fruitful in results, in order to provide a basis of facts sufficiently rich and varied so that among them some thoughtful student may begin to perceive those significant relationships which will finally lead him into the heart of the problem.

Those early biologists who established the cell theory made the first great contribution to such a descriptive study of development, and under the stimulus of their idea, biological analysis has gained many triumphs in the century that is past. We can best honor these pioneers of yesterday, however, not by pushing indefinitely onward over the path they first began to blaze and which now seems destined to end blindly in discouragement and frustration, but rather to follow the pioneers of to-day along the far more difficult path which will lead, however distantly, to an understanding of biological syntheses. Life is integration. Life is the knitting together of units into patterned wholes. Many of the units we know, thanks to the labors of a hundred years. An understanding of how these units are built into the fabric of an organism is the task for the hundred years that are to come.

MATHEMATICIANS, AND POETRY AND DRAMA. II*

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I have referred to Hamilton as a youthful prodigy able successfully to compete with the American mental calculator, Zerah Colburn. But among many gifted mental calculators who gave public exhibitions of their prowess, no one could compare with Zacharias Dase, who was born at Hamburg in 1824 and died in 1861. He is known to have extracted the square root of a 100-figure number in 52 minutes, and to have multiplied two 100-figure numbers in $8\frac{3}{4}$ hours; there is reason to believe that this last-mentioned multiplication was no great tax upon his powers of mental arithmetic. Gauss, the greatest living mathematician of his time, got him to work on calculating mathematical tables of value, and as a result four important volumes were published. A few years before his death Dase published a volume of material about himself, extracted from his scrapbook.[53] In this material are 69 stanzas or poems in a variety of forms and by as many different authors. So far as I am aware this is the largest number of so-called poems on any single mathematician. But these measure rather the popular appeal of his peculiar gift.

No such acclaim awaited two men of superlative genius who died in their twenties about the time that Dase was born, but whose names are constantly mentioned wherever mathematical research is now carried on. The one was Evariste Galois, a Frenchman, killed in a duel when 21 years of age. The other, probably the greater genius, was Niels Henrik Abel[54] (1802-29), of whom Norway was later so proud. After the articulation of far-reaching mathematical discoveries and a gallant struggle with poverty, he died of tuberculosis at the age of 27, just as his achievements had brought high recognition, which would have filled his later life with ease and content and given him untrammeled opportunity to draw back curtains hiding eternal truths. At the centenary of his birth in 1902 a great international celebration was held in Oslo,[55] and a long French poem on "Abel" was read by Bjørnstjerne Bjørnson.[56] Happy indeed was the expression of thought in two lines of this poem:—

Là où il a été
on ne pense plus sans lui.

Several other poems about him include one engraved on his tomb. The centenary of Abel's death was internationally celebrated in 1929, and four Norwegian postage stamps bearing his portrait were then issued.[57]

Let us turn now to a British centenary. Nearly seven years ago throughout the English-speaking world there were elaborate celebrations of the centenary of the birth of Charles Lutwidge Dodgson[58] (1832–1898), familiarly known by the pen name Lewis Carroll, which he first used in connection with a poem he published shortly after he graduated from Oxford. No other mathematician in the writing of nonsense produced such an effect on his country's literature[59] or became

* Concluded from the issue of SCIENCE for January 13.

53 "Zacharias Dase. Aufschlüsse und Proben seiner Leistungen als Rechenkünstler. Mitgetheilt von ihm selbst aus seinem Album," Berlin, 1856, vi + 122 pp.

54 G. Mittag-Leffler, *Revue du Mois*, 4: 5–26, 207–229, 1907; E. T. Bell, "Men of Mathematics," New York, 1937, pp. 307–326; G. Prasad, "Some Great Mathematicians of the Nineteenth Century," Benares, v. 1, 1933, pp. 111–165.

55 "Niels Henrik Abel. Memorial publié à l'Occasion du Centenaire de sa Naissance," Christiania, 1902.

56 See footnote 54.

57 *Scripta Mathematica*, 1: 183, 1932.

58 E. V. Lucas, "Dict. Nat. Biog," Suppl., v. 2, 1901. W. De La Mare, "Lewis Carroll," London, 1932; the best appreciation of Alice and her creator. S. H. Williams and F. Madan, "A Handbook of the Literature of the Rev. C. L. Dodgson (Lewis Carroll)," and Supplement, Oxford, 1931, 1935; invaluable work. F. Madan, ed., "The Lewis Carroll Centenary in London, 1932, including a Catalogue of the Exhibition, with Notes," London, 1932. *Scripta Mathematica*, 1: 172–175, 349, 1932; 4: 318, 1936. "Catalogue of an Exhibition at Columbia University to Commemorate the One Hundredth Anniversary of the Birth of Lewis Carroll," New York, 1932.

59 F. J. H. Darton, "Children's Books in England," Cambridge, England, 1932, pp. 263–269.

so universally popular. His writings have been translated into Braille, Chinese, Czech, Danish, Dutch, Esperanto, French, German, Hebrew, Hungarian, Irish, Italian, Japanese, Latin, Norwegian, Polish, Portuguese, Russian, shorthand, Spanish and Swedish.

Dodgson was a mathematical lecturer at Oxford for more than twenty-five years, 1855-81, and he was ordained a deacon in 1861. Some of his more substantial mathematical publications are the following: "Syllabus of Plane Algebraical Geometry (1860); "Elementary Treatise on Determinants" (1867); "Euclid and his Modern Rivals" (1879; second ed. and *Supplement,* 1885), in dramatic form; "Curiosa Mathematica" (2 v., 1888–93, 4 eds.) of which the second volume was entitled "Pillow Problems thought out during Sleepless Nights"; "Symbolic Logic, Part I, Elementary" (1896, 4 eds.).

In 1933 his verse was collected in a volume of over four hundred pages. Most of the poems and songs are taken from such works as "Alice's Adventures in Wonderland," "Puzzles from Wonderland," "Through a Looking Glass," "Phantasmagoria," "The Hunting of the Snark," and "Sylvie and Bruno." Many of the songs have been set to music, and accompanying music has been written for a number of Lewis Carroll's writings which have been dramatized; more than sixty items might be mentioned in this connection.[60] There are also scores of parodies of Carroll's writings by others.[61] Much of the effect of many of his own poems was due to the fact that they were such admirable parodies of well-known poems of, for example, Hood, Longfellow, Scott, Southey, Swinburne, Tennyson, Watts and Wordsworth.

Poems about Carroll are doubtless fairly numerous. Among them are *Punch's* tribute by Owen Seaman,[62] and those by Austin Dobson,[63] E. V. Lucas[64] and Margaret Sangster.[65]

As Oxford and Cambridge are closely associated in our thought, it is but natural that next we should consider a Cambridge man. Not long ago a query was raised in the London *Times*[66] as to the authorship of a stanza

> No power on earth, however great,
> Can pull a string, however fine,
> Into a horizontal line
> That shall be absolutely straight.

A correspondent pointed out that it was to be found in the first edition (1819) of "An Elementary Treatise on Mechanics" by the prodigiously learned William Whewell[67] (1794–1866), who was second wrangler in 1816, master of Trinity, author of 'The History of Inductive Sciences," of "The Plurality of Worlds" and of many mathematical works. In the chapter on "The Equilibrium of Forces on a Point" the following "accidental stanza" occurred in the sentence: "Hence no force however great can stretch a cord however fine into an horizontal line which is accurately straight." In the form first quoted the original meter has been repaired. "Accurately" has been crowded out by a stronger word. It must have been the wags of Trinity College, Cambridge, who adorned the Whewellian muse. The matter was the subject of an editorial in the *New York Times.*[68]

But Whewell was the author of many real poems. One of the principal honors which he gained in his undergraduate career was the chancellor's medal for the best poem on Boadicea. When about 50 years of age he published a translation of Goethe's "Hermann und Dorothea," and various original poems in *Blackwood's Magazine.* But two volumes of his verse appeared in 1847, the first entitled, "Verse Translation from the German: Including Bürger's Lenore, Schiller's Song of the Bell and Other Poems"; and the second, "Sunday Thoughts and Other Verses." Eight years later, shortly after the death of his first wife, Whewell circulated some privately printed "Elegiacs," consisting of about 800 lines in 13 sections. In thanking Whewell for a copy, the poet Longfellow wrote: "I have read the poems with great interest and pleasure; and yet a painful sympathy with you in your affliction, which has found expression in such musical numbers. I am delighted to see the Elegiac metre introduced into English verse; it is so beautiful, and satisfies the ear so completely. And to you we must give the honor of its introduction, if we pass over the few specimens of translation from the German." When Whewell later wrote a review praising Long-

[60] See Williams and Madan, *loc. cit.,* pp. 263–281; Supplement, pp. 18–20.

[61] See, for example, W. Hamilton, "Parodies of the works of English and American Authors," London, v. 4, 1887, pp. 55–59; C. Wells, "A Parody Anthology," New York, 1918, pp. 264–267; W. Jerrold and R. M. Leonard, "A Century of Parody and Imitation," Oxford, 1913, pp. 358–360; also, Williams and Madan, *loc. cit.,* pp. 287–309.

[62] Jan. 29, 1898; see Williams and Madan, *loc. cit.,* p. 246.

[63] Prefacing "Alice's Adventures in Wonderland," illustrated by A. Rackham, London, 1907; often reprinted.

[64] E. V. Lucas, "Another Book of Verses for Children," New York, 1925, pp. 377–378.

[65] *Good Housekeeping,* 94: 23, 1932.

[66] March 25, 1935.

[67] Leslie Stephen, "Dict. Nat. Biog.," v. 60, 1899. I. Todhunter, "William Whewell, D.D., Master of Trinity College, Cambridge," 2 v., London, 1876; "English Hexameters," pp. 283–301, "Poetical Pieces," pp. 367–375, 167. Mrs. S. Douglas, "The Life and Selections from the Correspondence of William Whewell," second ed., London, 1882, see especially pp. 87–88, 115–119, 243–244, 537–586. A. Macfarlane, "Lectures on Ten British Physicists of the Nineteenth Century," New York, 1919; "William Whewell," pp. 84–93.

[68] April 19, 1935; see also R. C. Archibald, *idem.,* April 23, 1935.

fellow's use of English hexameters in his "Evangeline," Longfellow was greatly pleased.

Whewell is also credited with the following verses:

U O a O, but I O thee,
O O no O, but O O me;
Then let not my O a O go,
But give O O I O thee so.

which is to be interpreted as:

You sigh for a cypher, but I sigh for thee,
O sigh for no cypher, but O sigh for me;
Then let not my sigh for a cypher go,
But give sigh for sigh, for I sigh for thee so.

One can imagine Wallie Hurwitz and Caesar Davis[69] exclaiming, *Whew—well* done!

The great variety of Whewell's studies struck some of his contemporaries as peculiar; for instance, Sidney Smith said of him: "That man's forte is science, and foible omniscience."

But almost a century before this Master of Trinity was appointed to a professorship at Cambridge, there died one who had been also a student and professor at Trinity, the greatest mathematical genius who has ever lived.

Newton died in March, 1727, and in June the future nature poet James Thomson (1700–1748) published his 209-line poem "Sacred to the memory of Sir Isaac Newton." It was issued as a folio volume dedicated to Sir Robert Walpole, then prime minister of Great Britain; four other editions were called for in the same year,[70] and two editions of an Italian translation were published in 1741 and 1760.[71]

Alexander Pope had a gift for the composition of epitaphs and often wrote them, or was called upon to revise those already written. His epitaph intended for Newton's tomb in Westminster Abbey, five lines in Latin and two in English, may be quoted[72] in this connection:

Isaac Newtonus:
Quem Immortalem
Testantur *Tempus, Natura, Coelum:*
Mortalem
Hoc marmor fatetur.
Nature and Nature's Laws lay hid in night:
God said, *Let Newton be!* and all was light.

This last fine epigram is often quoted. I was recently much surprised to discover that Aaron Hill, a contemporary of Pope, had not only written a poetic epitaph on Newton, but also the following epigram:

O'er nature's laws, God cast the veil of night,
Out blaz'd a Newton's *soul*—and *all* was *light*.

[69] That is, H. T. Davis, author of "The Fine Art of Punning" . . ., Colorado Springs, 1916.

[70] London, 3 eds., and Dublin, 1 ed.

[71] "Il Riccio Rapito [A. Pope] e le Lodi di Neuton [J. Thomson]. Poemi inglesi tradotti in Versi toscani dal Sig. A. Bonducci . . . con altri nuovi componimenti," Naples, 1760.

[72] "The Works of Alexander Pope." New ed. by Elwin and Courthope, London, v. 4, 1882, p. 390.

The great similarity of these lines to Pope's couplet suggests at once the question, Were they published before Pope's was in *The Grub Street Journal* for July 16, 1730? I found them in the first edition of Hill's "Works" published in 1753, four years after Hill, and nine years after Pope, had died. Hill's abilities as a poet and his relations to Pope hardly suggest that Pope was in any wise indebted to Hill.

As yet I have made no systematic effort to assemble *all* poems written about Newton[73] at the time of his death. The only other one with which I have met was that of another contemporary of Pope's, namely, Allan Ramsay (1685–1758), whose 14-verse "Ode on Sir Isaac Newton. Inscribed to the Royal Society of London for improving Natural Knowledge," recalls the fact that at the time of his death Newton had for 24 consecutive years been president of the Royal Society.

In more recent times we remember the "Watchers of the Sky" (1922) of Alfred Noyes, the first of his 3-volume work on "The Torch-Bearers." The fine forty-five page section on "Newton," not always conforming to the latest results of historical research, begins thus:

"If I saw farther, 'twas because I stood
On giant shoulders" wrote the king of thought,
Too proud of his great line to slight the toils
Of his forebears. He turned to their dim past
Their fading victories and their fond defeats,
And knelt as at an altar, drawing all
Their strengths into his own; and so went forth
With all their glory shining in his face;
To win new victories for the age to come.

And the concluding lines:

He rose at last so near
The Power divine that none can nearer go;
None in this age! To carry on his fire
We must await a mightier age to come.

It would seem as if Noyes must here have had in mind the closing lines of Edmond Halley's fine Latin ode on Newton prefixed to the first edition of Newton's "Principia.[74] In the translation of Professor Richardson, of the University of California, the concluding lines are as follows:

Then ye who now on heavenly nectar fare,
Come celebrate with me in song the name

[73] J. W. N. Sullivan, "Isaac Newton, 1642–1727," London, 1938. E. T. Bell, "Men of Mathematics," New York, 1937, p. 90–116. L. T. More, "Isaac Newton, a Biography," New York, 1934. "David Gregory, Isaac Newton and their Circle," ed. by W. G. Hiscock, Oxford, 1937, "Sir Isaac Newton 1727–1927. A Bicentary Evaluation of His Work. A series of Papers prepared under the auspices of the History of Science Society," Baltimore, 1928. Mathematical Assoc., "Isaac Newton 1642–1727. A memorial Volume," London, 1927. *Scripta Mathematica,* 1: 179, 271; 2: 290–291; 3: 85, 185–186, 272; 4: 180–181. 1932–1936.

[74] Halley's Latin hexameters were printed in unmutilated form in only the first edition of Newton's "Prin-

Of Newton, to the Muses dear; for he
Unlocked the hidden treasuries of Truth;
So richly through his mind had Phoebus cast
The radiance of his own divinity.
Nearer the gods no mortal may approach.

It is this last line, "Nearer the gods no mortal may approach" which may be compared with that of Noyes:

He rose at last so near
The Power divine that none can nearer go.

There are many incidental references to Newton in the poets; I shall refer to only a few among English poets. Four are to be found in poems of Byron—one in his "Poem on Churchill's Grave" and three in stanzas of "Don Juan." The first stanza of canto X of the latter is as follows:

When Newton saw an apple fall, he found
In that slight startle from his contemplation—
'Tis *said* (for I'll not answer above ground
For any sage's creed or calculation)—
A mode of proving that the earth turned round
In a most natural whirl, called "gravitation";
And this is the sole mortal who could grapple
Since Adam—with a fall—or with an apple.

Towards the end of his life Newton is reported to have remarked: "I do not know what I may appear to the world; but to myself I seem to have been only like a boy, playing on the seashore, and diverting myself, in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me." This will explain the allusion in stanza 5 of canto VII of Don Juan:

Newton (that proverb of the mind), alas!
Declared, with all his grand discoveries recent,
That he himself felt only like a youth
Picking up shells by the great ocean—Truth.

One of Newton's great discoveries was that by means of a prism he could break up white light into its component colors. This prism is noted in Wordsworth's reference in the "Prelude," to Roubilliac's statue of Newton, the finest of all the statues in the chapel of Trinity College, Cambridge:

And from my pillow, looking forth by light
Of moon or favoring stars, I could behold
The ante chapel where the statue stood
Of Newton with his prism, and silent face,
The marble index of a mind for ever
Voyaging through seas of Thought, alone.

And finally, we may recall the passage in Southey's "Translation of a Greek Ode on Astronomy,"

There Priest of Nature! dost thou shine,
Newton! a King among the Kings divine.

Another great mathematical genius at Trinity College, who afterwards became a professor in the university, was James Clerk Maxwell[75] (1831–1879), whose work has had a profound influence on the progress and conceptions of physical science. It has, moreover, been instrumental in harnessing the ether for service of man and has thereby advanced civilization and increased the safety and happiness of mankind. He was another of the famous second wranglers, and wrote many papers of great value in the fields of pure and applied mathematics. It was early in his school career that he began to write verses, a practice which he kept up all his life, to the great delight of his friends. Many of these, including one famous in the domestic history of Trinity College, an ode "To the committee of the Cayley portrait fund" (1874), are given in Campbell's "Life" of Maxwell.[76]

We have referred to Whewell and Maxwell as second wranglers at Cambridge. Another who started his mathematical career as second wrangler, in 1837, became one of the most interesting and eminent of British mathematicians of the nineteenth century, James Joseph Sylvester,[77] who was born in 1814 and died in

cipia," London, 1687. In the second edition (1713) Bentley omitted lines and touched up the Latinity in a number of places—not to its improvement, according to some scholars (*e.g.*, R. A. Sampson, *Nature*, 135: 129, 1935). In the third edition of the "Principia" Pemberton made but slight changes in Halley's original version. This is also to be found in "Selecta Poemata Anglorum Latina," Bath, 1776, v. 3, p. 29. The three "Principia" versions were reprinted in: (a) S. P. Rigaud, "Historical Essay on the First Publication of Newton's Principia," Oxford, 1838, p. 85–87; (b) D. Brewster, "Memoirs of the Life, Writings and Discoveries of Sir Isaac Newton," Edinburgh, v. 1, 1855, pp. 457–459; (c) C. F. MacPike, "Correspondence and Papers of Edmond Halley," Oxford, 1932, pp. 203–206. On pp. 207–208 of MacPike's work Halley's ode is given in English translation, by "Eugeno," which Rigaud states, "is not well done" and which was originally published in Benjamin Martin's *General Magazine of Arts and Sciences, Miscellaneous Correspondence in Prose and Verse* for January, 1755, London, v. 1, 1759, p. 4. This was also reprinted in *Popular Astronomy*, 12: 504–506, 571, 1904. A new translation by L. J. Richardson is given in the Motte-Cajori edition of Newton's "Principia," Berkeley, Calif., 1934; Sampson, *loc. cit.*, characterizes this as "a poor affair and gives no evidence that the writer knew what he was talking about." The translation into Ido by G. H. Richardson, of Newcastle-upon-Tyne, England, was first published in *Kulturo, revuo por l'internaciona Kulturo per l'internaciona Linguo*, Budapest, 2: 29–31, January-February, 1924; reprinted in *Biblioteko dil Internaciona Kulturo*, 9, Budapest, 1924, and in G. H. Richardson, "Spaco e Tempo," Newcastle-on-Tyne, 1929. It was also reprinted, with the Latin of 1687, in Richardson's "Laudo di Newton da Halley," Newcastle-on-Tyne, 1925.

[75] For the general reader the following little volume would be especially interesting: "James Clerk Maxwell. A commemoration Volume 1831–1931. Essays" by J. J. Thompson, M. Planck, A. Einstein, J. Larmor, J. Jeans, W. Garnett, A. Fleming, O. Lodge, R. T. Glazebrook and H. Lamb, Cambridge, 1931. A. Macfarlane, "Lectures on Ten British Physicists of the Nineteenth Century," New York, 1919, pp. 7–21.

[76] L. Campbell and W. Garnett, "The Life of James Clerk Maxwell," London, 1882, pp. 577–651.

[77] A. Macfarlane, "Lectures on Ten British Mathematicians of the Nineteenth Century," New York, 1916, pp.

1897. The father's name was Abraham Joseph, but his five sons—the eldest settled in New York—adopted the name Sylvester. James, the mathematician, was the youngest, and he has more than one connection with America; he was professor at the University of Virginia[78] in 1841–42 and the first professor of mathematics at the Johns Hopkins University from 1876 till 1883, when he was appointed Savilian professor of geometry at Oxford. Before the Johns Hopkins University opened its doors to students, the trustees of the institution were discussing with its president, Daniel Coit Gilman, the question of how to begin the work of the university which was to be a potent factor in higher learning in America. "Enlist a great mathematician and a distinguished Grecian," said the president, "your problem will be solved. Such men can teach in a dwelling house as well as in a palace . . . Other teachers will follow them." And thus were appointed the great Gildersleeve and the "soaring-geniused Sylvester," as Sidney Lanier characterized him.[79] Sylvester was the first editor, at Baltimore, of a great mathematical research journal, and he may be thought of as an inspiring source of modern American mathematics.

Throughout his life he gave evidence of thought teeming with poetical fancies. He had a keen relish for striking phrases, and many of his mathematical papers not only have original poetical introductions but are interspersed with poetical passages. Six years before coming to Baltimore he published a volume entitled "The Laws of Verse, or Principles of Versification Exemplified in Material Translations," and dedicated to his friend Matthew Arnold. The work contains many excellent translations from Horace and from German authors, as well as some original poems. He was accustomed to express his feelings in sonnets, and in his last years he composed considerable Latin verse. He wrote several "Studies in Monochrome," so called because they rang the changes upon a single rhyme through a long series of verses. Sylvester thought that these performances had an effect like that of "the regularly recurring dash and plash of the waves on the seashore." One such poem was "Rosalind," a "mock-sentimental" poem of four hundred lines, all ending in ĭnd or īnd. On several occasions Sylvester gave public readings from his poems. Lanier has given us an account of one performance at the Peabody Institute, Baltimore, in 1879 when his poem "Rosalind" was to be read.

> The audience quite filled the hall and expected to find much interest or amusement in listening to this unique experiment in verse. But Professor Sylvester had found it necessary to write a large number of explanatory footnotes, and he announced that in order not to interrupt the poem he would read the footnotes in a body first. Nearly every footnote suggested some additional extempore remark, and the reader was so interested in each one that he was not in the least aware of the flight of time or of the amusement of the audience. When he had dispatched the last of the notes, he looked at the clock, and was horrified to find that he had kept the audience an hour and a half before beginning to read the poem they had come to hear. The astonishment on his face was answered by a burst of goodhumored laughter from the audience, and then, after begging all his hearers to feel at perfect liberty to leave if they had engagements, he read the Rosalind poem.[80]

Since we have returned to America the voyage of observations draws to a close. Among those visited, who have been outstanding in poetry and drama? In this regard international acclaim has surely set on high the following men of mathematics: Omar Khayyám, Echegaray and Lewis Carroll, and the publications of Lewis Carroll, of which the poetry forms an important part, have been found to be the most universally popular. With reference to the mathematics of their times, Omar Khayyám was the leading mathematician of this trio.

What may be said concerning the literary productions of such geniuses and the future? In the case of Carroll the late E. V. Lucas, rare charmer of both children and adults, has made reply:

> "But will," the Prillil girl inquired,
> "His writings ever die?
> Will people always love his books
> The same as you and I?"
> "There is no doubt at all of that,"
> The Grownup made reply.

107–121. E. T. Bell, "Men of Mathematics," New York, 1937, pp. 378–405. R. C. Archibald, "Unpublished letters of James Joseph Sylvester and other new information concerning his life and work," *Osiris*, 1: 85–154, 1936; "Sylvester's poetry," p. 102–112, containing a pretty complete bibliography.

[78] A portrait painted by G. Patten in 1841, just before Sylvester left England, was thrown on the screen during the lecture, and was thus made public for the first time.

[79] S. Lanier, "Ode to The Johns Hopkins University," read 22 February 1880, *Johns Hopkins University Circular*, 1: 38, April, 1880; also in "Poems of Sidney Lanier," edited by his wife, new edition, New York, 1922, p. 108. Lines 10–14 are as follows:

> From far the sages saw, from far they came
> And ministered to her,
> Led by the soaring-genius'd Sylvester
> That, earlier, loosed the knot great Newton tied,
> And flung the door of Fame's locked temple wide.

[80] This poem began as follows:

> In Cecilia's name I find
> (Deem not thou the guess unkind)—
> Celia, with a sigh combined,*
> Whose five letters, loose aligned,
> Magic, set and recombined,
> Fairest O! of lily kind,
> Shall disclose to every mind,
> From Far West to Orient Ind
> With each mortal thing unkinned
> Thy sweet name, dear Rosalind!
>
> * Celia + ci = Cecilia.