn off in binding—were about 1831-34:

*Petit cours d'astronomie* <sup>[635]</sup> followed by *Sur l'unité mathématique*.—*Principes de la physique de la création implicitement admis dans la notice sur le tonnerre par M. Arago*.—*Question de longitude sur mer*. <sup>[636]</sup>—*Vrai système du monde* <sup>[637]</sup> (pp. 92). Same title, four pages, small type. Same title, four pages, addressed to the British Association. Same title, four pages, addressed to M. Mathieu. Same title, four pages, on M. Bouvard's report.—*Résumé de la physique de la création; troisième partie du vrai système du monde*. <sup>[638]</sup>

#### PARSEY'S PARADOX.

The quadrature of the circle discovered, by Arthur Parsey, <sup>[639]</sup> author of the 'art of miniature painting.' Submitted to the consideration of the Royal Society, on whose protection the author humbly throws himself. London, 1832, 8vo.

Mr. Parsey was an artist, who also made himself conspicuous by a new view of perspective. Seeing that the sides of a tower, for instance, would appear to meet in a point if the tower were high enough, he thought that these sides ought to slope to one another in the picture. On this [294] theory he published a small work, of which I have not the title, with a Grecian temple in the frontispiece, stated, if I remember rightly, to be the first picture which had ever been drawn in true perspective. Of course the building looked very Egyptian, with its sloping sides. The answer to his notion is easy enough. What is called the picture is not the picture from which the mind takes its

perception; that picture is on the retina. The *intermediate* picture, as it may be called—the human artist's work—is itself seen perspectively. If the tower were so high that the sides, though parallel, appeared to meet in a point, the picture must also be so high that the *picture-sides*, though parallel, would appear to meet in a point. I never saw this answer given, though I have seen and heard the remarks of artists on Mr. Parsey's work. I am inclined to think it is commonly supposed that the artist's picture is the representation which comes before the mind: this is not true; we might as well say the same of the object itself. In July 1831, reading an article on squaring the circle, and finding that there was a difficulty, he set to work, got a light denied to all mathematicians in—some would say through—a crack, and advertised in the *Times* that he had done the trick. He then prepared this work, in which, those who read it will see how, he showed that 3.14159... should be 3.0625. He might have found out his error by *stepping* a draughtsman's circle with the compasses.

Perspective has not had many paradoxes. The only other one I remember is that of a writer on perspective, whose name I forget, and whose four pages I do not possess. He circulated remarks on my notes on the subject, published in the *Athenæum*, in which he denies that the stereographic projection is a case of perspective, the reason being that the whole hemisphere makes too large a picture for the eye conveniently to grasp at once. That is to say, it is no perspective because there is too much perspective.[295]

#### ON A COUPLE OF GEOMETRIES.

Principles of Geometry familiarly illustrated. By the Rev. W. Ritchie, <sup>[640]</sup> LL.D. London, 1833, 12mo.

A new Exposition of the system of Euclid's Elements, being an attempt to establish his work on a different basis. By Alfred Day, <sup>[641]</sup> LL.D. London, 1839, 12mo.

These works belong to a small class which have the peculiarity of insisting that in the general propositions of geometry a proposition gives its converse: that "Every B is A" follows from "Every A is B." Dr. Ritchie says, "If it be proved that the equality of two of the angles of a triangle depends *essentially* upon the equality of the opposite sides, it follows that the equality of opposite sides depends *essentially* on the equality of the angles." Dr. Day puts it as follows:

"That the converses of Euclid, so called, where no particular limitation is specified or implied in the leading proposition, more than in the converse, must be necessarily true; for as by the nature of the reasoning the leading proposition must be universally

true, should the converse be not so, it cannot be so universally, but has at least all the exceptions conveyed in the leading proposition, and the case is therefore unadapted to geometric reasoning; or, what is the same thing, by the very nature of geometric reasoning, the particular exceptions to the extended converse must be identical with some one or other of the cases under the universal affirmative proposition with which we set forth, which is absurd."

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On this I cannot help transferring to my reader the words of the Pacha when he orders the bastinado,—May it do you good! A rational study of logic is much wanted to show many mathematicians, of all degrees of proficiency, that there is nothing in the *reasoning* of mathematics which differs from other reasoning. Dr. Day repeated his argument in *A Treatise on Proportion*, London, 1840, 8vo. Dr. Ritchie was a very clear-headed man. He published, in 1818, a work on arithmetic, with rational explanations. This was too early for such an improvement, and nearly the whole of his excellent work was sold as waste paper. His elementary introduction to the Differential Calculus was drawn up while he was learning the subject late in life. Books of this sort are often very effective on points of difficulty.

#### NEWTON AGAIN OBLITERATED.

Letter to the Royal Astronomical Society in refutation of Mistaken Notions held in common, by the Society, and by all the Newtonian philosophers. By Capt. Forman,<sup>[642]</sup> R.N. Shepton-Mallet, 1833, 8vo.

Capt. Forman wrote against the whole system of gravitation, and got no notice. He then wrote to Lord Brougham, Sir J. Herschel, and others I suppose, desiring them to procure notice of his books in the reviews: this not being acceded to, he wrote (in print) to Lord John Russell<sup>[643]</sup> to complain of their "dishonest" conduct. He then sent a manuscript letter to the Astronomical Society, inviting controversy: he was answered by a recommendation to study [297]dynamics. The above pamphlet was the consequence, in which, calling the Council of the Society "craven dunghill cocks," he set them right about their doctrines. From all I can learn, the life of a worthy man and a creditable officer was completely embittered by his want of power to see that no person is bound in reason to enter into controversy with every one who chooses to invite him to the field. This mistake is not peculiar to philosophers, whether of orthodoxy or paradox; a majority of educated persons imply, by their modes of

proceeding, that no one has a right to any opinion which he is not prepared to defend against all comers.

David and Goliath, or an attempt to prove that the Newtonian system of Astronomy is directly opposed to the Scriptures. By Wm. Lauder, [\[644\]](#) Sen., Mere, Wilts. Mere, 1833, 12mo.

Newton is Goliath; Mr. Lauder is David. David took five pebbles; Mr. Lauder takes five arguments. He expects opposition; for Paul and Jesus both met with it.

Mr. Lauder, in his comparison, seems to put himself in the divinely inspired class. This would not be a fair inference in every case; but we know not what to think when we remember that a tolerable number of cyclometers have attributed their knowledge to direct revelation. The works of this class are very scarce; I can only mention one or two from Montucla. [\[645\]](#) Alphonso Cano de Molina, [\[646\]](#) in the last century, upset all Euclid, and squared the circle upon the ruins; he found a follower, Janson, who translated him from Spanish into Latin. He declared that he believed in Euclid, until God, who humbles the proud, taught him better. One Paul Yvon, called from his estate de la Leu, a merchant at Rochelle, supported by his book-keeper, M. Pujos, and a [\[298\]](#)Scotchman, John Dunbar, solved the problem by divine grace, in a manner which was to convert all Jews, Infidels, etc. There seem to have been editions of his work in 1619 and 1628, and a controversial "Examen" in 1630, by Robert Sara. There was a noted discussion, in which Mydorge, [\[647\]](#) Hardy, [\[648\]](#) and others took part against de la Leu. I cannot find this name either in Lipenius [\[649\]](#) or Murhard, [\[650\]](#) and I should not have known the dates if it had not been for one of the keenest bibliographers of any time, my friend Prince Balthasar Boncompagni, [\[651\]](#) who is trying to find copies of the works, and has managed to find copies of the titles. In 1750, Henry Sullamar, an Englishman, squared the circle by the number of the Beast: he published a pamphlet every two or three years; but I cannot find any mention of him in English works. [\[652\]](#) In France, in 1753, M. de Causans, [\[653\]](#) of the Guards, cut a circular piece of turf, squared it, and [\[299\]](#)deduced original sin and the Trinity. He found out that the circle was equal to the square in which it is inscribed; and he offered a reward for detection of any error, and actually deposited 10,000 francs as earnest of 300,000. But the courts would not allow any one to recover.

SIR JOHN HERSCHEL.

1834. Ese año Sir John [Herschel](#)<sup>[654]</sup> instaló su telescopio en Feldhausen, Cabo de Buena Esperanza. Hizo mucho por la astronomía, pero poco por el *Presupuesto de Paradojas*. Sin embargo, me cuenta la siguiente historia. Él mostró a un residente una estrella rojo sangre extraordinaria, y poco después Escuchó hablar de un sermón predicado en esas partes en las que se afirmaba que las afirmaciones de la Biblia debían ser ciertas, pues que Sir J. H. vio en su telescopio "el mismo lugar al que van los malvados."

Pero el rojo no siempre es el color. Sir J. Herschel lo tiene en su posesión una carta escrita a su padre, Sir W. H. [H.](#)<sup>[655]</sup> fechada el 3 de abril de 1787, y firmada "Eliza Cumyns," suplicando por saber si alguna de las estrellas es *índigo* en color, "porque, si lo hay, creo que podría considerarse un fuerte ilustración conjetural de la expresión, tan a menudo utilizada por nuestro Salvador en los Santos Evangelios, que 'los desobedientes serán arrojados al exterior oscuridad'; pues como el Ser Todopoderoso puede sin duda confinar a cualquiera de los suyos criaturas, ya sean corpóreas o espirituales, a qué parte de su creación Le complace, si es que alguna de las estrellas (que están más allá de toda duda muchos soles a otros sistemas) pueden ser de un color tan oscuro como el anterior mencionado, pueden calcularse para dar el calor más insoportable a esos dolorosos sistemas dependientes de ellos (y de espíritus reprobados colocado allí), sin un solo rayo de luz alegre; y por tanto puede ser las escenas de futuros castigos." Esta carta está dirigida al Dr. Heredero en Slow. Algunos han colocado las regiones infernales dentro de Tierra, pero [300] otros han llenado este interior cavidad —para caries tendrán— con luz refulgente, y la convirtió en la morada de los bendecidos. Es difícil construir sin saber el número que se debe proporcionar. Un amigo mío escuchó el tras (parte) diálogo entre dos fervientes calvinistas escoceses: "¡no! ¡Hoo Manny D'Ye, gracias a que haya de los Alact en el arth en esto ¿momento?—¡Eh! Quizá una docena—¡Uuu! ¡Mon! No tan mony como ¡Thot!"

## EL ALMANAQUE NÁUTICO.

1834. De 1769 a 1834 se publicó el *Almanaque Náutico* en un plan que poco a poco se quedó atrás de lo que se quería. En 1834 la nueva serie comenzó bajo un nuevo superintendente (teniente W. S. Stratford). [\[656\]](#) Había sido un largo controversia científica, que no sería generalmente inteligible. Para establecer algunos de los puntos que he presentado al lector, reimprimo un recorte que he hecho por Yo. Es de la revista *Nautical Magazine*, pero escuché que algunos lo habían hecho una idea de que estaba en el propio *Almanaque Náutico*. Sin duda no lo fue, y me siento

satisfecho de que los Lores del Almirantazgo no lo habrían hecho permitió la inserción; nunca están adelantados a su edad. El El Almanaque de 1834 se publicó en julio de 1833.

El Nuevo Almanaque Náutico—Extracto de el 'Primum Mobile' y el 'Milky Way Gazette'. Comunicado por Aerolith.

Una reunión de los diferentes cuerpos que componen el Sistema Solar fue esta día celebrado en la Cola del Dragón, con el propósito de tomar en consideración de las alteraciones y enmiendas introducidas en la Nueva Almanaque Náutico. Las luminarias honorables habían sido convocadas individualmente [301] por cometas que navegaban rápido, y había una asistencia sorprendentemente completa. Entre los visitantes *observamos* a varias nebulosas, y casi todas las estrellas cuyos movimientos propios admitieran de Su presencia en ella.

El Sol fue llamado unánimemente al centro. Los pequeños planetas tomaron los juramentos y sus lugares tras una corta discusión, en la que se decidió que los lugares debían ser los de el propio Almanaque, con permiso reservado para moverse para correcciones.

Se presentaron peticiones de  $\alpha$  y  $\delta$  Ursæ Minoris, quejándose de haber sido presentadas en tareas diarias, y rezando por un aumento de salario.—Impuesto en el plano de la eclíptica.

Los fideicomisarios de los fondos de [excentricidad](#)[657] e inclinación informaron de un balance de 0,00001 en el primero, y un déficit de 0",009 en el segundo. Este anuncio causó considerable sorpresa y se convocó un comité para determinar cuál de los cuerpos tenía más o menos de su parte. Tras cierta discusión, en la que los pequeños planetas ofrecieron su consentimiento para una reducción, si era necesario, la moción era aprobada.

El Cuerpo Focal se levantó entonces para abordar la reunión. Comentó que el tema sobre el que se reunieron era una de gran importancia para las rutas y revoluciones de los celestiales cuerpos. Para sí mismo, aunque un acuerdo privado entre dos de los suyos vecinos honorables (aquí miró atentamente la Tierra y Venus) tenían le impidió hasta entonces prestar tanta atención a las predicciones de el Almanaque Náutico, que declaró haber deseado hacer siempre; Sin embargo, él se sentía consolado al saber que los directores de esa obra habían tenido que dispuesta a tener en cuenta sus circunstancias peculiares. Él declaró que nunca había cruzado los cables de un tránsito sin profundamente sintiendo su incapacidad para adaptarse al estado actual de su teoría; una sensación que temía que a veces le causara un pequeño desaire

temblor en su miembro. Antes [302]Se sentó, expresó la esperanza de que Las luminarias honorables evitarían eclipsar en la medida de lo posible entre sí, o causando perturbaciones mutuas. De hecho, debería sentirse muy apenado de ver alguna interrupción de la armonía de las esferas. (Aplausos.)

A continuación, se leyeron los distintos artículos del Nuevo Almanaque Náutico sin ningún comentario; solo observamos que Saturno agitaba su anillo en cada vez novedad, y Júpiter le dio un chisco a su cinturón y guiñó un ojo a los satélites en la página 21 de cada mes.

La Luna se levantó para proponer una solución. Nadie, dijo que se sorprendería de que él sacara este asunto a la luz en la de la manera en que lo hizo, cuando se consideraba lo completo y satisfactorio que era la forma en que sus movimientos ahora se representaban. Debe admitir que tembló cuando los Lores del Almirantazgo disolvieron la Junta de Longitud, pero su La tranquilidad se restableció con creces con la adopción de la nueva sistema. No sabía si cualquier pequeña ayuda podría darle La astronomía náutica perdía cada vez menos valor, debido a a la mejora de los cronómetros. Pero había una cosa que Nada podía privarle—se refería a la regulación de las mareas. Y, quizás, cuando su atención no estaba ocupada por algo más que el segundo, debería poder introducir un poco más de regularidad en el Fenómenos. (Aquí el honorable luminario ofreció una especie de modesta libración, lo que sacudió la reunión de risas.) Podrían reírse de su una enfermedad natural si les apetecía, pero podía asegurarles que solo surgía por la necesidad a la que tenía, de joven, de observar los movimientos de su digna primaria. Posteriormente presentó una resolución altamente elogiosa de la alteraciones que aparecieron en el Nuevo Almanaque Náutico.

La Tierra se levantó, para apoyar el gesto. Su El honorable Satellite había expresado plenamente sus opiniones sobre el tema. Él se unió a su honorable amigo en el objetivo de pagar cada atención al Almanaque Náutico, pero, [303]De verdad, cuando es así Una modificación importante se produjo en su polo magnético <sup>[658]</sup> (Oí) y allí podría, por lo que él sabía, un intento exitoso de alcanzar su polo de rotación, pensó que no podría responder por la preservación de la precesión en su estado actual. (Aquí el ilustre luminario, rascando su exclamó, mientras se sentaba, "Más barcos de vapor—maldito sea ¡Esas personas!")

Un honorable satélite (cuyo nombre no pudimos aprender) propuso que La resolución debe enviarse inmediatamente, corregida por refracción, cuando fue llamado al orden por el Cuerpo Focal, que recordó él que era contrario a las órdenes móviles del

sistema tomar conciencia de lo que ocurría dentro de la atmósfera de cualquier planeta.

Saturno y Pallas rosa juntos. (Los gritos de "¡Nuevo miembro!" y el primero se desvaneció.) Lo segundo, en un largo y elocuente discurso, elogió la generosidad con la que él y Sus colegas finalmente habían sido relevados de la astronomía descalificaciones. Pensaba que era contrario al espíritu de la leyes de la gravitación para excluir cualquier planeta de su cargo debido a la excentricidad o inclinación de su órbita. Las luminarias honorables no tienen por qué Hablando de la falta de convergencia de su serie. ¿Qué tenían que ver con cualquier acuerdo privado entre él y las ecuaciones generales de la ¿sistema? (Murmillos de la oposición.) Mientras obedeciera las leyes de a la que ese día había hecho un solemne juramento, preguntaría, eran planetas antiguos, que ahora eran tan conocidos que nadie confiaba en ellos, para....

El Cuerpo Focal dijo que lamentaba romper el continuidad de los acontecimientos, pero pensó que los comentarios sobre personaje, con signo negativo, introduciría [304]diferencias demasiado altas una orden. El honorable luminar debe eliminar la expresión que él mismo había sacado, en términos finitos, y usaría desigualdades menores en el futuro. (Amén.)

explicó Pallas que estaba lejos de ser intencionado para reflexionar sobre el carácter orbital de cualquier planeta presente. Él solo pretendía protestar contra ser juzgado por cualquier ley que no fuera la de Gravitación y cálculo diferencial: él lo consideraba muy injusto que los astrónomos deben evitar que se observen los pequeños planetas, y luego les reprochamos las imperfecciones de las tablas, que eran el resultado de su propia política de mente cerrada. (Salud.)

Saturno pensaba que, como planeta antiguo, sí no me han tratado con el debido respeto. (Eso, desde sus satélites.) Lo había hecho Durante mucho tiempo predijo el desastre del sistema por parte de los Amigos de la Innovación. ¿Por qué, podría preguntarse, sus satélites debían ser excluidos cuando eran pequeños planetas, cometas de trompeta, que no podían mantener sus distancias medias (¡gritos de oh! ¡oh!), estrellas dobles, con aproximaciones gráficas, y cosas así El oscuro riff-raff of the Heavens (Gran Protesta) encontró espacio suficiente. Así que Ayúdale con Aritmética, no podía salir nada de eso, salvo una parada de todo revolución. Su honorable amigo en el centro podría sonreír, porque sería un ganar por tal evento; pero en cuanto a él (Saturno), tenía algo que perdido, y las luminarias honorables sabían bien que, pensara lo que *pensaran bajo* una atmósfera, *por encima* de ella la revolución continua era la La única forma de evitar la anarquía perpetua. En cuanto al

ilustre ilustre que había se levantó ante él, no se sorprendió por sus comentarios, pues sí Observaba invariablemente que él y sus colegas se permitían *hacerlo mucha margen*. La estabilidad del sistema requería que lo hicieran si fuera derribado, y él, por su parte, ejercería todos sus poderes de atracción para lograr ese fin. Si otros cuerpos se unieran cordialmente con él, especialmente con su noble amigo a su lado, que no era una luminaria poseía mayor peso—

Júpiter se levantó al orden. Concibió a su noble amigo [305]no tenía derecho a aludir a él en eso y se sorprendió mucho por su propuesta, considerando los asuntos que seguía en disputa entre ellos. En la situación actual, Se aseguraría de no estar nunca en colaboración con su honorable vecino One un momento más largo de lo que podía evitarlo. (Gritos de "Orden, orden, no más desigualdades," durante la cual se sentó.)

Saturn proceeded to say, that he did not know till then that a planet with a ring could affront one who had only a belt, by proposing mutual co-operation. He would now come to the subject under discussion. He should think meanly of his hon. colleagues if they consented to bestow their approbation upon a mere astronomical production. Had they forgotten that they once were considered the arbiters of fate, and the prognosticators of man's destiny? What had lost them that proud position? Was it not the infernal march of intellect, which, after having turned the earth topsy-turvy, was now disturbing the very universe? For himself (others might do as they pleased), but he stuck to the venerable Partridge, <sup>[659]</sup> and the Stationers' Company, and trusted that they would outlive infidels and anarchists, whether of Astronomical or Diffusion of Knowledge Societies. (Cries of oh! oh!)

Mars said he had been told, for he must confess he had not seen the work, that the places of the planets were given for Sundays. This, he must be allowed to say, was an indecorum he had not expected; and he was convinced the Lords of the Admiralty had given no orders to that effect. He hoped this point would be considered in the measure which had been introduced in another place, and that some [306]one would move that the prohibition against travelling on Sundays extend to the heavenly as well as earthly bodies.

Several of the stars here declared, that they had been much annoyed by being observed on Sunday evenings, during the hours of divine service.

The room was then cleared for a division, but we are unable to state what took place. Several comets-at-arms were sent for, and we heard rumors of a personal collision having taken place between two luminaries in opposition. We were afterwards told that the resolution was carried by a majority, and the luminaries elongated at 2 h. 15 m. 33,41 s. sidereal time.

\* \* \* It is reported, but we hope without foundation, that Saturn, and several other discontented planets, have accepted an invitation from Sirius to join his system, on the most liberal appointments. We believe the report to have originated in nothing more than the discovery of the annual parallax of Sirius from the orbit of Saturn; but we may safely assure our readers that no steps have as yet been taken to open any communication.

We are also happy to state, that there is no truth in the rumor of the laws of gravitation being about to be repealed. We have traced this report, and find it originated with a gentleman living near Bath (Captain Forman, R.N.), <sup>[660]</sup> whose name we forbear to mention.

A great excitement has been observed among the nebulæ, visible to the earth's southern hemisphere, particularly among those which have not yet been discovered from thence. We are at a loss to conjecture the cause, but we shall not fail to report to our readers the news of any movement which may take place. (Sir J. Herschel's visit. He could just see this before he went out.)

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#### WOODLEY'S DIVINE SYSTEM.

A Treatise on the Divine System of the Universe, by Captain Woodley, R.N., <sup>[661]</sup> and as demonstrated by his Universal Time-piece, and universal method of determining a ship's longitude by the apparent true place of the moon; with an introduction refuting the solar system of Copernicus, the Newtonian philosophy, and mathematics. 1834. <sup>[662]</sup> 8vo.

Description of the Universal Time-piece. (4pp. 12mo.)

I think this divine system was published several years before, and was republished with an introduction in 1834. <sup>[663]</sup> Capt. Woodley was very sure that the earth does not move: he pointed out to me, in a conversation I had with him, something—I forget what—in the motion of the Great Bear, visible to any eye, which could not possibly be if the earth moved. He was exceedingly ignorant, as the following quotation from his account of the usual opinion will show:

"The north pole of the Earth's axis deserts, they say, the north star or pole of the Heavens, at the rate of 1° in 71¾ years.... The fact is, nothing can be more certain than that the Stars have not changed their latitudes or declinations *one degree* in the last 71¾ years."

This is a strong specimen of a class of men by whom all accessible persons who have made any name in science are hunted. It is a pity that they cannot be admitted into scientific societies, and allowed fairly to state their cases, and stand quiet cross-examination, being kept in their answers very close to the questions, and the answers written down. I am perfectly satisfied that if one meeting in the year were devoted to the hearing of those who chose to come forward on such conditions, much good would be done. But I strongly suspect few would come forward [308]at first, and none in a little while: and I have had some experience of the method I recommend, privately tried. Capt. Woodley was proposed, a little after 1834, as a Fellow of the Astronomical Society; and, not caring whether he moved the sun or the earth, or both—I could not have stood *neither*—I signed the proposal. I always had a sneaking kindness for paradoxers, such a one, perhaps, as Petit André had for his *lambs*, as he called them. There was so little feeling against his opinions, that he only failed by a fraction of a ball. Had I myself voted, he would have been elected; but being engaged in conversation, and not having heard the slightest objection to him, I did not think it worth while to cross the room for the purpose. I regretted this at the time, but had I known how ignorant he was I should not have supported him. Probably those who voted against him knew more of his book than I did.

I remember no other instance of exclusion from a scientific society on the ground of opinion, even if this be one; of which it may be that ignorance had more to do with it than paradoxy. Mr. Frend, <sup>[664]</sup>a strong anti-Newtonian, was a Fellow of the Astronomical Society, and for some years in the Council. Lieut. Kerigan<sup>[665]</sup> was elected to the Royal Society at a time when his proposers must have known that his immediate object was to put F.R.S. on the title-page of a work against the tides. To give all I know, I may add that the editor of some very ignorant bombast about the "forehead of the solar sky," who did not know the difference between *Bailly*<sup>[666]</sup> and *Baily*,<sup>[667]</sup> received hints which induced him to withdraw his proposal for election into the Astronomical Society. But this was an act of kindness; [309]for if he had seen Mr. Baily in the chair, with his head on, he might have been political historian enough to faint away.

De la formation des Corps. Par Paul Laurent. <sup>[668]</sup>Nancy, 1834, 8vo.

Atoms, and ether, and ovules or eggs, which are planets, and their eggs, which are satellites. These speculators can create worlds, in which they cannot be refuted; but none of them dare attack the problem of a grain of wheat, and its passage from a seed to a plant, bearing scores of seeds like what it was itself.

## ON JOHN FLAMSTEED.

An account of the Rev. John Flamsteed,<sup>[669]</sup> the First Astronomer-Royal.... By Francis Baily,<sup>[670]</sup> Esq. London, 1835, 4to. Supplement, London, 1837, 4to.

My friend Francis Baily was a paradoxer: he brought forward things counter to universal opinion. That Newton was impeccable in every point was the national creed; and failings of temper and conduct would have been utterly disbelieved, if the paradox had not come supported by very unusual evidence. Anybody who impeached Newton on existing evidence might as well have been squaring the circle, for any attention he would have got. About this book I will tell a story. It was published by the Admiralty for distribution; and the distribution was entrusted to Mr. Baily. On the eve of its appearance, rumors of its extraordinary revelations got about, and persons of influence applied to the Admiralty for copies. The Lords were in a difficulty: but on looking at the list they saw names, as they [310]thought, which were so obscure that they had a right to assume Mr. Baily had included persons who had no claim to such a compliment as presentation from the Admiralty. The Secretary requested Mr. Baily to call upon him. "Mr. Baily, my Lords are inclined to think that some of the persons in this list are perhaps not of that note which would justify their Lordships in presenting this work."—"To whom does your observation apply, Mr. Secretary?"—"Well, now, let us examine the list; let me see; now,—now,—now,—come!—here's Gauss<sup>[671]</sup>—*who's Gauss?*"—"Gauss, Mr. Secretary, is the oldest mathematician now living, and is generally thought to be the greatest."—"O-o-oh! Well, Mr. Baily, we will see about it, and I will write you a letter." The letter expressed their Lordships' perfect satisfaction with the list.

There was a controversy about the revelations made in this work; but as the eccentric anomalies took no part in it, there is nothing for my purpose. The following valentine from Mrs. Flamsteed,<sup>[672]</sup> which I found among Baily's papers, illustrates some of the points:

"3 Astronomers' Row, Paradise: February 14, 1836.

"Dear Sir,—I suppose you hardly expected to receive a letter from me, dated from this place; but the truth is, a gentleman from our street was appointed guardian angel to the American Treaty, in which there is some astronomical question about boundaries. He has got leave to go back to fetch some instruments which he left behind, and I take this opportunity of making your acquaintance. That America has become a wonderful place since I was down among you; you have no idea how grand the fire at New

York [311] looked up here. Poor dear Mr. Flamsteed does not know I am writing a letter to a gentleman on Valentine's day; he is walked out with Sir Isaac Newton (they are pretty good friends now, though they do squabble a little sometimes) and Sir William Herschel, to see a new nebula. Sir Isaac says he can't make out at all how it is managed; and I am sure I cannot help him. I never bothered my head about those things down below, and I don't intend to begin here.

"I have just received the news of your having written a book about my poor dear man. It's a chance that I heard it at all; for the truth is, the scientific gentlemen are somehow or other become so wicked, and go so little to church, that very few of them are considered fit company for this place. If it had not been for Dr. Brinkley, <sup>[673]</sup> who came here of course, I should not have heard about it. He seems a nice man, but is not yet used to our ways. As to Mr. Halley, <sup>[674]</sup> he is of course not here; which is lucky for him, for Mr. Flamsteed swore the moment he caught him in a place where there are no magistrates, he would make a sacrifice of him to heavenly truth. It was very generous in Mr. F. not appearing against Sir Isaac when he came up, for I am told that if he had, Sir Isaac would not have been allowed to come in at all. I should have been sorry for that, for he is a companionable man enough, only holds his head rather higher than he should do. I met him the other day walking with Mr. Whiston, <sup>[675]</sup> and disputing about the deluge. 'Well, Mrs. Flamsteed,' says he, 'does old Poke-the-Stars understand gravitation yet?' Now you must know that is rather a sore point with poor dear Mr. Flamsteed. He says that Sir Isaac is as crochety about the moon as ever; and as to [312] what some people say about what has been done since his time, he says he should like to see somebody who knows something about it of himself. For it is very singular that none of the people who have carried on Sir Isaac's notions have been allowed to come here.

"I hope you have not forgotten to tell how badly Sir Isaac used Mr. Flamsteed about that book. I have never quite forgiven him; as for Mr. Flamsteed, he says that as long as he does not come for observations, he does not care about it, and that he will never trust him with any papers again as long as he lives. I shall never forget what a rage he came home in when Sir Isaac had called him a puppy. He struck the stairs all the way up with his crutch, and said puppy at every step, and all the evening, as soon as ever a star appeared in the telescope, he called it puppy. I could not think what was the matter, and when I asked, he only called me puppy.

"I shall be very glad to see you if you come our way. Pray keep up some appearances, and go to church a little. St. Peter is always uncommonly civil to astronomers, and indeed to all scientific persons, and never bothers them with many questions. If they can make anything out of the case, he is sure to let them in. Indeed, he says, it is

perfectly out of the question expecting a mathematician to be as religious as an apostle, but that it is as much as his place is worth to let in the greater number of those who come. So try if you cannot manage it, for I am very curious to know whether you found all the letters. I remain, dear sir, your faithful servant,

"Margaret Flamsteed.

Francis Baily, Esq.

"P.S. Mr. Flamsteed has come in, and says he left Sir Isaac riding cockhorse upon the nebula, and poring over it as if it were a book. He has brought in his old acquaintance Ozanam,<sup>[676]</sup> who says that it was always his maxim on [313]earth, that 'il appartient aux docteurs de Sorbonne de disputer, au Pape de prononcer, et au mathématicien d'aller en Paradis en ligne perpendiculaire.'"<sup>[677]</sup>

## ON STEVIN.

The Secretary of the Admiralty was completely extinguished. I can recall but two instances of demolition as complete, though no doubt there are many others. The first is in

Simon Stevin<sup>[678]</sup> and M. Dumortier. Nieuport, 1845, 12mo.

M. Dumortier was a member of the Academy of Brussels: there was a discussion, I believe, about a national Pantheon for Belgium. The name of Stevinus suggested itself as naturally as that of Newton to an Englishman; probably no Belgian is better known to foreigners as illustrious in science. Stevinus is great in the *Mécanique Analytique* of Lagrange;<sup>[679]</sup> Stevinus is great in the *Tristram Shandy* of Sterne. M. Dumortier, who believed that not one Belgian in a thousand knew Stevinus, and who confesses with ironical shame that he was not the odd man, protested against placing the statue of an obscure man in the Pantheon, to give foreigners the notion that Belgium could show nothing greater. The work above named is a slashing retort: any one who knows the history of science ever so little may imagine what a dressing was given, by mere extract from foreign writers. The tract is a letter signed J. du Fan, but this is a pseudonym of Mr. Van de Weyer.<sup>[680]</sup> The Academician says Stevinus was a man who was not [314]without merit for the time at which he lived: Sir! is the answer, he was as much before his own time as you are behind yours. How came a man who had never heard of Stevinus to be a member of the Brussels Academy?

The second story was told me by Mr. Crabb Robinson,<sup>[681]</sup> who was long connected with the *Times*, and intimately acquainted with Mr. W\*\*\*.<sup>[682]</sup> When W\*\*\* was an

undergraduate at Cambridge, taking a walk, he came to a stile, on which sat a bumpkin who did not make way for him: the gown in that day looked down on the town. "Why do you not make way for a gentleman?"—"Eh?"—"Yes, why do you not move? You deserve a good hiding, and you shall get it if you don't take care!" The bumpkin raised his muscular figure on its feet, patted his menacer on the head, and said, very quietly,—"Young man! I'm Cribb."<sup>[683]</sup> W\*\*\* seized the great pugilist's hand, and shook it warmly, got him to his own rooms in college, collected some friends, and had a symposium which lasted until the large end of the small hours.

#### FINLEYSON AS A PARADOXER.

God's Creation of the Universe as it is, in support of the Scriptures. By Mr. Finleyson.<sup>[684]</sup> Sixth Edition, 1835, 8vo.

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This writer, by his own account, succeeded in delivering the famous Lieut. Richard Brothers<sup>[685]</sup> from the lunatic asylum, and tending him, not as a keeper but as a disciple, till he died. Brothers was, by his own account, the nephew of the Almighty, and Finleyson ought to have been the nephew of Brothers. For Napoleon came to him in a vision, with a broken sword and an arrow in his side, beseeching help: Finleyson pulled out the arrow, but refused to give a new sword; whereby poor Napoleon, though he got off with life, lost the battle of Waterloo. This story was written to the Duke of Wellington, ending with "I pulled out the arrow, but left the broken sword. Your Grace can supply the rest, and what followed is amply recorded in history." The book contains a long account of applications to Government to do three things: to pay 2,000*l.* for care taken of Brothers, to pay 10,000*l.* for discovery of the longitude, and to prohibit the teaching of the Newtonian system, which makes God a liar. The successive administrations were threatened that they would have to turn out if they refused, which, it is remarked, came to pass in every case. I have heard of a joke of Lord Macaulay, that the House of Commons must be the Beast of the Revelations, since 658 members, with the officers necessary for the action of the House, make 666. Macaulay read most things, and the greater part of the rest: so that he might be suspected of having appropriated as a joke one of Finleyson's serious points—"I wrote Earl Grey<sup>[686]</sup> upon the 13th of July, 1831, informing him that his Reform [316]Bill could not be carried, as it reduced the members below the present amount of 658, which, with the eight principal clerks or officers of the House, make the number 666." But a witness has informed me that Macaulay's joke was made in his hearing a great many years before the Reform Bill was proposed; in fact, when both were students at

Cambridge. Earl Grey was, according to Finleyson, a descendant of Uriah the Hittite. For a specimen of Lieut. Brothers, this book would be worth picking up. Perhaps a specimen of the Lieutenant's poetry may be acceptable: Brothers *loquitur*, remember:

"Jerusalem ! Jerusalem! shall be built again!

More rich, more grand then ever;

And through it shall Jordan flow!(!)

My people's favourite river.

There I'll erect a splendid throne,

And build on the wasted place;

To fulfil my ancient covenant

To King David and his race.

\* \* \* \* \*

"Euphrates' stream shall flow with ships,

And also my wedded Nile;

And on my coast shall cities rise,

Each one distant but a mile.

\* \* \* \* \*

"My friends the Russians on the north

With Persees and Arabs round,

Do show the limits of my land,

Here! Here! then I mark the ground."

#### ON THEOLOGICAL PARADOXERS.

Among the paradoxers are some of the theologians who in their own organs of the press venture to criticise science. These may hold their ground when they confine themselves to the geology of long past periods and to general cosmogony: for it is the tug of Greek against Greek; and both sides deal much in what is grand when called *hypothesis*, petty when called *supposition*. And very often they are not

conspicuous when they venture upon things within knowledge; [317]wrong, but not quite wrong enough for a Budget of Paradoxes. One case, however, is destined to live, as an instance of a school which finds writers, editors, and readers. The double stars have been seen from the seventeenth century, and diligently observed by many from the time of Wm. Herschel, who first devoted continuous attention to them. The year 1836 was that of a remarkable triumph of astronomical prediction. The theory of gravitation had been applied to the motion of binary stars about each other, in elliptic orbits, and in that year the two stars of  $\gamma$  Virginis, as had been predicted should happen within a few years of that time—for years are small quantities in such long revolutions—the two stars came to their nearest: in fact, they appeared to be one as much with the telescope as without it. This remarkable turning-point of the history of a long and widely-known branch of astronomy was followed by an article in the *Church of England Quarterly Review* for April 1837, written against the Useful Knowledge Society. The notion that there are any such things as double stars is (p. 460) implied to be imposture or delusion, as in the following extract. I suspect that I myself am the *Sidrophel*, and that my companion to the maps of the stars, written for the Society and published in 1836, is the work to which the writer refers:

"We have forgotten the name of that Sidrophel who lately discovered that the fixed stars were not single stars, but appear in the heavens like soles at Billingsgate, in pairs; while a second astronomer, under the influence of that competition in trade which the political economists tell us is so advantageous to the public, professes to show us, through his superior telescope, that the apparently single stars are really three. Before such wondrous mandarins of science, how continually must *homunculi* like ourselves keep in the background, lest we come between the wind and their nobility."

If the *homunculus* who wrote this be still above ground, [318]how devoutly must he hope he may be able to keep in the background! But the chief blame falls on the editor. The title of the article is:

"The new school of superficial pantology; a speech intended to be delivered before a defunct Mechanics' Institute. By Swallow Swift, late M.P. for the Borough of Cockney-Cloud, Witsbury: reprinted Balloon Island, Bubble year, month *Ventose*. Long live Charlatan!"

As a rule, orthodox theologians should avoid humor, a weapon which all history shows to be very difficult to employ in favor of establishment, and which, nine times out of ten, leaves its wielder fighting on the side of heterodoxy. Theological argument, when not enlivened by bigotry, is seldom worse than narcotic: but theological fun, when not

covert heresy, is almost always sialagogue. The article in question is a craze, which no editor should have admitted, except after severe inspection by qualified persons. The author of this wit committed a mistake which occurs now and then in old satire, the confusion between himself and the party aimed at. He ought to be reviewing this fictitious book, but every now and then the article becomes the book itself; not by quotation, but by the writer forgetting that *he* is not Mr. Swallow Swift, but his reviewer. In fact he and Mr. S. Swift had each had a dose of the *Devil's Elixir*. A novel so called, published about forty years ago, proceeds upon a legend of this kind. If two parties both drink of the elixir, their identities get curiously intermingled; each turns up in the character of the other throughout the three volumes, without having his ideas clear as to whether he be himself or the other. There is a similar confusion in the answer made to the famous *Epistolæ Obscurorum Virorum*:<sup>[687]</sup> it is headed *Lamentationes Obscurorum Virorum*.<sup>[688]</sup> [319] This is not a retort of the writer, throwing back the imputation: the obscure men who had been satirized are themselves made, by name, to wince under the disapprobation which the Pope had expressed at the satire upon themselves.

Of course the book here reviewed is a transparent forgery. But I do not know how often it may have happened that the book, in the journals which always put a title at the head, may have been written after the review. About the year 1830 a friend showed me the proof of an article of his on the malt tax, for the next number of the *Edinburgh Review*. Nothing was wanting except the title of the book reviewed; I asked what it was. He sat down, and wrote as follows at the head, "The Maltster's Guide (pp. 124)," and said that would do as well as anything.

But I myself, it will be remarked, have employed such humor as I can command "in favor of establishment." What it is worth I am not to judge; as usual in such cases, those who are of my cabal pronounce it good, but cyclometers and other paradoxers either call it very poor, or commend it as sheer buffoonery. Be it one or the other, I observe that all the effective ridicule is, in this subject, on the side of establishment. This is partly due to the difficulty of quizzing plain and sober demonstration; but so much, if not more, to the ignorance of the paradoxers. For that which cannot be *ridiculed*, can be *turned into ridicule* by those who know how. But by the time a person is deep enough in *negative* quantities, and *impossible* quantities, to be able to satirize them, he is caught, and being inclined to become a *user*, shrinks from being an *abuser*. Imagine a person with a gift of ridicule, and knowledge enough, trying his hand on the junction of the assertions which he will find in various books of algebra. First, that a negative quantity has no logarithm; secondly, that a [320]negative quantity has no square root; thirdly, that the first non-existent is to the second as the

circumference of a circle to its diameter. One great reason of the allowance of such unsound modes of expression is the confidence felt by the writers that  $\sqrt{-1}$  and  $\log(-1)$  will make their way, however inaccurately described. I heartily wish that the cyclometers had knowledge enough to attack the weak points of algebraical diction: they would soon work a beneficial change. <sup>[689]</sup>

#### AN EARLY METEOROLOGIST.

Recueil de ma vie, mes ouvrages et mes pensées. Par Thomas Ignace Marie Forster. <sup>[690]</sup> Brussels, 1836, 12mo.

Mr. Forster, an Englishman settled at Bruges, was an observer in many subjects, but especially in meteorology. He communicated to the Astronomical Society, in 1848, the information that, in the registers kept by his grandfather, his father, and himself, beginning in 1767, new moon on Saturday was followed, nineteen times out of twenty, by twenty days of rain and wind. This statement being published in the *Athenæum*, a cluster of correspondents averred that the belief is common among seamen, in all parts of the world, and among landsmen too. Some one quoted a distich:

"Saturday's moon and Sunday's full

Never were fine and never *wull*."

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Another brought forward:

"If a Saturday's moon

Comes once in seven years it comes too soon."

Mr. Forster did not say he was aware of the proverbial character of the phenomenon. He was a very eccentric man. He treated his dogs as friends, and buried them with ceremony. He quarrelled with the *curé* of his parish, who remarked that he could not take his dogs to heaven with him. I will go nowhere, said he, where I cannot take my dog. He was a sincere Catholic: but there is a point beyond which even churches have no influence.

The following is some account of the announcement of 1849. The *Athenæum* (Feb. 17), giving an account of the meeting of the Astronomical Society in December, 1858, says:

"Dr. Forster of Bruges, who is well known as a meteorologist, made a communication at which our readers will stare: he declares that by journals of the weather kept by his grandfather, father, and himself, ever since 1767, to the present time, *whenever the new moon has fallen on a Saturday, the following twenty days have been wet and windy*, in nineteen cases out of twenty. In spite of our friend Zadkiel<sup>[691]</sup> and the others who declare that we would smother every truth that does not happen to agree with us, we are glad to see that the Society had the sense to publish this communication, coming, as it does, from a veteran observer, and one whose love of truth is undoubted. It must be that the fact is so set down in the journals, because Dr. Forster says it: and whether it be only a fact of the journals, or one of the heavens, can soon be tried. The new moon of March next, falls on *Saturday* the 24th, at 2 in the afternoon. We shall certainly look out."

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The following appeared in the number of March 31:

"The first *Saturday Moon* since Dr. Forster's announcement came off a week ago. We had previously received a number of letters from different correspondents—all to the effect that the notion of new moon on Saturday bringing wet weather is one of widely extended currency. One correspondent (who gives his name) states that he has constantly heard it at sea, and among the farmers and peasantry in Scotland, Ireland, and the North of England. He proceeds thus: 'Since 1826, nineteen years of the time I have spent in a seafaring life. I have constantly observed, though unable to account for, the phenomenon. I have also heard the stormy qualities of a Saturday's moon remarked by American, French, and Spanish seamen; and, still more distant, a Chinese pilot, who was once doing duty on board my vessel seemed to be perfectly cognizant of the fact.' So that it seems we have, in giving currency to what we only knew as a very curious communication from an earnest meteorologist, been repeating what is common enough among sailors and farmers. Another correspondent affirms that the thing is most devoutly believed in by seamen; who would as soon sail on a Friday as be in the Channel after a Saturday moon.—After a tolerable course of dry weather, there was some snow, accompanied by wind on Saturday last, here in London; there were also heavy louring clouds. Sunday was cloudy and cold, with a little rain; Monday was louring, Tuesday unsettled; Wednesday quite overclouded, with rain in the morning. The present occasion shows only a general change of weather with a tendency towards rain. If Dr. Forster's theory be true, it is decidedly one of the minor instances, as far as London weather is concerned.—It will take a good deal of evidence to make us believe in the omen of a Saturday Moon. But, as we have said of the Poughkeepsie Seer, the thing is very curious whether true or false. Whence

comes this universal proverb—and a hundred others—while the meteorological observer [323]cannot, when he puts down a long series of results, detect any weather cycles at all? One of our correspondents wrote us something of a lecture for encouraging, he said, the notion that *names* could influence the weather. He mistakes the question. If there be any weather cycles depending on the moon, it is possible that one of them may be so related to the week cycle of seven days, as to show recurrences which are of the kind stated, or any other. For example, we know that if the new moon of March fall on a Saturday in this year, it will most probably fall on a Saturday nineteen years hence. This is not connected with the spelling of Saturday—but with the connection between the motions of the sun and moon. Nothing but the Moon can settle the question—and we are willing to wait on her for further information. If the adage be true, then the philosopher has missed what lies before his eyes; if false, then the world can be led by the nose in spite of the eyes. Both these things happen sometimes; and we are willing to take whichever of the two solutions is borne out by future facts. In the mean time, we announce the next Saturday Moon for the 18th of August."

How many coincidences are required to establish a law of connection? It depends on the way in which the mind views the matter in question. Many of the paradoxers are quite set up by a very few instances. I will now tell a story about myself, and then ask them a question.

So far as instances can prove a law, the following is proved: no failure has occurred. Let a clergyman be known to me, whether by personal acquaintance or correspondence, or by being frequently brought before me by those with whom I am connected in private life: that clergyman does not, except in few cases, become a bishop; but *if* he become a bishop, he is sure, first or last, to become an arch-bishop. This has happened in every case. As follows:

1. My last schoolmaster, a former Fellow of Oriel, was [324]a very intimate college friend of Richard Whately<sup>[692]</sup>, a younger man. Struck by his friend's talents, he used to talk of him perpetually, and predict his future eminence. Before I was sixteen, and before Whately had even given his Bampton Lectures, I was very familiar with his name, and some of his sayings. I need not say that he became Archbishop of Dublin.

2. When I was a child, a first cousin of John Bird Sumner<sup>[693]</sup> married a sister of my mother. I cannot remember the time when I first heard his name, but it was made very familiar to me. In time he became Bishop of Chester, and then, Archbishop of Canterbury. My reader may say that Dr. C. R. Sumner, <sup>[694]</sup>Bishop of Winchester, has just as good a claim: but it is not so: those connected with me had more knowledge of

Dr. J. B. Sumner;<sup>[695]</sup> and said nothing, or next to nothing, of the other. Rumor says that the Bishop of Winchester has *declined* an Archbishopric: if so, my rule is a rule of gradations.

3. Thomas Musgrave,<sup>[696]</sup> Fellow of Trinity College, Cambridge, was *Dean* of the college when I was an undergraduate: this brought me into connection with him, he giving impositions for not going to chapel, I writing them out according. We had also friendly intercourse in after life; I forgiving, he probably forgetting. Honest Tom [325] Musgrave, as he used to be called, became Bishop of Hereford, and Archbishop of York.

4. About the time when I went to Cambridge, I heard a great deal about Mr. C. T. Longley,<sup>[697]</sup> of Christchurch, from a cousin of my own of the same college, long since deceased, who spoke of him much, and most affectionately. Dr. Longley passed from Durham to York, and thence to Canterbury. I cannot quite make out the two Archbishoprics; I do not remember any other private channel through which the name came to me: perhaps Dr. Longley, having two strings to his bow, would have been one archbishop if I had never heard of him.

5. Cuando el Dr. Wm. Thomson<sup>[698]</sup> fue nombrado para la sede de Gloucester en 1861, él y yo habíamos sido corresponsales sobre el tema de lógica—sobre la que ambos habíamos escrito—durante unos catorce años. Al ser elevado le escribí, dando los ejemplos anteriores, y informándole de que sin duda sería arzobispo. El caso era un fuerte, y la ley actuó rápidamente; por la elevación del Dr. Thomson a la la sede de York tuvo lugar en 1862.

Aquí tienes cinco casos; Y no hay un caso opuesto. Yo sí busqué en los almanaques desde 1828 y no pudo encontrar ningún caso de obispo no finalmente arzobispo, del que conocía por fuentes privadas, directo o indirecto. ¿Y qué dicen mis paradojicos? ¿Es esto un ¿Armonía preestablecida o una cadena de coincidencias? Y cuántos ¿En qué casos se necesitarán para establecer una ley? <sup>[699]</sup>

#### EL ENGAÑO DE HERSCHEL.

Algunos relatos de los grandes descubrimientos astronómicos realizados recientemente por Sir John Herschel en el Cabo de Buena Esperanza. Segunda edición. Londres, 12 meses. 1836.

Es un extraño engaño, evidentemente escrito por alguien versado en astronomía y astuta para introducir circunstancias probables y no diseñadas coincidencias. <sup>[700]</sup> Eso apareció por primera vez en un periódico. Hace que Sir J. Herschel descubra a los hombres, animales, etc. en la luna, de los que se da muchos detalles. Parece que sí han sido una edición francesa, la original y la edición inglesa

en América, de donde llegó el trabajo a Gran Bretaña: pero si los franceses fueron publicada en América o en París, no lo sé. No hay duda de que sí fue producida en Estados Unidos por M. Nicollet<sup>[701]</sup>, un astrónomo, en su día de París, y una Fugitivo de algún tipo. Sobre él he oído dos historias. Primero que él huyó a América con fondos que no eran suyos, y que ese libro era solo un dispositivo para levantar el viento. En segundo lugar, que fue protegido de Laplace, y del partido Polignac, y también un hombre franco. Que después de la Revolucionario, era tan insoportable para el Partido Republicano que la juzgaba prudente abandonar Francia; lo que hizo endeudado, dejando dinero para sus acreedores, pero no suficientes, con el señor Bouvard. En Estados Unidos conectó él mismo con una oficina de seguros. [327]La historia de la luna fue escrito, y enviado a Francia, principalmente con la intención de atrapar a M. Arago, el enemigo especial de Nicollet, en la creencia en ello. Y a quienes narrar esta versión de la historia termina diciendo que M. Arago *fue* atrapado y difundió las maravillas por París, hasta que un la carta de Nicollet a M. [Bouvard](#)<sup>[702]</sup> explicaba el engaño. No tengo nada conocimiento personal de cualquiera de las dos historias: pero como el pobre hombre tuvo que soportar el Primero, es justo que el segundo se diga con él.

## UN POCO MÁS DE METEOROLOGÍA.

El Almanaque del Tiempo para el año 1838. Por P. Murphy,<sup>[703]</sup> Esq., M.N.S.

Por M. N. S. se entiende por *no ser miembro de ninguna sociedad...* Este almanaque de osos en la portada hay dos recomendaciones. *The Morning Post* lo llama así Una de las publicaciones más importantes, si es ciertas, de nuestra generación. *The Times* dice: "Si la base de su teoría resulta sólida, y su Los principios pueden estar sancionados por una experiencia más extendida, no es demasiado Mucho para decir que la importancia del descubrimiento es igual a la del longitud." ¡Periodista cauteloso! Tres veces más que la longitud Han sido demasiado poco para decirlo. Que el terrateniente pudiera predecir el tiempo de todo el año, al principio, Jack se rendía alegremente longitud astronómica—el problema—en conjunto, y recurrir a cronómetros con las antiguas L, lead, latitud y vigilante, aplicado al ajuste de cuentas exactas. El señor Murphy intentó dar el el tiempo día a día: así los primeros siete días de marzo [328]Diámetro Cambiable; Lluvia; Lluvia; *Lluvia-viento*; Cambiable; Justo; Cambiable. Apuntar a tal precisión que ponga un día justo entre dos días cambiables Por teoría meteorológica se acercaba mucho al viento y al tiempo también. Murphy abrió el año con frío y helada; Y el tiempo hizo lo mismo. Pero Murphy, a diferencia del sábado 20 de enero, escribió "Justo, probable más bajo grado de temperatura

invernal." Cuando llegó este sábado, no fue simplemente probablemente el más frío de 1838, pero sin duda el más frío de muchos años consecutivos. Sin saber nada de Murphy, me pareció prudente taparme la nariz con el guante mientras caminaba por la calle a las ocho de la mañana Buenos días. La fortuna del Almanaque estaba hecha de su parte. Nadie esperó a ver si el futuro dementaría la profecía: la tienda estaba asediada en un la manera en que la policía mantuviera el orden; y se decía que el El almanaque de 1838 supuso una ganancia de 5.000*libras* para los propietarios. Muy pronto Parecía que esto solo fue un éxito afortunado: el Profeta del Tiempo tuvo un modificó su reputación durante unos años; y ahora ya no se sabe de él. Una obra de su testamento aparecerá actualmente en la lista.

### LAS GRANDES PIRÁMIDES.

Carta desde Alejandría sobre la evidencia de la aplicación práctica de la cuadratura del círculo en las grandes pirámides de Gize. Por H. C. Agnew, [\[704\]](#) Esq. London, 1838, 4to.

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El señor Agnew detecta proporciones que cree que fueron sugeridas por aquellos de la circunferencia y diámetro de un círculo.

### LA MATEMÁTICA DE UN CREDO.

El credo de San Atanasio se demostró mediante un paralelo matemático. Antes censuras, condenas o apruebas; Leer, examinar y comprender. E. B. Revilo. [\[705\]](#) Londres, 1839, 8vo.

Este autor realmente se creía a sí mismo, y lo decía en serio. Él no es el La única persona que ha escrito tonterías confundiendo las matemáticas infinito (de cantidad) con lo que ahora los especuladores expresan más correctamente por lo ilimitado, lo incondicionado o lo absoluto. Este terreno vale la pena preservando, como en el caso extremo de un tipo particular. Lo siguiente es un ejemplar. El infinito representado por  $\infty$ , como es habitual, y  $f$ ,  $s$ ,  $g$ , siendo enteros finitos, las tres Personas se denotan por  $\infty^f$ ,  $(m \infty)^s$ ,  $\infty^g$ , la fracción finita  $m$  que representa La naturaleza humana, a diferencia de la  $\infty$ . Las cláusulas del Credo son entonces dado con sus paralelismos matemáticos. Extraigo un par:

"Pero la Divinidad de la Padre, del Hijo, y de el Espíritu Santo, es todo uno: la gloria igual, la Majestad co-eterno.

"Se ha demostrado que  $\infty^f$ ,  $\infty^g$  y  $(m \infty)$   $\infty$ , y que cada uno es  $\infty$ , y cualquier  $m$  existencia representada por  $\infty$  siempre será: porque no puede se hagan, o de existe.

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"Igual al Padre, como tocando su Divinidad: y inferior al Padre, tocando su hombría."

" $(m \infty)^s$  es igual a  $\infty^f$  como tocando  $\infty$   $\infty^f$  como tocar  $m$ : porque  $m$  no es infini

Quizá lo hubiera pasado por alto, como si estuviera por debajo incluso de mi tema actual, pero por la forma en que me familiarizé con ella. Un librero, *no El editor* me lo entregó sobre su mostrador: uno que había tenido publicó obras matemáticas. Dijo, con un aire de importancia comunicación, ¿ha visto esto, señor? En respuesta, recomendé para mostrárselo a mi amigo el señor —, para quien había publicado matemáticas. Hombres cultos, acostumbrados a los libros y a la conversa con los eruditos Hombres, mirad con asombro misterioso a producciones como esta: Por lo cual razón por la que he hecho una cita que muchos juzgarán que mejor habría sido Omitido. Pero habría sido una imposición para el público si yo lo hubiera hecho, omitiendo este y algunos otros usos de la Biblia y la Oración Común, para finge que te he dado una imagen real de mi colegio.

[Desde la publicación de lo anterior, se ha afirmado que el autor es el Sr. Oliver Byrne, autor de la *Dual Aritmética* mencionada más adelante en: E. B. Revilo parece ser obviamente una inversión.]