'The Telescope of the church': Coleridge, Astronomy, and Religion

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BETWEEN SEPTEMBER AND NOVEMBER 1799, having recently returned from Germany, Coleridge jotted down in a notebook a line which he repeated virtually word for word almost three years later in another note dated August or September 1802:

> Socinianism Moonlight—Methodism &c A Stove! O for some Sun that shall unite Light & Warmth. [2]

As a potential source for these lines Kathleen Coburn offers a passage from the first volume of the two-part English translation of Thomas Burnet's *Sacred Theory of the Earth* (1684, 1690).[3] Although this is perfectly plausible given that Coleridge was using Burnet in his lectures on politics and revealed religion in 1795, it does not explain what spurred Coleridge to scribble the note out twice on quite discrete occasions. For that, another possibility bears investigation which explains Coleridge's duplication whilst making scientific sense of the metaphors in the phrase. This second source shows Coleridge drawing out a host of important imaginative connections between his religious machinations and nineteenth-century astronomy which he sustained throughout his life.

In the three years that separate the notes Coleridge's Unitarian allegiances waned in the same fashion that his erstwhile Hartleian Necessitarianism had done by the mid-1790s. At the time he wrote the second note he was far removed from the militant Unitarianism he had preached in Shrewsbury in 1798. In July 1802, as a letter to his brother George demonstrates, Coleridge avowed that 'the Socinian & Arian Hypotheses are utterly untenable' and that subsequently 'the Nature of the Being of Christ is left in obscurity'.[4] This 'obscurity' left him anxiously searching for a concrete theological position which would not emerge until he made his Trinitarian declaration from Malta in February 1805:

> No Trinity, no God… Unitarianism in all its Forms is Idolatry…O that this conviction may work upon me and in me…that I may be made to know either their especial and peculiar Union, or their absolute disunion in any peculiar Sense. (CN II 2448)

[1] I am grateful to Professor Stephen Gill at Lincoln College, Oxford, for his helpful comments of a draft of this work.

[2] *The Notebooks of Samuel Taylor Coleridge*, ed. Kathleen Coburn et al, 5 double vols. (London and Princeton: Routledge & Kegan Paul, 1957-2002) I, 467. Cf. 1233.

[3] Ibid., 467n. Coburn quotes from Thomas Burnet, *Sacred Theory of the Earth* (London: Printed by R. Norton for Walter Kettilby, 1684), I, p. 297: "We may commonly distinguish these Inclination-opinions from the Rational, because we find them accompanied with more Heat than Light, a great deal of eagerness and impatience in defending them, and but slender arguments." Coleridge's copy was given to him by Charles Danvers in 1795-1796, a friend of Southey's, and retained at Rydal Mount by 1814. The original Latin version, *Telluris Theoria Sacra*, was published in two volumes in 1681 and 1689.

[4] *Collected Letters of Samuel Taylor Coleridge*, ed. Earl Leslie Griggs, 6 vols. (Oxford: Clarendon Press, 1956-71), II, p. 807.

Coleridge's exasperation might serve to explain why he repeated the entry. He may have hoped that this deed alone would suffice to spur Trinitarianism to 'work upon me and in me'. But it was not merely a memorandum. There is, in fact, a more complex series of allusions at work within the phrase which *did* enable him to grasp the 'especial and peculiar Union' of the Trinity and which gives the second note a completely different tone from the first.

From Greta Hall, Keswick, in 1801, Coleridge's religious turmoil played out alongside his growing fascination with Herschelian astronomy. This is not something which Neil Vickers discusses in his study of 'Coleridge's "abstruse researches"' between 1800 and 1802. Vickers's thesis is that Coleridge's intense interest in sight and touch during this period was primarily stimulated by Berkeleian philosophy, Erasmus Darwin, and Tom Wedgwood, and that these sources influenced his distinction between Fancy and Imagination.[5] My own contention is rather different. In 1801, nothing aroused Coleridge's attentiveness to the sensory faculties more than Herschelian science, with which material he found a way to enunciate his religious perplexities for the rest of his life.

Writing to Humphry Davy in May 1801, Coleridge asked him to explain 'whether Herschel's Thermometric *Spectrum* (in the Philos. Trans.) will lead to any Revolution in the chemical Philosophy' (CL II 727).[6] The 1800 issue of the *Philosophical Transactions of the Royal Society* contained five papers by William Herschel, four of which were concerned with the 'Thermometric *Spectrum*' and his discovery of infra-red radiation. What Herschel had unearthed was that there were 'some striking and substantial differences between light and heat': indeed, invisible 'rays of heat' were emitted in light and various degrees of heat could be obtained from different parts of the light spectrum. Violet rays produced 'two degrees of heat' whilst 'the full red colour, on the opposite side, gave no less than seven degrees'.[7] Whilst some rays of the Sun are admitted by the eye 'under the appearance of light and colours', others are 'stopped in the coats and humours of the eye [and] act upon them, as they are known to do upon all the other parts of the body, by occasioning a sensation of heat'.[8] Herschel's paper on the 'Investigation of the Powers of the Prismatic Colours to Heat and Illuminate Objects; With Remarks, That Prove the Different Refrangibility of Radiant Heat', showed both that 'we come to the maximum of light, long before we come to that of heat, which lies at the other extreme', and that certain colours are 'more apt to occasion heat' whilst others are 'more

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[5] Neil Vickers, 'Coleridge's "Abstruse Researches"', in *Samuel Taylor Coleridge and the Sciences of Life*, ed. Nicholas Roe (Oxford: Oxford University Press, 2001), pp. 155-74, esp. 157.

[6] Cf. Trevor H. Levere, *Poetry Realized in Nature: Samuel Taylor Coleridge and Early Nineteenth-Century Science* (Cambridge: Cambridge University Press, 1981), p. 148.

[7] William Herschel, 'Experiments on the Solar, and on the Terrestrial Rays that Occasion Heat; With a Comparative View of the Laws to Which Light and Heat, or Rather the Rays Which Occasion Them, are Subject, in Order to Determine Whether They are the Same, or Different', *Philosophical Transactions of the Royal Society of London*, 90, (1800), 2 Parts: I, 293-326; II, 437-538, esp. 438-507.

[8] Herschel, 'Experiments on the Refrangibility of the Invisible Rays of the Sun', *Phil. Trans. R. Soc. Lond.*, 90, (1800), 284-292, esp. 292.

fit for vision'.[9]

Coleridge's reading of this material in the period immediately preceding his letter to Davy must account for his otherwise enigmatic request to Poole in March:

> When you come, I shall beg you to bring me a *Present* - it is, three Prisms—they will cost you 8 shillings a piece…[10] (CL II 712)

Dividing light like Herschel into its constituents of colour, visible light and heat was top of Coleridge's scientific agenda in the middle of 1801; moreover, it is likely that this is the activity to which he refers in a letter to Longman on 27 March, telling the publisher that he has been 'lately immersed' in 'very important Researches & Studies… & which have made all subjects of ordinary Interest appear to me *trifling* beyond measure' (CL II 715). In fact, I would go further and argue that it was his restless pursuit of Herschel that made him physically unwell at this time:

> At Wordsworth's advice or rather fervent intreaty I have intermitted the pursuit—the intensity of thought, & the multitude of minute experiments with Light & Figure, have made me so nervous & feverish, that I cannot sleep as long as I ought & have been used to do; & the sleep, which I have, is made up of Ideas so connected, & so little different from the operations of Reason, that it does not afford me the due Refreshment. (CL II 707)

> [18 March] Wednesday—Afternoon. Abed—nervous—had noticed the prismatic colours ~~reflected~~ transmitted from the Tumbler—Wordsworth came—I talked with him—he left me alone—I shut my eyes—beauteous spectra of two colors, orange and violet—then of green, which immediately changed to Peagreen, & then actually *grew* to my eye into a beautiful moss, the same as is on the mantle-piece at Grasmere.—abstract Ideas—& unconscious Links!! (CN I 925)

Recognising the frenzy into which Coleridge was working himself, Wordsworth stepped in to restrain and soothe his friend. From the tone of the episodes, one wonders whether or not Wordsworth's 'fervent intreaty' involved having to confiscate the prisms for Coleridge's own health. But if so, it was no good; the tumbler sufficed to split light and set his mind towards forging 'abstract Ideas'. In the second passage, the substitution of 'transmitted'

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[9] Herschel, 'Investigation of the Powers of the Prismatic Colours to Heat and Illuminate Objects; With Remarks, That Prove the Different Refrangibility of Radiant Heat. To Which is Added, an Inquiry into the Method of Viewing the Sun Advantageously, with Telescopes of Large Apertures and High Magnifying Powers', *Phil. Trans. R. Soc. Lond.*, 90, (1800), 255-283, esp. 256, 272.

[10] Coleridge almost certainly already owned at least one prism (CL II 714) which he would have needed for his concurrent examination of Newton's *Opticks* (1704). Coleridge was reading the third, corrected edition of the *Opticks* (London: for William and John Innys, 1721). See: Ralph J. Coffman, *Coleridge's Library: A Bibliography of Books Owned or Read by Samuel Taylor Coleridge* (Boston: G.K. Hall, 1987), p. 152.

for 'reflected' is indicative of Coleridge's new understanding; it is a more intimate verb, and its usage attests to a hands-on approach that is attuned to the inner workings of light moving through a prism colourfully. Even when he closed his eyes, Coleridge's mind continued to move the prism and vividly connected the growing shades of green with familiar objects.

It is these Herschelian experiments which Coleridge both read about and practised for himself that resonate afresh in the notebook entry of August-September 1802. If Socinianism is characterized as 'Moonlight' and Methodism as 'A Stove!', the former has no power to transmit heat whilst the latter gives off next to no light. At the second time of writing, the fundamental problems which Coleridge saw in the Socinian denial of Christ's inherent divinity, coupled with his unease at the reliance of Wesleyan Methodist theology on Lockean empiricism, were refracted through the latest theories of light.[11] In other words, it was precisely the *invisible* which these denominations refused to endorse and which Herschel had shown to be active properties of light. Here were 'unconscious Links!!' of the highest order.

Perhaps this explains why the 1802 entry merits two exclamation marks:

> Socinianism moonlight—Methodism a Stove! O for some Sun to unite heat & ~~warm~~ Light! [12] (CN I 1233)

The punctuation is newly indicative of real discovery which in the 1799 entry was tentatively something to be hoped for. Religious anxiety is replaced by renewed conviction. The Sun that would 'unite heat and & ~~warm~~ Light!' had in fact just been revealed by Herschel and was also that which Coleridge implemented in a religious context to confer unificatory and divine status upon the Son of God. Holding the dual meaning of 'Sun/Son' together, the pun linguistically enacts Herschel's discovery by silently warming its invisible other half. Coleridge's little slippage—'~~warm~~ Light!'—was exactly what Herschel proved to exist in varying gradations in 1800. The solid orthodoxy of Trinitarian Christianity, which for Coleridge shattered the half-truths of Arianism, Socinianism, Methodism, and Unitarianism, was from the first instance, and in radically Coleridgean style, expressible in terms of Herschel's infra-red.

This establishes a powerful precedent in Coleridge's imaginative thinking: astronomy is conceived in theological terms and vice versa; Herschel's science is important in itself and as a flexible, methodological armature capable of conceptualising and communicating Trinitarianism. In a letter of October 1806 to Thomas Clarkson, Coleridge's stipulation 'that the Idea of God involves that of a Tri-unity' is juxtaposed with his conception of Unitarianism, which now offers 'no Sun, no Light with vivifying Warmth, but a cold and dull

[11] Richard E. Brantley, *Locke, Wesley and the Method of English Romanticism* (Gainesville: University of Florida Press, 1984), pp. 1-26; Douglas Hedley, *Coleridge, Philosophy and Religion* (Cambridge: Cambridge University Press, 2000), p. 47; Graham Neville, *Coleridge and Liberal Religious Thought: Romanticism, Science and Theological Tradition* (London: I.B. Tauris, 2010), pp. 10-11.

[12] Cf. *Aids to Reflection*, ed. John Beer (Princeton: Princeton University Press, 1993), pp. lxxxvii-lxxxviii.

moonshine, or rather star-light, which shews itself but shews nothing else' (CL II 1196). John Beer's assessment that 'Light became for Coleridge a central symbol, second only to love in its power to bind together disparate strands of his thinking',[13] is given renewed credence by the fact that Coleridge's discussions of 'Tri-unity' take place in a metaphorical space consistently allied with Herschel.

The full force of this is felt much later on. In his marginalia to Edward Irving's *Sermons, Lectures, and Occasional Discourses* (1828), dated between November 1828 and February 1829, Coleridge worked Herschel into the final formulae of his great shape-shifting dialectical devices, the Noetic Tetractys and the Logical Pentad. This was Coleridge's fullest utterance of the subtle contiguities he saw between Herschelian science and Trinitarianism, written in response to what he called Irving's 'utter misapphrehension of the Trinity…neither apprehending aright the unities or the distinctities':[14]

> In the Solar radiance three sorts of Rays are emitted, the chemical or formative, the calorific and the lucific, i.e. power, warmth and light. In the divine Glory (a metaphor taken from the Sun) Will, Mind and Spiritual Life are eradiated. It is therefore perfectly indifferent, whether I say, that the End of the Utterance and Incarnation of the WORD, i.e. Creation and Redemption, was the Glory or Glorification of God, or that the End was <the communication of> the greatest possible Holiness and Beatitude: for both mean the same—in the first, it is conveyed ~~by~~ in a metaphor, in the second, without any. [15] (M III 29)

The affinities Coleridge draws between the tripartite structure of light and the 'divine Glory' are predicated upon a very good understanding of Herschel that he had built up from the 1790s. Calorific light is a direct reference to Herschel's discovery of infra-red which produces heat beyond the visible (lucific) red portion of the prismatic spectrum. In 1801, Johann Wilhelm Ritter (1776-1810), whose work Coleridge read avidly, had discovered the 'chemical or formative' properties of light by watching silver chloride-soaked paper blacken beyond the violet part of the spectrum.[16] This region became known as ultraviolet and would have been known to Humphry Davy, to whom Coleridge wrote in 1801 to ask whether 'Herschel's Thermometric

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[13] John Beer, *Coleridge: The Visionary* (London: Chatto & Windus, 1959), p. 52. For an analysis of how Coleridge's interpretation of Baconian empiricism 'is part of a strategy of reconciling the modern scientific method with religious faith', see: Michael Raiger, 'Coleridge's theory of symbol and the distinction between reason and understanding: A genealogical recovery of the Baconian method of science', *History of European Ideas*, 36: 3 (2010), 311-23, 321.

[14] *The Collected Works of Samuel Taylor Coleridge: Marginalia*, ed. H.J. Jackson and George Whalley, 6 vols. (Princeton: Princeton University Press, 1980-2001), III, p. 66.

[15] Coleridge's amendment of 'by a metaphor' to 'in a metaphor' is suggestive of a distinction he made fully between metaphor and symbol in *The Statesman's Manual* (1816). The change from 'by' to 'in' represents a shift from seeing the metaphor simply as a conduit for a new idea and seeing it as having the capacity to contain that idea *within* itself.

[16] Edmund Newton Harvey, *A History of Luminescence: From the Earliest Times Until 1900* (Philadelphia: American Philosophical Society, 1957), pp. 196-97, 340; Noel B. Jackson, 'Critical Conditions: Coleridge, "Common Sense", and the Literature of Self-Experiment', *English Literary History*, 70: 1, (2003), 117-149, esp. 126.

Spectrum…will lead to any Revolution in the chemical Philosophy'. The answer to that question was resoundingly positive and Coleridge heard about chemiluminescence—the emission of light as a result of chemical reaction—at Davy's lectures on chemistry at the Royal Institution in 1802.[17] The account of Coleridge attending these lectures in order to renew his stock of metaphors is wholly vindicated by the fact that he was explicitly employing scientific ideas gleaned from Davy and Herschel in the name of religion to the end of his life.[18]

Mapping ultraviolet, infra-red and visible rays directly on to the 'Will, Mind and Spiritual Life' respectively was not a happy accident but rather an indication of how serious Coleridge was about the capacity for astronomy and Triune theology to interact profitably. Coleridge read the symbolic world and his use of Herschel exemplified how for him the ideas of the mind are the laws of nature and vice versa. To a slightly earlier passage of Irving's *Sermons* (1828), Coleridge appended the form of his Noetic Tetractys:

Identity
Absolute Will, the alone Good.

Ipseity
The ~~Father~~, I AM, who in affirming himself begetteth
the son & is thus the Father –

Alterity
The Son—Mind, ~~I~~ Subsistent Idea

Community
Spirit, Life, Love. (M III 18)

Using this diagram it is clear that Coleridge's connection of 'Will' with ultraviolet, 'Mind' with infra-red, and 'Spiritual Life' with visible light, is a direct attempt to make Herschelian science co-instantaneous with Ipseity, Alterity, and Community, which stands for the Holy Trinity of Father, Son, and Holy Spirit.[19] (See Figure 1 on the next page.)

This application of the properties of new light to Trinitarianism is ingenious. God as 'Will' radiates ultraviolet; His work on Man is active but invisible. God as 'Mind' or the Son emits infra-red, the '~~warm~~ Light!' or 'light with vivifying Warmth' of Coleridge's notes and letters; He is both fully human and fully divine so that whilst He cannot be seen His handiwork can yet be *felt*.

[17] Waka Ishikura, 'Coleridge, Davy, and the Science of Method', *The Coleridge Bulletin*, N.S. 24, (2004), 68-73, esp. 69-70.

[18] John Ayrton Paris, *The Life of Sir Humphry Davy*, 2 vols. (London: Henry Colburn and Richard Bentley, 1831), I., p. 92.

[19] It is important to note that 'Will' cannot stand for the 'Absolute', which is the 'Prothesis' or *ground* for the Trinity, because there is no content in the 'Prothesis' – it is not existential. I benefitted greatly from discussions with Nicholas Reid on this matter at the Wordsworth Summer Conference 2012. Cf. Raimonda Modiano, *Coleridge and the Concept of Nature* (London: Macmillan, 1985), pp. 196-99.

He is the operative and essential channel to the Father, breaching the mundane and supermundane worlds. God as 'Spirit' is visible; He makes manifest the effect of His love in the lives of the Christian community for all to see. The fact that one set of truths is scientific and the other spiritual does not alter the sense for Coleridge that 'both mean the same—in the first, it is conveyed ~~by~~ in a metaphor, in the second, without any'. The status of metaphor is thus elevated to the same level as literal and scriptural interpretation: relationship between ideas is more valuable for Coleridge than individual truth.[20] Light was *the* idea that put Biblical exegesis and Herschelian science on the same wavelength.

Figure 1

1. *Pythagorean Tetractys* 2. *Trinity* 3. *Solar radiance* 4. *Light rays*

Identity (Prothesis)
Absolute Will, the alone Good

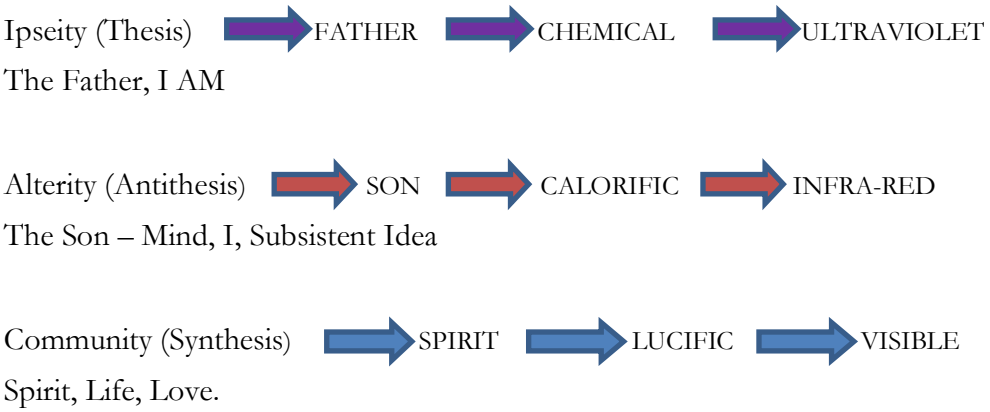

Figure 1. This diagram is a visual aid for understanding the underlying importance of nineteenth-century theories of light for Coleridge's philosophy. Columns 1 and 3 form the marginalia to Irving's *Sermons* (1828), in *Marginalia*, vol. III, pp. 18, 29. The Tetractys, which contains the Trinity within itself – thus binding theology and philosophy – was the dialectical model for Coleridge's attempts to synthesise all knowledge, and its structure was radically expressible in terms of Herschel's and Ritter's discoveries. The technical *workings* of the Persons of the Trinity, Coleridge realised, could be communicated with the help of the latest science. In Trinitarian fashion, Herschel's light theory guaranteed unity even as it conferred multeity. For Coleridge, this made it divine.

[20] Christopher Ricks, 'The Pursuit of Metaphor' (1997), repr. in *Allusion to the Poets* (Oxford: Oxford University Press, 2002), pp. 241-60, esp. 245: 'Whatever else a metaphor may be, it is a relation…'

The Divine Tetractys in turn answered to the four forms of noetic or pure rational logic: Identity, Thesis, Antithesis, and Synthesis (M III 18). With these two models Coleridge attempted to express all knowledge in a coherent system and thus to locate an original and organic heuristic for thought. This was the ultimate project for his mature philosophy and it was imaginatively underpinned by astronomy. In order to make sure that he never introduced 'any one of the Divine Tri-unity without a clear intuition of the Co-presence of all' (M III 13), Coleridge fashioned Herschel into the lifeblood of his system. In Herschel he found the answer to a problem that had plagued him since November 1799, at which time he first wrote a notebook entry linking light with Socinianism and Methodism:

> I would make a Pilgrimage to the desert sands of Arabia…to find the Man who could explain to me there can be *oneness*, there being infinite Perceptions. (CN I 556)

Herschel expanded the range of what was thought to be perceptible and in so doing connected the capacity of human vision with the prospect of infinite possibility.

The underlying importance of trichotomous logic for Coleridge, exemplified by the Trinity in its highest manifestation, meant that his imaginative loyalty to Herschelian conceptions of triunity was unswerving. Later on in a postscript to Irving's *Sermons*, Coleridge envisaged the Trinity afresh with a different Herschelian observation:

> P.S. ~~As~~ The improved Telescopes have resolved several supposed single Orbs into double Stars–apply this to the fact–that in the Old Testament and the Apocryphal Wisdom of Solomon, the Second Distinctity in the One God is hidden in the third, viz. the Spirit, while in the N.T.—especially in the writings of John & Paul, the Spirit, when spoken of ~~with~~ as a person, seems to be, if not positively identified <with>, yet not clearly distinguished from, the Son—i.e. Christ, assurgent, and glorified.—The Telescope of the church has drawn out what *may*, I doubt not, be fairly *inferred*, but cannot, perhaps, be coercively proved from the declarations of the Evangelists and Apostles. And well! for the Subjective, and the Objective may be made plain to Believers of average Capacity; but the Objectively-Subjective requires a more steady Vision and an ethereal atmosphere. (M III 73-74)

Measuring the angles and distances of double stars began in earnest in the 1780s and it was Herschel's observations that dominated the *Philosophical Transactions* from then onwards. Coleridge's first proper exposure came between 23 April - 22 May 1798 when he borrowed the *Philosophical Transactions* for the year 1785 from the Bristol Library. This issue contained the second collection of William Herschel's hugely important 'Catalogue of Double

Stars'.[21] In it, Herschel explained that with his seven-foot Newtonian reflector he could:

> give a much smaller image of the stars than the 3 ½ feet achromatic refractors; wherefore the two stars, which in refractors as it were run into each other, will in the reflector remain separate.[22]

Essentially, Herschel found that stars which Newton saw as single were, in fact, concealing others behind them (up to as many as five) and thus their parallax—the relative magnitude and position—could be calculated. In a subsequent paper of 1802 which Coleridge very probably saw,[23] Herschel differentiated between optical doubles—stars which appear close together due to the chance alignment of the Earth—and real doubles—stars which 'remain united by the bond of their own mutual gravitation towards each other'.[24] Herschel went on to discuss 'more complicated sidereal Systems, or treble, quadruple, quintuple, and multiple Stars':

> Those who have admitted our arguments for the existence of real double stars, will easily advance a step further, and allow that three stars may be connected in one mutual system of reciprocal attraction…preserved in a permanent connection, by revolving in proper orbits about a common centre of motion.
>
> (Herschel Catalogue 486-87)

Herschel's discovery of double and triple stars encouraged Coleridge to forge an imaginative link with his dyadic or polar concept which led, in the words of Thomas McFarland, 'to conceptions of triplicity, and in the last period of his life, to those of fourness and even fiveness'.[25] The trinities Coleridge found in nature confirmed for him the trinity of the mind and God. Although caution must be taken not to elide polarity with the Triune sphere, in as much as the noetic has no place in the Godhead, it is essential to remember that, in his marginalia to Jakob Böhme's *Three Principles of the Divine Essence* written c. 1818-19, Coleridge meant both to be conceivable in terms of each

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[21] Duncan Wu, *Wordsworth's Reading 1770-1779* (Cambridge: Cambridge University Press, 1993), pp. 182-83. It is possible Wordsworth or Cottle returned this volume.

[22] Herschel, 'Catalogue of Double Stars', *Phil. Trans. R. Soc. Lond.*, 75, (1785), pp. 40-126, esp. 44.

[23] The evidence for this is based on a letter Coleridge wrote to Samuel Purkis on 1 February 1803 in which he excitedly tells Purkis that he is to go with Tom Wedgwood to France and Italy (CL II 919): '[Coleridge is] a Comet tied to a Comet's Tail, & our combined path must needs be damnably eccentric, & a defying Puzzle to all Astronomers from La Lande & Herschell to YZ…'. The 1802 issue of the *Philosophical Transactions* also contained Herschel's 'Observations on the Two Lately Discovered Celestial Bodies', *Phil. Trans. R. Soc. Lond.,* 92, (1802), 213-232, esp. 226, which defined comets in precisely the terms used by Coleridge, who references Herschel directly in the Purkis letter.

[24] Herschel, 'Catalogue of 500 New Nebulae, Nebulous Stars, Planetary Nebulae, and Clusters of Stars; With Remarks on the Construction of the Heavens', *Phil. Trans. R. Soc. Lond.*, 92, (1802), 477-528, esp. 479-81.

[25] *Opus Maximum*, ed. Thomas McFarland, with the assistance of Nicholas Halmi (Princeton: Princeton University Press, 2002), p. lxxxvii. Unlike Schelling, from whom he inherited the concept of polarity, Coleridge attempts to develop a genuine metalogic.

other: 'Observe, however, that both the Polar System or Tetractys, and the Triune, are necessary views of the same truth, and by no means does either invalidate the practical Results of the other' (M I 642).[26] The synthesis of the polar logic in a 'tertium aliquid' or 'third thing' was *the* reconciling act of the imagination (based on Fichte and Schelling) that Coleridge outlined in the *Biographia Literaria* (1817), and for which he found a celestial counterpart in Herschel's sky.[27] The new stars provided a map for a complex imaginative schema that Coleridge sought physically to describe.

Moreover, in the notion of a triple system of 'reciprocal attraction' Coleridge found a means to calibrate the differences between the God of the Old and New Testaments. If Herschel's 'improved Telescopes' had revealed that three stars, where previously only one was thought to exist, may be 'preserved in a permanent connection, by revolving in proper orbits about a common centre of motion', then Coleridge saw that this could be applied to the idea that 'the Second Distinctity of the One God is hidden in the third, viz. the Spirit'. The Persons of the Holy Trinity are irrevocably bound to one another, much like the gravitational pull linking real triple stars, and yet Herschel's magnifiers have also shown the latter to be distinct entities. 'Distinctity', for Coleridge, is an astronomical measure of the Three-in-One: the lustre or magnificatory power of each part of the Trinity can be measured as an expression of itself and as part of a larger, stable, and self-sufficient whole. Herschel performed a little miracle for Coleridge: he created science with which Coleridge could conceptualise difficult doctrine and communicate it adequately to others.

In the Old Testament, Coleridge avers that Christ is hidden in the Spirit whilst in the New Testament the reverse is true: '…especially in the writings of John & Paul, the Spirit… seems to be, if not positively identified <with>, yet not clearly distinguished from, the Son'. The progression from Old to New Testament is represented as a parallactic shift or orbital turn that privileges the Personhood of Jesus. Christ is most definitely, in Coleridge's phrase, 'assurgent, and glorified'; He is the rising star. This emphasis is crucial because in the Necessitarianism of Hartley and Priestley it is precisely the notion of personal freedom that is sacrificed by the deterministic laws of association. In the words of Alan Gregory, it is only in the acknowledgement of a personal God that Coleridge found 'a ground that guarantees the eternal significance of persons'.[28] Indeed, the conditional nature of the clause—'if not positively identified <with>, yet not clearly distinguished from'—resonates both with the vibrations of Coleridgean philosophical polarity and with Herschel's task of searching out the relationship and cataloguing the 'distinctity' of real triple

[26] Cf. Nicholas Reid, *Coleridge, Form and Symbol:* or, *The Ascertaining Vision* (Aldershot: Ashgate, 2006), pp. 124-30.

[27] *Biographia Literaria*, ed. James Engell and W. Jackson Bate, 2 vols in 1. (Princeton: Princeton University Press, 1983), I, pp. 299-300, esp. 299 n. 1: 'The imagination is, sparely put, an act of ultimate synthesis in the dialectic of mind and nature.'

[28] Alan P.R. Gregory, '"That I May Be Here": Human Persons and Divine Personeity in the *Opus Maximum*', in *Coleridge's Assertion of Religion: Essays on the Opus Maximum*, ed. Jeffrey W. Barbeau (Dudley, MA: Peeters, 2006), pp. 187-211, 189. Cf. Jeffrey W. Barbeau, 'Science and the Depersonalisation of the Divine: Pantheism, Unitarianism, and the Limits of Natural Theology', in *Coleridge's Assertion of Religion*, ed. Barbeau (2006), pp. 163-85, 178-79.

stars.

Coleridge thrived in the challenge of nuancing fresh encounters. 'The Telescope of the church' syntactically links Herschel and Trinitarianism in a format legitimised by Coleridge's unifying Tetractys. Astronomy draws out spiritual truths which otherwise can only be '*inferred*', not 'coercively proved'. The visible and invisible properties of light, taken together with double and triple stars, constitute a bold imaginative endeavour to perceive the world in a new way whilst at the same time satisfying Coleridge's drive to demonstrate that there can and must be unity in multiplicity—the ultimate goal of which is 'the eternal Identity of Allness and Oneness' (CL IV 689) as Coleridge told James Gillman in November 1816. Herschel's discoveries had a long gestation in Coleridge's lifetime; their origins are as early as 1795 and they had certainly taken root by the time he was with Wordsworth at Alfoxden. Tracing the religious application of Coleridge's rigorous astronomical knowledge shows his conscious thought patterns to be wonderfully sedimented. He looked for the quiet consistencies between truths—valuing the transmissibility of truth itself—which allowed him to feel for how two or more ideas could orbit together, in harmony, rather than settling for the construction of an ultimately self-limiting intellectual hierarchy. Consequently, much of his best theological teaching has a curious weight (or Herschelian heat) that rises up from within, sensitive and alert to balancing the power of new thinking with Church doctrine.