

# Speculations upon Romanticism and Modern Science : Newton, Kant, Coleridge and Wordsworth

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# Speculations upon Romanticism and Modern Science: Newton, Kant, Coleridge and Wordsworth

Tomohisa HIROSE

## Introduction

The purpose of this essay is to inquire into the relation between the spirit of Romanticism and those elements which constitute the metaphysical framework of modern science. My hypothetical answer to this question lies in the transcendental nature of human mind itself which, however, was realized with the arrival of modern age as self or self-consciousness. To make the point clear, what we should attempt first is to compare the structure of time and space, and the position of mind behind the literary works in Romanticism with those behind modern science.

We can take the best hint for this question from what William Wordsworth says about Newton in his poetical works. Wordsworth's room in St. John's College, Cambridge, was adjacent to Trinity College where Newton studied. On this, in his *Prelude*, celebrating Newton's exploration, Wordsworth says:

And from my pillow, looking forth by light  
Of moon or favouring stars, I could behold  
The antechapel where the statue stood  
Of Newton with his prism and silent face,  
The marble index of a mind for ever  
Voyaging through strange seas of Thought, alone<sup>1</sup>

From the phrase “for ever Voyaging through strange seas of Thought”, we can imagine the space behind this poem as the infinite and homogeneous expanse in which one voyage for ever. What we should notice here is that to Wordsworth the expanse of space is to coincide with that of his thought.

From the same phrase “for ever Voyaging through the strange seas of Thought”, we can imagine the time behind this poem as that which flows homogeneously from the infinite past to the infinite future. And what we should notice here also is that to Wordsworth the stretch of time is to coincide with that of his thought.

From the considerations developed above, let us investigate where the position of mind is in this poem. First of all, there exists in this poem a mind that is “for ever Voyaging through the strange seas of Thought, alone”, which is enough to suggest that this mind is voyaging through the infinite, homogeneous space and time as the whole universe. And “alone” suggests that to this mind the whole universe coincides with the world of its own thought. In this poem, however, there exists another mind which can be an “index” for the mind for ever voyaging. And in this case, this “another mind” actually stands outside the world of voyager’s thought, and, because of this positioning, it can provide the standard of truth for the voyager’s mind. Then, it is only by taking the position to stand outside the world of its own thought that the voyager’s mind can construct this world objectively as the real universe.

Wordsworth, therefore, seems to suppose that depending on its positioning, Newton’s mind can both be the mind of the voyager and the mind as an “index”, which makes it possible for Newton to construct the world of his thought objectively as the real world by standing its outside and presenting the standard of objective truth through the setting of an axis of coordinates in the infinite, homogeneous universe. This positioning of Newton’s mind is exactly the same as the positioning of Wordsworth’s mind when he composes this poem, which shows that this positioning of mind can only be realized because it derives from the transcendental nature of human mind itself.

## **I Newton’s Concept of Space and Time**

In “Scholium” at the beginning of his *Philosophiae Naturalis Principia Mathematica* (1687), Newton lays out his concept of absolute time, space and motion. As for absolute time, he says:

Absolute, true and mathematical time, of itself, and from its own nature flows equably without regard to anything external, and by another name is called duration: relative, apparent and common time, is some sensible and external (whether accurate or unequal) measure of duration by the means of motion, which is commonly used instead of true time ...<sup>2</sup>

The essence of Newton's idea of absolute time is the time which flows homogeneously from the infinite past to the infinite future. Then if we stand inside this flow of time, it is impossible for us to have any absolute measure for this time. Newton's absolute time, therefore, is actually relative time. For one to call this time absolute and real, as Newton does, it is necessary for one to stand outside this flow of time. And we suppose that Newton takes this position when he defines his absolute time as real time.

On his idea of absolute space, Newton says:

Absolute space, in its own nature, without regard to anything external, remains always similar and immovable. Relative space is some movable dimension or measure of the absolute spaces; which our senses determine by its position to bodies: and which is vulgarly taken for immovable space ...<sup>3</sup>

The essence of Newton's idea of absolute space is the infinite, homogeneous expanse. Then, as for its absoluteness, the same thing can be said about space as about time. If we stand inside this space, it is impossible for us to have any absolute measure for this space. Newton's absolute space, therefore, is actually relative space. For one to call this space absolute and real, as Newton does, it is necessary for one to stand outside this space, as Newton is supposed to do when he defines his absolute space as real space.

Then on his idea of absolute motion. Newton says:

Absolute motion is the translation of a body from one absolute place into another: and relative motion, the translation from one

relative place into another ..<sup>4</sup>

The essence of Newton's absolute motion is the motion measured by the absolute standard in absolute time and space. And to Newton, knowing the truth of the universe is equal to knowing the absolute motions of bodies. Then to know the reality of the universe, we must take the position to stand outside the universe of the infinite, homogeneous space and time.

Is it, however, really possible to take the position outside the infinite, homogeneous universe? It is apparently impossible if we use our faculty of senses and logical thinking. It is only possible if we have the faculty of imagination which can mediate between the finite and the infinite.

On the faculty of imagination and reason, what Kant tries to shed light on in his *Critique of Pure Reason* (1781) is that Newton's idea of absolute time and space is based on imagination, and, therefore, cannot be proved to be real time and space. Kant further tries to make it clear that basic categories of human knowledge, such as quantity and quality, and relation and modality, are the forms of reason invoked by imagination, and cannot be proved to be corresponding to the reality of nature. From Kant's critical position, the whole system of modern science is based on human imagination, and, therefore, is an imaginative construction.

## II Imagination in Romanticism

Concerning the faculty of imagination, Romanticism takes quite the contrary position to that of Kant. Samuel Taylor Coleridge, like other Romantics, resorted to imagination as the highest faculty of the mind for the mediation between the finite and the infinite, and for the knowledge of the reality of the universe, saying:

The Imagination then, I consider either as primary, or secondary. The primary Imagination I hold to be the living Power and prime Agent of all human Perception, and as a repetition in the finite mind of the eternal act of creation in the infinite I AM.<sup>5</sup>

In this definition, the infinity of the absolute being, the I AM, is seen in the eternity of its act of creation, while the absoluteness of the absolute being, is seen in its creativity itself as creativity includes the idea of origin as the standard of absoluteness. For the finite mind to touch something absolute it is necessary to have the mental faculty for creation, that is, imagination, for the “repetition in the finite mind of the eternal act of creation in the infinite I AM”.

Here, to Coleridge, perception is creation if it be based on imagination, and the mind in Coleridge’s system, through the faculty of imagination, is, in its act of creation, taking the same voyage as that taken by the mind in what Wordsworth considers as Newton’s system of universe. Coleridge further tries to explain the creative nature of imagination on the ground of his idea of self-consciousness. He proposes “SUM or I AM” as the first principle for the construction of his “Dynamic Philosophy”, and he tries to express it indiscriminately “by the words, spirit, self, and self-consciousness”, saying that a subject “becomes a subject by the act of constructing itself objectively to itself”.<sup>6</sup> Only if we consider self-consciousness, the substance of imagination, as the perpetual process of self-construction of the active subject, can we give creativity to this process of the working of imagination.

From all these, we can say that by using the faculty of imagination, one’s mind can take the position outside itself as the whole universe of the infinite, homogeneous time and space, and, by constructing it objectively as an object, it can become a subject. It is this perpetual process of self-construction that is the essence of the realization of the transcendental nature of mind.

The transcendental nature of mind, however, wakes up in an individual self in the process of modernization. It appears inseparably with the advent of an individual who becomes an individual by confronting the whole world as an object to oneself. In this process the relation of an individual with the world becomes that of a subject with an object, not that of you and I of the traditional communities. And it is in this relation that mind realizes its nature of transcendence through Romantic imagination which expresses itself as the spirit working in modern science, a modern nation state and modern art and literature by way of creation

as objective construction.

### III The Literary Expression in Romanticism

In this chapter, I examine *Lyrical Ballads* published in 1898 by S. T. Coleridge and Wordsworth, and inquire into what factors realized the expressions peculiar to Romanticism.

In the preface of *Lyrical Ballads*, what is declared is the creation of the fundamentally novel poetic expressions. Here I explore their nature by quoting the first stanza of Wordsworth's 'Tintern Abbey'.

LINES WRITTEN A FEW MILES ABOVE TINTERN ABBEY,  
ON REVISITING THE BANKS OF THE WYE DURING A TOUR,  
*July 13, 1798.*

Five years have past; five summers with the length  
Of five long winters! And again I hear  
These waters, rolling from their mountain-springs  
With a sweet inland murmur,—Once again  
Do I behold these steep and lofty cliffs,  
Which on a wild secluded scene impress  
Thoughts of more deep seclusion; and connect  
The landscape with the quiet of the sky,  
The day is come when I again repose  
Here, under this dark sycamore, and view  
These plots of cottage-ground, these orchard-tufts,  
Which, at this season, with their unripe fruits,  
Among the woods and copses lose themselves,  
Nor, with their green simple hue, disturb  
The wild green landscape. Once again I see  
These hedge-rows, hardly hedge-rows, little lines  
Of sportive wood run wild; these pastoral farms,  
Green to the very door; and wreathes of smoke  
Sent up, in silence, from among the trees,  
With some uncertain notice, as might seem,  
Of vagrant dwellers in the houseless woods,

Or of some hermit's cave, where by his fire  
The hermit sits alone.<sup>7</sup>

As we read these lines, we, living in the twenty first century, unconsciously take it for granted that the world of this poem composed by Wordsworth really exists, and that what this poem tells us is an objective fact, and have a feeling that we can enter this world without any sense of unnaturalness. This is simply because Wordsworth constructs the world of this poem such as one that objectively exists.

In this poem, there exists a narrator other than the "I" who appears in these lines. This narrator, however, never appears in this poem. Wordsworth, as the narrator, then, takes the position to construct the world of this poem from its outside through the "I" in the poem as if by describing what one really observes. He, therefore, could construct it as if it exists objectively, according to the standards of objectivity without inserting any subjective value judgement into it. What makes this objective description possible, I would like here to call perspective in a broad sense which is based on Newtonian view of time and space, and the transcendental categories analyzed by Kant.

In this poem of Wordsworth's, two kinds of perspective are combined to make the objective expression possible, that is, the perspective of time and the perspective of space. From the title which includes a date and the first two lines of this poem, we judge that the time which flows behind the world of this poem is that which flows homogeneously from the infinite past to the infinite future, and that this flow of time is just the same as the flow of time we imagine behind our own world, that is, Newtonian concept of absolute time in which time flows homogeneously from the infinite past to the infinite future. We, therefore, don't doubt the reality of the world of this poem based on the same image of time as ours.

As for the perspective of space, in this poem, it is functioning as a precondition for the perspective of time. For, the perspective of space is the device of expression which is based on the mental attitude of taking the position to stand outside the world, and view it as an infinite homogeneous space. The world of this poem, the banks of the Wye



described by Wordsworth is located in what we imagine as an infinite, homogeneous space, in spite of the banks being a deeply secluded place, as it is described as a place connected to both the upper and lower reaches of the river, and the landscape of this valley is “connected with the quiet of the sky” by those “steep and lofty cliffs”. We necessarily imagine the infinite expanse of space outside this valley. And we must also notice that the location of this poem is not Tintern Abbey itself, but “a few miles above Tintern Abbey”. This suggests that Wordsworth intentionally avoid the place of any significance, and this avoidance necessarily has the effect of intensifying the image of the homogeneity of space in this poem.

In this poem, the year 1798 which in that age of drastic change is the year of relative calmness is deliberately selected for the title, which is effective in making the image of homogeneous, and therefore autonomous flow of time. Further, the author intentionally excludes from the world of this poem those elements which could evoke the feelings of the presence of human beings, and could be the causes of value judgements based on human interests. There, the fruits are not yet ripe for the harvest, the hedgerows are “hardly hedgerows” like wild “little lines of sportive wood”, and those pastoral farms are “green to the very door”. The only signs of the presence of human beings are “wreathes of smoke sent up, in silence, from among the trees”, from which, however, Wordsworth imagines the dwelling of vagrants or a hermit who are absolved from the worldly interests of the society.

In the world of this poem, anything human is buried in the autonomous, objective nature, that is, in the flow of time and the expanse of space which are infinite, homogeneous and independent of any human values and interests. And the device of expression which causes this sense of flow of time, I call the perspective of time and space which is generated by the mental attitude to stand outside the flow of time, and the expanse of space to imagine the time as the autonomous, homogeneous flow from the infinite past to the infinite future, and the space as the infinite, homogeneous expanse, in order to see things without any value judgements.

Viewing the world thus constructed in the first stanza of ‘Tintern

Abbey' through the perspective of time and space combined, we have no doubt of its real existence, and we are led to have a sense of unity with this world. From these all, what we understand as the attitude of mind and the framework of thinking peculiar to Romanticism is just what Kant defines as the aesthetic attitude of disinterest in his *Critique of Judgement* (1790), that is, the attitude of standing outside the world, taking the distance from it, and facing it without any subjective value judgement, that is, the attitude of *epoche*. This is the attitude of viewing the world as a landscape, through which one can believe the objective existence of the world, and have a sense of belonging to it. This is the attitude of disinterest, through which one can see the world and the people in it with a sense of unity with them. It is this sense of belonging and unity that should have been the moral basis for the forging of national consciousness in a modern nation state after the collapse of the traditional communities.

This attitude of disinterest, in other words, the attitude of being neutral to the world to describe and construct it according to the entirely objective standards, is also exactly what should be the basic attitude for the knowledge of modern science. From all these, we can say that in Romanticism what Kant presents as the limits of human reason in his three critiques are synthetically to be overcome through what we should call the aesthetic attitude.

### **Conclusion: The Deconstruction of Topography**

What was clarified through the considerations developed above is that the same attitude of mind is behind modern science and Romanticism. In this attitude, using the faculty of imagination, mind takes the position to see the world from its outside, and constructs and presents it objectively. Only in this framework of mind, both scientific observations and literary descriptions become objective, and are considered to be the expression of the reality of the world.

What, then, was brought about by the attitude of mind of Romanticism in art and literature? It is what, I should call, is the deconstruction of topography of which the first stanza of Wordsworth's 'Tintern Abbey' is a typical example. A topographical site is a place which is

given *a priori* meanings, and, therefore, is a teleologically composed site. The site of Tintern Abbey used to be a holy place, and the ruins of it still had a symbolic meaning such as the transience of life, or “*me-ménto móri*”.

The expressions of Wordsworth’s ‘Tintern Abbey’, with those objective descriptions, completely demolished whatever symbolic meanings of the site, and what appeared there was nature as a landscape with which one can have a sense of unity as, paradoxically, it is an autonomous nature under its own universal laws, and, therefore, neutral to any human interests.

What happened in Wordsworth’s mind when he wrote ‘Tintern Abbey’ seems to have happened in Coleridge’s mind when he wrote what is called his earliest poem.

As late I journey’d o’er th’ extensive plain  
Where native Otter sports his scanty stream  
Musing in torpid Woe a Sister’s pain,  
The glorious prospect woke me from the dream.

At every step it widen’d to my sight,  
Wood, Meadow, verdant Hill, and dreary Steep  
Following in quick succession of delight;  
Till all — at once — my ravish’d eye did sweep!

May this (I cried) my course thro’ Life pourtray,  
New Scenes of Wisdom may each step display,  
And Knowledge open, as my days advance!  
Till what time Death shall pour th’ undarken’d ray  
My eye shall dart thro’ infinite expanse,  
While thought suspended lies in Rapture’s blissful Trance!<sup>18</sup>

The glorious prospect which woke Coleridge from the dream and widened to his sight at every step was actually nothing but the common, trivial sights of “Wood, Meadow, verdant Hill, and dreary Steep” in his native country. Then why did Coleridge consider them as “Scenes of

Wisdom”?

The only one possible answer is that “Musing in torpid Woe a Sister’s pain”, Coleridge was in a completely disinterested state of mind, liberated from any worldly desire, when what used to be the nature of his native land suddenly reveals itself as nature in itself, that is, the autonomous nature objectively existing under its own law which, to Coleridge, is the nature in its absolute, original state designed and created by the absolute being. And this, exactly, is the nature in the state of its absolute existence which never ceases to reveal the grace and the wisdom of the absolute being.

#### Notes

- 1 Wordsworth, W., *The Prelude or Growth of a Poet’s Mind; An Autobiographical Poem*, (London, Edward Moxon, 1850), Book III, pp. 57-58.
- 2 Newton, I., *The Mathematical Principles of Natural Philosophy*, Eng. tra. by Andrew Motte, 2 Vols, (London, printed for B. Motte, 1850), Vol. 1, p. 9.
- 3 Ibid., p. 9.
- 4 Ibid., p. 10.
- 5 Coleridge, S.T., *Biographia Literaria*, ed. J.Showcross, 2 vols, (London, Oxford UP, 1907), I, p. 202.
- 6 Ibid., I, pp. 178-83.
- 7 Wordsworth, W., *Lyrical Ballads with Other Poems*, 2 vols, (London, printed for Longman and Rees, 1800), Vol. 1, p. 201.
- 8 Coleridge, S.T., *Poetical Works I in The Collected Works of Samuel Taylor Coleridge* 16, ed. J.C.C.Mays (Princeton, NJ, Princeton UP, 2001), p. 15.