An Aeolian Harp: Nature and Novalis' Science

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Before all the wondrous shows of the widespread space around him, what living, sentient thing loves not the all-joyous light, with its colours, its rays and undulations, its gentle omnipresence in the form of the wakening Day? The giant world of the unresting constellations inhales it as the innermost soul of life, and floats dancing on its azure flood; the sparkling, ever-tranquil stone, the thoughtful, imbibing plant, and the wild, burning, multiform beast-world inhales it; but more than all, the lordly stranger with the meaning eyes, the swaying walk, and the sweetly-closed, melodious lips. Light like a king over earthly nature rouses every force to countless transformations, binds and unbinds innumerable alliances, hangs its heavenly form about every earthly substance. Its presence alone reveals the marvellous splendor of the kingdoms of the world.

Aside I turn to the holy, unspeakable, mysterious Night.

Novalis, from Hymns to the Night
translated by George MacDonald

With these lines Novalis reveals himself to us. His gaze is attentive to the light-filled sense world, to the qualities and diversity of nature's four kingdoms, but especially to the power of Light whose action evokes transformations, unions, and a heavenly radiance. Yet, for all its glory, from it Novalis turns to embrace "the holy, unspeakable, mysterious Night." What draws Novalis from the splendors of the sun-illumined day to the depths of night? He goes on to tell us. Released from the fetters of Light, the "soul of Night, heavenly Slumber" descends upon him raising his spirit to an "unbound, newborn" existence and so transfigures the earth that he saw the "glorified face" of his beloved Sophie. Such rapture was, for Novalis, impossible in the light of day. Its splendor veiled the deeper mysteries which night revealed. In his own words, "The immortal Sense of the Unseen cannot be annihilated, but it may be clouded, mutilated, smothered by other senses."[1]

A universal polarity here finds beautiful expression in the singular experience of the poet and thereby becomes conscious in us as well as him. Yet there is another dimension to this polarity, that of time and the evolution of mankind. It is of both themes that Novalis writes. He speaks on the polarity of inner and outer, of man and nature, but also of the fall of man from an ancient intimacy with nature when we were as "a sentient instrument of her secret activities." We are now as "moribund men" peering through microscopes unaware of "what marvels surround their lens."

By exploring Novalis' writings on nature and our changing relationship to her, natural and human history take on a new and profound countenance. The static visages of history and nature are transformed into moral and vital processes demanding from us responsible and enlightened action. To witness this we need to address Novalis from a little known but essential side, namely Novalis as geologist, mathematician, scientist and philosopher. The scope of his genius could not be confined to a single subject or mode of understanding. As will become

[1] Novalis, from *The Disciples at Sais and Other Fragments*, translated by F.V.M.T. and U.C.B. (Methuen, London, 1903). Translations of selected fragments can also be found in Carlyle's essay "Novalis" in *Critical and Miscellaneous Essays*, Vol. II (Brown and Taggard, Boston, 1860) and in *Hymns to the Night and Other Selected Writings*, translated by Charles Passage (Bobbs-Merrill, Indianapolis, 1960). Most of the fragments which appear in this article are my own translations done with the generous, critical help of Frederick Amrine.

evident, just this universal character, his many-sidedness, renders Novalis' writings enigmatic and seemingly incongruous. Yet through all a common ideal, a common spirit is at work. The individuality, the ego of Novalis was able to explore and appreciate many world views. He came close to the ideal expressed by Steiner in his *Human and Cosmic Thought*:

> *Just as the sun passes through the signs of the zodiac in order to illuminate the earth from twelve different points, so we must not adopt one standpoint. . .; we must be in a position to go all round the world and accustom ourselves to the twelve different standpoints from which it can be contemplated.*

If Friedrich von Hardenberg (1772-1801) is known to most of us, it is as the leading poet of early German romanticism who, under the pen-name of Novalis, wrote *Hymns to the Night* and *Henry of Ofterdingen*. The traditional image of Novalis as an emotional, meteoric poet, distinguished for his sensitivity and delicate constitution, distorts his real figure. One gains no sense of the diverse nature of his genius and activities. We are, for the most part, unaware of Novalis' profound study of mathematics, geology, medicine and science generally. Nor do we usually know he studied at the renowned academy of Freiberg under the founder of modern geology, Abraham Werner, and chose in his last years the profession of a mining engineer. Beside the usual picture of Novalis as an ethereal poet, we should place an image of a young, vigorous Hardenberg who was a "bold rider, untiring mountain climber and hiker" and who could speak with "indescribably great fire." He was the bright, young star of the romantic movement in Germany — a poet, scientist and philosopher of sensitivity and genius.

After the death of his beloved Sophie, in March of 1797, Novalis plunged into a despair so deep that he verged on suicide. In constrast to Hölderlin and Kleist, however, Novalis was ultimately to rebound from Sophie's death with new creative powers and an enthusiasm for new undertakings.[2] By

[2] See Albert Steffen's, "Novalis: Herald and Forerunner," *Journal for Anthroposophy*, No. 31, Spring, 1980.

the end of that same year Novalis had enrolled in the School of Mining Technology at Freiberg (E. Germany) and upon completing his studies returned to Weissenfels near Leipzig to work, as had his father, supervising the salt-mines of Saxony. Beyond these outer circumstances, profound developments simultaneously were taking place in Novalis.

Already in 1795-96, Novalis had carefully and thoroughly studied Fichte's monument of thought, *Science of Knowledge*. Although its influence on Novalis was considerable and lasting, by mid-1797 he had moved away from Fichte's rigorously conceptual idealism to one more suited to his own nature. In a letter to Schlegel from this time Novalis wrote: "Fichte is the most dangerous of all thinkers that I know. He enchants one into his circle." Steiner recognized the kinship and distinction of these two figures when he wrote that the "soul mood" of Novalis was related to Fichte's world view.

> *Fichte's spirit, however, works the sharp contours of pure concepts while that of Novalis springs from a richness of soul, feeling where others think, living in the element of love where others aim to embrace what is and what goes on in the world with ideas.*[3]

At the time he set Fichte aside, Novalis began reading deeply in Schelling's *Ideas toward a Philosophy of Nature*, gleaning from it empirical support for the romantic conviction that nature is an organism structured by primeval polaric forces — for example, attraction and repulsion. But here too Novalis was ultimately to reject what he had initially found so engaging. Schelling's "Naturphilosophie" lacked a God to stand above the World-Soul and was therefore impossible in Novalis' eyes.

> *Shall I set God or the World-Soul in Heaven? It were better if I explained Heaven as a moral Universe and found room for the World-Soul in the Universum* (the world about us).

From these considerations it becomes clear that Novalis was, at this time, a pioneer conquering the philosophical peaks of

[3] R. Steiner, *Riddles of Philosophy*, translated by F. Koelln (Anthroposophic Press, Spring Valley, N.Y., 1973) p. 149.

his age. But once mastered, he perceived the shortcomings of each world view as well as its strengths. One could go on to document his broad and varied readings, but the point has been made. During the years from 1795-99 Novalis moved from one world system to another, mining each for its truth and for the unique perspective it could give on reality. His studies at Freiberg continued this schooling. From the lofty if abstract idealism of Fichte, Novalis moved through the vital and dynamic world view of Schelling, to the intense experience of rationalism and empiricism in the scientific training of his day. The mining academy completes the sun-like travels of Novalis through the zodiac of world views. As with Henry of Ofterdingen, Novalis' own schooling nears its end with a descent into the caverns of the earth under the tutelage of a miner. All that remains to awaken his poetic creativeness is a meeting of destiny: Klingsohr in the novel, Tieck in his own life. Tieck catalyzed Novalis into activity. In an extrordinary burst of creativity, fragmentary works begun after Sophie's death were brought to completion. His *Hymns to the Night* and *Spiritual Hymns* stand completed; *Henry of Ofterdingen* and the *Disciples at Sais* take on new dimensions. But in the midst of it all Novalis fell severely ill. While always optimistic about his recovery, his strength steadily diminished. His peaceful meeting with death stands like an icon before our souls. In it we can discern the countenance of one who knew that earthly death is but a spiritual rebirth. As his brother played the piano for Novalis and his companion Friedrich Schlegel, Novalis slipped gently away, so quietly in fact that death went unperceived.

Man and Nature

In his magnificent, unfinished work, *The Disciples at Sais*, Novalis presents to us nature and man's relationship and responsibility to her more explicitly than in any other of his works. Yet we must remain cautious. Many voices and views find expression in this work, all of which are reflections of Novalis' own thoughts, for we can find them also in his notebooks. Novalis' voice is not single and solitary but a polyphony. Like a choral master he forms out of himself a concordance of world views freely moving from one to the next. To identify Novalis with one voice only would be a grave injustice.

As in his *Hymns to the Night*, Novalis begins by pointing to the Book of Nature,

> *. . . to the great Manuscript of Design which we everywhere descry, on wings of birds, on the shell of eggs, in clouds, in snow, in crystals, in rock formations, in frozen water, within and upon mountains, in plants, in beasts, in men, in the light of day. . . .*[4]

The Master of Sais often told his disciples of his own path, of his travels and study of nature's ways, of his descent into caves and study of stars and stones. He told of how "Ere long he saw nothing singly," of how he perceived all in each. The disciples sought to emmulate their Master by searching out nature's mysteries and bringing her wonders back to the Temple, itself a marvelous museum of nature.

Although apprenticed to this same Master, our guide and narrator is unlike the others. While they search out nature's treasures, he is allowed to sit in the great hall in meditation. Even if he did not seek without for nature's treasures, he sought constantly in them. "Men travel by many different paths." This path too will lead far, ultimately to return again "to these Dwellings and to this blessed Hearth."

Thus Novalis recognized both an outer path through nature as veiled image of the divine, and a more inward, meditative path which remained, nonetheless, in perfect accord with nature's outer forms. There exists a profound, reciprocal relationship between man and nature which assures the unity of these two poles. In his poetry, prose and fragments, Novalis approached and engaged both the inner, "mystical" and the outer, "alchemical" paths as Steiner termed them. Whereas

[4] Novalis, *The Disciples at Sais and Other Fragments*, see ref. 1.

Goethe immediately distrusted knowledge born of reflection alone, Novalis deeply plumbed his own soul philosophically and meditatively. Yet the alchemical experience of nature was also profoundly present. We must remember that his daily life as geologist took Novalis to mountain peaks and into the deepest shafts man had then put into the earth. Everywhere Novalis turned, he heard a hidden harmony resounding through nature, cosmos and man.

> *Nature is an Aeolian harp — she is a musical instrument whose tones again are keys to higher strings within us.*

Her crystalline tones weave through all of nature's kingdoms.

> *Physics. Should not all plastic form, from the crystal all the way up to man, be explained acoustically through hidden movements? Chemical acoustics.*

One could go far in relating these thoughts of Novalis' to Steiner's indications concerning the tone ether, but for our purpose it is enough to observe that our world is, after all, not purely sensory but deeply supersensible if only we have the power to see it.

> *It is only because our organs and inner tranquility are weak, that we do not see ourselves in a fairy world.*

Indeed, as we gaze into nature we see nothing other than the magnificent plan of our own spirit. It is not enough to gain only knowledge of this plan. That knowledge must be forged into activity and deed until we are able to truly enter into the being of nature. This is the goal of man — to become a god.

> *What is nature? — A systematic, encyclopedic index or plan of our spirit. Why do we wish to content ourselves with a mere catalog of our treasures? — Nature allows us to view ourselves — and to employ and elaborate the list in diverse ways. The destiny that presses in on us is the indolence of our spirit. Through expansion and cultivation of our activity, we will transform ourselves into our destiny.*

> *All appears to stream in towards us, because we do not stream out. We are negative because we desire; the more positive we become, the more negative will be the world around us — until in the end there will be no more negation, but we are all in all.* God desires Gods.

Novalis speaks here not only of nature as a macrocosm reflection of our spirit, but also of what we may learn fro nature. More than mere lists of her treasures can be gleaned we waken our indolent spirits. Once awakened we ca transform our destiny; self-development can replace the u conscious degeneration of mankind.

Magic Idealism

Earlier we saw that Novalis moved through several wor systems. Out of this searching came the conviction that could carry on where others had faltered. His synthesis called magic idealism, conjoining transcendental knowled with the power to transform our world. In the idealist philosophies of Kant, Fichte and Schelling, Novalis saw th beginnings of a road which he too could travel. From the ofte materialistic philosophies of the Enlightenment, a different roa was now being taken.

> *Thence the road leads to Kant, thence to Fichte, and at last to magic idealism.*

Others besides Novalis had and would continue to participa in the development of magic idealism. Goethe in particular *"the first physicist of his time,"* was seen by Novalis as penetratir the secrets of the world as only Plotinus had done before hin

> *Goethe is to become the liturgist of this physical science — he understands the temple service perfectly.*

Yet Goethe's method of patient and careful observation natural phenomena, of seeking the unity or law within th phenomena themselves as archetypal phenomenon and not i

abstract theory, this was not entirely the method of Novalis. His path was more inward. The objects and phenomena of nature were to be "poeticized." In a letter to A. Schlegel he wrote:

> *All the sciences must be poeticized — of this real scientific Poetry, I hope to converse with you extensively. A main thought in this is the idea of religion in my fragments.*

Fichte had begun the process of transcendentalizing science. Novalis sought to continue it.

> *The twofold universality of every science: One universality is created if I make use of all other sciences to build up the particular one; the other if I make the particular science into the universal science — all other sciences I consider as its modifications. Fichte undertook the first attempt of the latter type with his philosophy. This should be undertaken in all sciences.*

Thus, in Novalis' view, to become a true scientist one must reach beyond the particular to the universal science. This could only be possible if one reaches beyond merely sensory substances and forces to purely imaginative ones, for there lies reality. Only with a "logical physics" of imaginative substances and forces can the cosmos be ordered.

> *We will become physicists only when we make imaginative materials and energies into the regulative measure of natural substances and forces.*

Elsewhere he writes:

> *The concepts matter, phlogiston, oxygen, gas, force and so on belong in a* logical physics *which knows nothing of concrete substances; rather it wilfully siezes world-chaos with a daring hand — and makes its own order.* Physics of Plotinus.

Or again:

> *All names are dark and without meaning which do not embody a particular definition or bring their meaning with them, for example carbon, oxygen and so on. Physics is still not on the right track as long as it does not simultaneously proceed in an imaginative, unhindered, and yet rigorous and concise fashion. In true philosophy,* creatio rationalis *alone can bring salvation.*

Finally:

Physics is nothing but the teaching of the imagination. The power of the imagination transcends the sphere of mechanism by dealing with pure thoughts, images or experiences. Imagination must supplant cold reason as the organ of physics.

> *A* pure *thought — a* pure *image — a* pure *experience are thoughts, images and experiences which are not* aroused *by a corresponding object, etc., but have risen outside of the so-called mechanical* laws *— the sphere of mechanism. The imagination is such an extra-mechanical power.*
> *Magic or "syntheticism" of the imagination.*
> *Philosophy here appears entirely as magical idealism. Has nature always been* lawful, *and will she always remain* lawful?

Throughout these fragments we witness Novalis' struggle toward an ideal, universal and imaginative science. Pure mathematics appeared to him a likeness of that future science, a paradigm to be imitated.

Pythagorean Harmonies

Mathematics has been held as sacred by some since at least the time of Pythagoras. It was considered as preparatory to initiation because it freed thought life from the bonds of the sense world. It stood as a half-way house on the way to the Forms of Platonic philosophy. Not surprisingly Novalis saw a similar significance in mathematics. It could lift one beyond the mundane world into realms eternal. When his ill brother Erasmus wrote that he was taking up the study of mathematics, Novalis responded warmly.

Your resolve to study algebra is certainly very healthy. The sciences have wonderful healing forces — at least, like opium, they silence pains and raise us into spheres permeated by an eternal sunlight. They are the most beautiful asylum to which we are granted access. Without this comfort I would and could not live. How could I have stood so calmly watching Sophie's illness for the past year and a half without them. . . . Come what will, the sciences remain with me — with them I hope to withstand all of life's hardships.

Not only could mathematics act as a source of comfort in the midst of tragedy, as for example in the tragic death of Novalis' beloved Sophie, but its application to any field heightened that field. Although our present mathematics may be modest and specialized, in the future it will take on a grand and exhalted form.

The mathematics of forces is mechanics.
The mathematics of forms is geometry.
The mathematics of light is optics.
The mathematics of sight is perspective. . .
All sciences should become mathematics.
Current mathematics is only the first and simplest revelation of the true science of spirit.
The number system is the mode of a proper system of speech. — Our letters should become numbers, our speech arithmetic.
What did the Pythagoreans understand by the number forces?

Or in another place Novalis writes:

Current mathematics is little more than a special empirical Organon or instrument.
True mathematics is the proper element of the Magi.
The life of the gods is mathematics.
Pure mathematics is religion.
In the Orient true mathematics is at home. In Europe it has degenerated into mere technique.

The mathematics which is so dry and abstract for many, sang to Novalis of the harmonious life of the gods. It could become religion itself. In this he was like the ancient Magi and Pythagoreans. Just this observation has been expressed by Steiner when speaking of the ancient star-world of the Magi.

The average man is prosaic enough to see the world as empty and abstract. . . . The exquisite Novalis sings of it because something of an echo still lives in him of what this world was . . . the old light-filled, star-world.[5]

Elsewhere Steiner speaks again of Novalis' profound experience of mathematics.[6] Steiner describes the mathematical process as the last remnants of a living, inner process still active in the growth forces of childhood until the seventh year. Our own experience of mathematics is usually abstract. Yet it need not and, indeed, should not remain so.

One must have struggled through, as Novalis had, in order to wonder at the inner harmony and melody of mathematics.
Then something new enters into one's experience of mathematics.

The new experience, one which Novalis had, is a *conscious* sense of what is active in the child but remains unconscious. When deepened still further, beyond what Novalis was able to achieve, a new faculty of cognition appears:

In this higher experience of mathematics one comes to know Inspiration.

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[5] R. Steiner, *Die Suche nach der neuen Isis der göttlichen Sophia*, (Verlag der Rudolf Steiner-Nachlassverwaltung, Dornach/Switzerland, 1961) December 25, 1920, p. 48.

[6] R. Steiner, *Grenzen der Naturerkenntnis*, September 29, 1920, translated by Frederick Amrine.

Novalis envisioned his magic idealism as a potent force for the shaping of nature. Magic, we should recall, had as its task the shaping by man of earthly events through supernatural means. It is only through his knowledge of nature that man has the power to shape her, for good or for ill. "Human knowledge and human power meet in one. . . . *Nature to be commanded must be obeyed."*[7] These words of Bacon's foreshadowed the dramatic effects technology was to have on nature. Magic idealism was also to have the power for transformation, the power to heal. Just because his was a universal and transcendental science, Novalis saw magic idealism as essential for the great task before us, the moral and spiritual rejuvenation of nature and of civilization. In every major work, Novalis recalls to us a bygone Golden Age wherein man and nature dwelt in union so complete that speech itself then could shape nature as a formative and generative agent. At the end of *The Disciples at Sais* we learn of the travelers' hope that the Master of Sais can tell them something of that ancient tongue whose "enunciation was a miraculous chant whose sounds penetrated deep into the core of each nature and analysed it." While revering the past, Novalis looked energetically to the future. He prophesied a new Golden Age attainable through a transformation of nature and man. In this new age all of man's activities would become true art: in the commonplace we will sense, indeed know the divine, and the divine will be brought down into the mundane. The spiritual and earthly realms will be harmoniously entwined through man as citizen of both worlds. The foundation of a new Jerusalem.

> *The world must be romanticized. In this way one rediscovers the original meaning. Romanticizing is nothing other than a qualitative potentization. In this operation the lower self becomes identified with a better self — just as we ourselves are a series of such qualitative potentizations. This operation is still entirely unknown. By giving the common-place a high meaning, the familiar a secret aspect, the finite the appearance of the infinite; thus do I romanticize it. — The operation is just the opposite for the high, the unknown, the mystical, the infinite — it becomes "logarithmitized" through this process. — It receives a familiar countenance, romantic philosophy.* Lingua romana. *Reciprocal exaltation and descent.*

The redemption of nature found its epitome in the redemption of man when God became man in Christ.

> *If God can become man He can also become a stone, a plant, an animal, an element, and perhaps there is in this way a progressive redemption of Nature.*

We stand as the link between the cosmic and the earthly.

> *Mankind is, as it were, the higher sense of our planet, the eye which it raises heavenward, the nerve that binds this planet with the world above.*

Thus the task of rejuvenation falls to us.

> *Man is the Messiah of Nature.*

Novalis' science is not a passive one limited to sensory phenomena. Rather, his vision seeks a truly universal science which will lead to the transformation of man, his destiny, and of the worlds about him, spiritual and physical. Only man's own activity borne out by the insights of magic idealism will carry civilization to its destined renewal. The world must be romanticized!

No short essay can do justice to the variety and depth of Novalis' thought. Yet in bringing together a few of his reflections on nature and science, and on man's responsibilities, I

[7] F. Bacon, *The New Organon* (Liberal Arts Press, N.Y., 1960) p. 39.

hope we might recognize Novalis as a struggling pioneer of genius in the founding of a new culture. Rudolf Steiner termed it the Michael culture.

> *Michael culture. . . . If we move through the world with the consciousness that with every look we direct outward, with every tone we hear, something spiritual, something of the nature of the soul streams into us, and that at the same time we let our soul element stream out into the world, we have gained the consciousness which mankind needs in the future.*[8]

The Stars spake once to Man.
It is World-destiny
That they are silent now.
To be aware of the silence
Can become pain for earthly Man.

But in this deepening silence
There grows and ripens
What Man speaks to the Stars.
To be aware of this speaking
Can become strength for Spirit-Man.

Rudolf Steiner,
given to Marie Steiner, Christmas, 1922

[8] R. Steiner, *The Mission of the Archangel Michael*, translated by Lisa Monges (Anthroposophic Press, N.Y., 1961) November 30, 1919.

From FRAGMENTS

NOVALIS

Translations by Thomas Carlyle

The division of philosopher and poet is only apparent and to the disadvantage of both. It is a sign of disease and of a sickly constitution.

The spirit of Poesy is the morning light, which makes the statue of Memnon sound.

The true poet is all-knowing; he is an actual world in miniature.

Our life is no dream, but it may and will perhaps become one.

Man is the higher sense of our planet, the star which connects it with the upper world, the eye which it turns towards heaven.

Man is a sun; his senses are the planets.

A character is a completely fashioned will.

There is but one temple in the world, and that is the body of Man. Nothing is holier than this high form. Bending before men is a reverence done to this revelation in the flesh. We touch heaven, when we lay our hand on a human body.

Every beloved object is the center of Paradise.