

Coleridge, Davy, and the Science of Method

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In January 1818, the first volume of the *Encyclopaedia Metropolitana* was published. It included Coleridge's essay on method entitled 'General Introduction: or Preliminary Treatise on Method.' Long before this publication, Coleridge began thinking about principles of method, and when he was involved with the publication of the *Encyclopaedia* he got the first opportunity to make his idea of method public. The *Encyclopaedia* had a prospectus, which is considered to be the joint work of Coleridge and Dr. Stoddart. It includes references to the growth of scientific knowledge: 'The political changes of the world have not been more wonderful than the scientific and moral revolutions that have occurred within the last few years,' and 'Our project is in this respect therefore singularly fortunate in point of time.'¹ The publication of the *Encyclopaedia Metropolitana* coincided with the development of various sciences and industries. It was the age of the industrial revolution when, in search of utilitarian values, improvements in machines and other devices were strongly encouraged, and more generally, applying scientific knowledge to practical manners began to be widespread. Manufacturers, innovators, mechanics, and men of science in general, worked together to make up a force of industry of the country.

The prospectus continues to say, that there was in society 'the manifest tendency of all the Arts and Sciences at present, from the most purely intellectual even to the labours of the common mechanic, to—organize themselves into one harmonious body of knowledge.'² 'One harmonious body of knowledge'³—this phrase might refer to any political, economical, or cultural concern, and yet it sounds Coleridgean. For Coleridge, the pursuit for the unity of knowledge yielded the demand for establishing the science of method. 'Method,' he says, in its original Greek, is literally '*a way, or path of Transit*,'³ which makes it possible to think of things in relation to each other. Ideally, for all kinds of people, the science of method would work to unify all that had been brought from intellectual labours and all that can be thought now and in the future. At first, Coleridge himself valued the essay, 'Treatise on Method,' more than all his other writings together.⁴ Yet partly because of the interpolation made by the editor (we don't know how extensive it was, however), and partly because of his wish to refine it as 'the groundwork of [his] philosophic opinions,'⁵ he extensively revised it and included it in *The Friend*, which he published in November 1818 as a book of three volumes.

¹ Alice D. Snyder (ed.), *S. T. Coleridge's Treatise on Method* (London: Constable, 1934), 77-8.

² Snyder (ed.), 78.

³ Samuel Taylor Coleridge, *The Friend*, ed. Barbara E. Rooke, 2vols. (Princeton: Princeton University Press, 1969), I, 457. Hereafter cited as *Friend*.

⁴ See *Collected Letters of Samuel Taylor Coleridge*, ed. Earl Leslie Griggs, 6vols. (Oxford: Clarendon Press, 1956-71), IV, 825. Hereafter cited as *CL*.

⁵ *CL* IV 860.

The development of the experimental sciences in the early 19th century in England might well be exemplified by the field of chemistry. Humphry Davy, a friend of Coleridge and other Romantics, at the newly established Royal Institution in London, represents the coming of the new age of science. From the start of his career at the Royal Institution, Davy was successful in making experiments by means of voltaic piles, while giving lectures, which were very popular. And in 1806 and 1807, he decomposed various alkalis, for example potassium and sodium for the first time, which led him to enjoy worldwide fame. At this time, Coleridge expressed his highest admiration for Davy, rather intoxicatedly, calling him ‘our prince of Chemists’.⁶ That Davy’s successful chemical research took hold of the science of the age, was well evident in contemporary scientific journals.⁷

In 1803 Coleridge wrote ‘I have hoped, and do hope, more proudly of Davy than of any other man.’⁸ It was Davy who opened Coleridge’s eyes on the newly developed practical sciences, letting him say, ‘I shall attack chemistry—like a Shark.’⁹ It was also Davy who taught Coleridge, if not directly, that there was in chemistry something more than increasing his stock of metaphors; for example, there was a scientific fact that would form an idea for further thinking. In his essays on method in 1818, Coleridge includes various scientific accounts, which show that he had up-to-date knowledge of contemporary sciences, and many of which are related to, or suggestive of Davy’s scientific researches. It is quite clear that the intellectual stimulus given by Davy to Coleridge was outstanding. I would like to see Coleridge’s writing on method as his philosophical response to Davy’s scientific endeavor.

There are many interesting anecdotes about Coleridge and Davy in Bristol and in London—for example, the inhaling of nitrous oxide at Dr. Beddoes’ Pneumatic Institution, or their joining Godwin’s circle in London. To the purpose of this paper, however, I will focus on Coleridge’s theoretical arguments in favor of Davy and his chemical research. In 1801, when Coleridge heard about Davy’s lectures on Galvanism, he said, ‘My motive muscles tingled & contracted at the news, as if you had bared them & were *zincifying* the life-mocking Fibres.’¹⁰ Yet in the same letter he soon began criticizing the contemporary chemistry, saying that ‘That which most discourages me in it is that I find all power & vital attributes to depend on modes of *arrangement*—and that Chemistry throws not even a distant rush-light glimmer upon this subject.’¹¹ Here Coleridge’s point is in the lack of effective ideas to see fundamental principles for diverse chemical phenomena.

Responding to this, in his ‘Discourse Introductory to A Course of

⁶ Samuel Taylor Coleridge, *Marginalia*, eds. George Whalley and H. J. Jackson, 6vols. (1984-2001), I, 650. Hereafter cited as *Marginalia*. This entry is supposed to be written some time before April 1812.

⁷ William Nicholson’s *Journal of Natural Philosophy, Chemistry, and the Arts*, and Alexander Tilloch’s *Philosophical Magazine* are among these.

⁸ *CL* II 927.

⁹ *CL* I 605.

¹⁰ *CL* II 726.

¹¹ *CL* II 727.

Lectures on Chemistry' in 1802, some lectures of which Coleridge attended, Davy admitted: 'Though we can perceive, develop, and even produce, by means of our instruments of experiment, an almost infinite variety of minute phaenomena, yet we are incapable of determining the general laws by which they are governed.'¹² But Davy also questioned, in a rather Coleridgean tone, that 'who would not be ambitious of becoming acquainted with the most profound secrets of nature, of ascertaining her hidden operations, and of exhibiting to men that system of knowledge which relates so intimately to their own physical and moral constitution?'¹³ Here we can see that Davy suggests a system of knowledge that could incorporate the material world with the spiritual in a certain unifying view. This corresponds to what Coleridge claims on behalf of poets in the same period: having 'dim analogies with the moral world,' 'A Poet's *Heart & Intellect* should be *combined, intimately combined & unified*, with the great appearances in Nature.'¹⁴ Thus their friendship encourages the belief in the correspondence between the natural world and the human being, though it was not likely that they clearly postulated the existence of an entity, a spirit, or a vibration, or whatever--a conceptual medium combining the material world with the spiritual.

Coleridge thought that Davy was, by means of the modern art of transmuting metals, pursuing the idea that there is one power in the material world that governs it:¹⁵ electricity is the key to open a new view of the world. But for Coleridge, the relation between the external world and the human being may have some effect on how the mind works. In the process of thinking, we are making meaningful relations between our thoughts, and how our thoughts should relate each other is what matters most. The science of method will actualize the process, making it something like a living organism which has the 'PRINCIPLE OF UNITY WITH PROGRESSION.'¹⁶ In this process, it is necessary to have the knowledge of Law, an attribute of reason, which is in our mind conceived of as an idea, a 'mental antecedent,' or a 'master light.'¹⁷ By having an idea, we will be capable of exerting proper methods for obtaining certain objects. So Davy has an idea of one power in his chemical research, which made him possible to have one of the most appropriate methods to pursue the fundamental law in nature. Generally speaking, the science of method will work on the mind that processes the information in the mind, taken from sense perception, memory and others, and organizes and actualizes it with the power of an idea. It will make a harmony between everything concerned with the human mind.

In 'Treatise on Method' in the *Encyclopaedia*, Coleridge speaks about the

¹² *The Collected Works of Sir Humphry Davy*, ed. John Davy, 9 vols. (1839-40; New York: Johnson Reprint Corporation, 1972) II, 320. Hereafter cited as *Works*.

¹³ *Works*, II 320.

¹⁴ *CL* II 864.

¹⁵ See *CL* III 38.

¹⁶ *Friend*, I 476.

¹⁷ *Friend*, I 513 and 495.

knowledge of Law indispensable to method, pointing to a scientific investigation. This is a fine example of Coleridgean thinking, methodical or not, in which all thoughts are diversified and unified in the light of one idea. In this case, the idea seems to owe something to the genius of Davy:

Such, too, is the case with the substances of the LABORATORY, which are assumed to be incapable of decomposition. They are mere exponents of some one law, which the chemical philosopher, whatever may be his theory, is incessantly labouring to discover. The law, indeed, has not yet assumed the form of an idea in his mind; it is what we have called an Instinct; it is a pursuit after unity of principle, through a diversity of forms. Thus as ‘the lunatic, the lover, and the poet,’ suggest each other to Shakespeare’s Theseus, as soon as his thoughts present him the ONE FORM, of which they are but varieties; so water and flame, the diamond, the charcoal, and the mantling champagne, with it ebullient sparkles, are convoked and fraternized by the theory of the chemist.¹⁸

‘Laboratory’ substances containing carbon, ‘decomposition,’ and Shakespearean criticism—all are, for Coleridge, concerned with Davy. First, as for a laboratory, Coleridge once offered Davy a plan to live in the Lakes in a house with a small laboratory,¹⁹ though Davy soon moved to London and began to use the best equipped laboratory in the country at the time in the Royal Institution. Next, associations of ideas about carbon are working here: ‘the diamond, the charcoal, and the mantling champagne.’ Coleridge attended Davy’s lectures in 1802 in which various substances were introduced. Coleridge took notes on this occasion, which contain references to carbon: ‘Carbon. pure in Diamond—Diamond pure chrystallized Carbon,’ and ‘Diamond + x Oxygen = Charcoal N.B. Cottle’s Psalms—.’²⁰ As I said before, Davy was successful in isolating some substances which were considered ‘incapable of decomposition.’ And in 1808, solicited by Davy, Coleridge commenced lectures on Shakespeare at the Royal Institution. Coleridge later recollected in 1823, that he did the lectures for ‘the Pride of being a fellow-lecturer with the Father and Founder of philosophic Alchemy.’²¹

It may be true that Coleridge admired Davy’s determined attitude to his experiments, which sees the experimental results analytically in the light of the law of attraction and repulsion between positive and negative electric forces.

¹⁸ Samuel Taylor Coleridge, *Shorter Works and Fragments*, eds. H. J. Jackson and J. R. De J. Jackson, 2 vols. (Princeton: Princeton University Press, 1995), I 647-8.

¹⁹ In a letter to Davy in February 1801, ‘A Gentleman resident here, his name Calvert, an idle, good-hearted, and ingenious man, has a great desire to commence fellow- student with me & Wordsworth in Chemistry,’ writes Coleridge, inviting Davy to join them. *CL* II 670-1.

²⁰ *The Notebooks of Samuel Taylor Coleridge*, ed. Kathleen Coburn et al. 5 vols. (Princeton: Princeton University Press, 1957-), I, entry number 1098. Coleridge’s metaphor works as to connect the idea of something impure transmuting diamond into charcoal, with the quality of the psalms written by Joseph Cottle.

²¹ *CL* V 309.

Coleridge, rather sententiously, declared: ‘Humphry Davy in his Laboratory is probably doing more for the Science of Mind, than all the Metaphysicians have done from Aristotle to Hartley, inclusive.’²² Coleridge seemed to expect Davy to prove scientifically that the work of nature was pertinent to the work of the mind, and to find something in the electrochemistry analogous to the work of human consciousness. If one power governs the universe, the human mind may exert a power that is ultimately the same as one that governs external nature, and all powers will converge in God. But the poet and the man of science are somewhat different in the point that Coleridge had strong moral concern, while Davy had a strong power of induction from various experimental results, which gave his researches scientific precision. Though the audience at Davy’s lectures witnessed that Davy often digressed into appeals to supreme wisdom, and he was also in a sense the heir of Priestley’s chemical researches, Davy was among the new generation of men of science who tried to find applications of chemical study to practical works, such as seen in his studies on tanning and agriculture.²³ Coleridge saw Priestley’s chemical experiments as ‘giving *wings* to his [Priestley’s] more sublime theological works.’²⁴ In Coleridge’s case, it was his philosophical investigation that gave wings to his science of method, enabling it to be more inclusive than it could be. The fact that he put strong emphasis on a moral foundation for the principles of method may indicate that he made an effort to take back benefits from developed sciences for the welfare of human minds.

Coleridge wrote a letter to Davy in January 1809 in which he confessed that he had been fortunate to be Davy’s contemporary, admiring Davy’s scientific enterprise. This letter, however, was not written in a simple admiring mood, but in a rather twisted manner. Coleridge, who had just read a brief account of Davy’s lecture, and had not felt at ease when he saw ‘Theosophy’ mingled with science. He said that he furnished to [his] Understanding & Conscience proofs—both of the Supreme Reason as superessential to the World of the Senses; of an analogous Mind in Man not resulting from it’s perishable Machine, nor even from the general Spirit of Life, it’s inclosed steam or perfluent water-force.²⁵ Coleridge seems here to be obsessed with the question of what life is, or what the moral constitution of human life is, while figuring out that the essential property of life would never be reducible to any mechanism including electricity. It seems to me that this letter sounds as if Coleridge wished to hear the voice of Davy proclaim just what he thought. Yet this Coleridgean fit ends with a prosaic account concerning the money he had got from the Royal Institution.

Though their friendship gradually cooled, at least until he finished writing the essays on method, Coleridge probably had an undercurrent of thought that

²² *Marginalia*, I, 566.

²³ See Humphry Davy, ‘The Constituent Parts of Certain Astringent Vegetables,’ *Philosophical Transactions*, 93 (1803), 233-73 and his *Elements of Agricultural Chemistry, a Course of Lectures* (London: 1813)

²⁴ *CL* I 372.

²⁵ *CL* III 172.

he was, if not directly, allied with Davy. This may be rooted back to his sentiment toward Davy, a feeling of being a twin, or of being a mirror image of him. In January 1804, although Coleridge was ill, he frequently met with Davy in London, and spoke of his dream to Southey:

I came up into one of Xt Hospital Wards, & sitting by a bed was told that it was Davy in it, who in attempts to enlighten mankind had inflicted ghastly wounds on himself, & must henceforward live bed-ridden...²⁶

This is one of his Christ-hospitalized dreams that posed feelings of misery, fear, and frustration. We have here corresponding images of Coleridge and Davy. Coleridge was in bad health, and Davy also sometimes got ill because of the bad effects of the chemicals he used in his experiments, and might suffer from ghastly wounds, while serving the public good.²⁷ Coleridge then burdened himself with the task of philosophical works, which were yet not finished. The dream might be interpreted: ‘We, who in attempts to enlighten mankind have inflicted ghastly wounds on ourselves, must henceforward live bed-ridden.’ Some enterprise was necessary in order to rescue them. The doubling image of Coleridge in the dream may show his emotional attachment to Davy, or Davy in this dream might be a mental projection of Coleridge himself. As Coleridge ascribed chemistry to ‘the passion of Hope,’²⁸ Davy could be a possible object to which Coleridge could find his way to make himself worthy of accomplishment. Coleridge called Davy ‘the Man who *born* a Poet first converted Poetry into Science.’²⁹ This man could be Coleridge, who was then trying to convert a poetic vision, such as ‘the one life, within us and abroad,’³⁰ into a science. By means of integrating the principle of the unity with progression with the science of God, it seems, Coleridge was backing up Davy, or what could be represented by the image of Davy. The presence of Davy functions in this way to push him forward, as that of Wordsworth did in the case of theory of poetry. When he was twenty eight, Coleridge said to Davy: ‘I have a deep faith in the guardianship of Nature over you—of the Great Being whom you are manifesting.’³¹ To make this manifestation enduring, given the motives social and personal, Coleridge aimed at establishing the science of method, which sees all human intellectual labors in harmony with a power to evolve.

²⁶ CL II 1028.

²⁷ One of the instances when Davy got seriously ill was in 1807. It was reported as caused by the effects of his experiments. See *Works*, I, 111-2.

²⁸ CL I 557.

²⁹ CL V 309.

³⁰ This phrase in ‘The Eolian Harp’ first appeared in the errata in *Sibylline Leaves* (1817).

³¹ CL II 726.