

GOETHE'S NATURE PHILOSOPHY.

BY THE EDITOR.

GOETHE disliked the jealousy of the God of the Jews who would not tolerate other gods beside himself. He loved Jacobi for his positive Christian conviction, and was only alienated from him through his friend's narrowness, but even then he never ceased to appreciate his character and to cherish his regard.

Jacobi wrote to Goethe on December 28, 1812, "I am sorry that my booklet *On divine Things* has 'pretty much indisposed' you. Perhaps you will read it over once more after a year's time and I sincerely hope that you will. I do not believe, as you do, that we are constantly diverging, but that my love for you can not die, you should know."

Goethe answered this kind letter of his friend on January 6, 1813:

"Men are united by convictions; they are separated by opinions. The former are units in which we come together, the latter are manifolds in which we become dispersed. . . . The friendships of our youth are founded on the former; our differences in an advanced age are due to the latter. As to myself I can not, considering the diverse directions of my nature, be satisfied with one way of thinking. As a poet and artist I am polytheistic, as a naturalist I am pantheistic, and I am the one as decidedly as the other. In case I needed a God for my personality as a moral being, I should be provided therewith. Heavenly and earthly things comprise such a wide realm that they can be covered only by the activity of all taken together. You see such is my case, and in this way I work entirely within and without myself, and I desire that every one else should do the same. Only when what is indispensable for my own being and doing is treated by others as subordinate, unreal or even obnoxious, do I permit myself for some moments to be cross, nor do I conceal it from my friends or those who are near me.

The mood soon passes and though I may be headstrong in my own way, I beware of a reaction."

After Jacobi's death in 1819, Goethe sums up his view of him as follows: "Jacobi thought first of spirit, I of nature. We were separated by what should have united us, but the first ground of our relations remained unshaken. Our inclination, love and confidence remained constant, yet the loving interest became gradually less and finally disappeared. During our later labors we never again exchanged a friendly word. Strange that persons who cultivate the powers of thought, could not become clear concerning their mutual relations, that they allowed themselves to be disturbed through a mere onesidedness of speech, by antagonistic thought and error that could easily be removed; Why did we not say in season, 'Who wants the highest, must will the whole; who speaks of spirit must presuppose nature; who speaks of nature must presuppose spirit, or if not presuppose, must tacitly assume it. We can not separate thinking from thought, will from what is willed.' Had we tried to understand one another we might have gone through life hand in hand, instead, as is now the case, at the end of our careers when contemplating our paths trodden in separation, with a kindly and even cordial, but none the less actual, regret."

Goethe expressed his world-conception in a prose poem on nature which is published as "A Fragment" in the first issues of the *Journal* of Erfurt in 1782, a periodical which was not printed but written by hand in eleven copies, and circulated in the select circles of Weimar. This fragment is a remarkable piece of poetic prose, characteristic of Goethe the pantheist, and reads as follows:

GOETHE'S RHAPSODY ON NATURE.*

"Nature! By her we are surrounded and encompassed—unable to step out of her and unable to enter deeper into her. Unsolicited and unwarned, she receives us into the circle of her dance, and hurries along with us, till we are exhausted and drop out of her arms.

"She creates ever new forms; what now is, was never before; what was, comes not again—all is new, and yet always the old.

"We live in her midst, and are strangers to her. She speaks with us incessantly, and betrays not her mystery unto us. We affect her constantly, and yet have no power over her.

"She seems to have contrived everything for individuality, but cares nothing for individuals. She builds ever and ever destroys, and her workshop is inaccessible.

* Translated by the author.

"She lives in children alone; and the mother, where is she? She is the only artist: from the simplest subject to the greatest contrasts; without apparent effort to the greatest perfection, to the precisest exactness—always covered with something gentle. Every one of her works has a being of its own, every one of her phenomena has the most isolated idea, and yet they all make one.

"She acts a play on the stage: whether she sees it herself we know not, and yet she plays it for us who stand in in the corner.

"There is an eternal living, becoming, and moving in her, and yet she proceeds no farther. She transforms herself forever, and there is no moment when she stands still. Of remaining in a spot she does not think, and attaches her curse to standing still. She is firm; her step is measured, her exceptions rare, her laws unalterable.

"She has thought, and is constantly meditating; not as a man, but as nature. She has an all-embracing mind of her own, and no one can penetrate it.

"All men are in her, and she is in all. With all she carries on a friendly game, and rejoices the more they win from her. She plays it with many so secretly, that she plays it to the end ere they know it.

"The most unnatural is also nature; even the stupidest Philistinism hath something of her genius. Who sees her not everywhere, sees her nowhere aright.

"She loves herself and clings ever, with eyes and hearts without number, to herself. She has divided herself in pieces in order to enjoy herself. Ever she lets new enjoyers grow, insatiable to impart herself.

"She delights in illusion. Whoever destroys this in himself and others, him she punishes as the strictest tyrant. Whoever trustfully follows her, him she presses like a child to her heart.

"Her children are without number. To no one is she altogether niggardly, but she has favorites upon whom she squanders much, and to whom she sacrifices much. To greatness she has pledged her protection.

"She flings forth her creatures out of nothing, and tells them not whence they come, nor whither they are going. Let them only run; she knows the way.

"She has few springs, but those are never worn out, always active, always manifold.

"Her play is ever new, because she ever creates new spectators. Life is her finest invention, and death is her artifice to get more life.

"She veils man in darkness, and spurs him continually to the

light. She makes him dependent on the earth, dull and heavy, and keeps rousing him afresh.

"She gives wants, because she loves motion. The wonder is that she accomplishes all this motion with so little. Every want is a benefit; quickly satisfied, quickly growing again. If she gives one more, it is a new source of pleasure; but she soon comes into equilibrium.

"She sets out every moment for the longest race, and is every moment at the goal.

"She is vanity itself, but not for us, to whom she has made herself the greatest weight.

"She lets every child tinker upon her, every fool pass judgment on her, thousands stumble over her and see nothing; and she has her joy in all, and she finds in all her account.

"Man obeys her laws, even when he strives against them; he works with her even when he would work against her.

"She makes of all she gives a blessing, for she first makes it indispensable. She lags, that we may long for her; she hastens, that we may not grow weary of her.

"She has no speech or language; but she creates tongues and hearts through which she feels and speaks.

"Her crown is love. Only through it can one come near her. She creates gaps between all things, and is always ready to engulf all. She has isolated all, to draw all together. By a few draughts from the cup of love she makes up for a life full of trouble.

"She is all. She rewards herself and punishes herself, delights and torments herself. She is rude and gentle, lovely and terrible, powerless and almighty.

"All is always *now* in her. Past and future knows she not. The present is her eternity.

"She is kindly. I praise her with all her works. She is wise and quiet. One can tear no explanation from her, extort from her no gift, which she gives not of her own free will. She is cunning, but for a good end, and it is best not to observe her cunning.

"She is whole, and yet ever uncompleted. As she plies it, she can always ply it.

"To every one she appears in a form of her own. She hides herself in a thousand names and terms, and is always the same.

"She has placed me here, she will lead me away. I trust myself to her. She may manage it with me. She will not hate her work. It is not I who spake of her. No, both the true as well as the false, she has spoken it all. All the guilt is hers, and hers all the merit."

Many years after this rhapsody was written, the Chancellor of Saxe-Weimar, Herr Müller, again submitted the manuscript to Goethe, who had forgotten all about it. In the meantime he had modified his views, or rather emphasized another point in his world-conception, and so he looked upon his former thought as unsatisfactory. It was to him a comparative that ought to be superceded by a superlative. Yet it is understood that the superlative surpasses the comparative without suppressing it.

In 1782 Goethe as a pantheist believed in nature and in the divinity of nature in which we live and move and have our being, but in later years he says concerning his view at this time: "Nature here does not move forward, she remains the same. Her laws are unchangeable. Nature places me within life; she will lead me out of it, and I confide in her." Without objecting to his former belief, he has now learned to appreciate progress in nature. He sees that by "polarity" and by "gradation" nature produces a tendency *sursum*, involving a constant metamorphosis. His investigations in natural science taught him that man is kin to the animal, that he has risen from the animal kingdom, and that consequently he is capable of rising higher and higher. The thoughts of man's lowly origin and his kinship to the animal world are not depressing to him, but on the contrary elevating. He sees in them the promise of man's unlimited possibilities, but this idea is not expressed in his fragment on "Nature." So he adds to it an "Elucidation to the Aphoristic Essay on Nature," under the date of May 24, 1828, addressed to Chancellor Von Müller as follows:

"This essay was sent to me a short time ago from among the papers of the late revered Duchess Anna Amalia; it is written by a familiar hand, of which I was accustomed to avail myself in my affairs, in the year 1780 or thereabouts.

"I do not exactly remember having written these reflections, but they agree very well with the ideas which had at that time become developed in my mind. I might term the degree of insight which I then possessed, a comparative one, which was trying to express its tendency towards a superlative not yet attained.

"There is an obvious inclination to a sort of Pantheism, to the conception of an unfathomable, unconditioned, humorously self-contradictory being, underlying the phenomena of nature; and it may pass as a jest, with a bitter truth in it.

"What it lacks, however, to make it complete is the consideration of the two great driving wheels of nature: the ideas of polarity and of gradation, the first pertaining to matter in so far as we con-

ceive it as material, the second on the other hand pertaining to spirit in so far as we conceive it as spiritual; the one exists in continuous attraction and repulsion, the other in constantly aspiring to a higher stage. But because matter can not exist efficiently without spirit nor spirit without matter, matter is also capable of advancement just as spirit is not prevented from attracting and repelling; as only those can understand who have analysed sufficiently to be able to make combinations, or have made enough combinations to be able to analyse again.

"In those years when the above mentioned essay was probably written I was chiefly occupied with comparative anatomy, and in 1784 took great pains to arouse sympathy with my conviction that man's possession of an intermaxillary bone was not to be disputed. Even very good thinkers would not investigate the truth of the assertion and the best observers denied its importance and as in so many other matters I had to secretly pursue my own way.

"I studied with unremitting effort the versatility of nature in the vegetable kingdom, and was fortunate enough when in Sicily in 1787 to become acquainted objectively with the metamorphosis of plants as well as in the abstract conception. The metamorphosis of the animal kingdom bordered on that of plants, and in 1790 in Venice I discovered the origin of the skull from vertebræ. I now pursued more eagerly the construction of the type, dictated the formula to Max Jacobi at Jena in 1795, and soon had the pleasure of seeing my work taken up by German naturalists.

"If we consider the high achievements by which all the phenomena of nature have been gradually linked together in the human mind; and then, once more, thoughtfully peruse the above essay, from which we started, we shall, not without a smile, compare that comparative, as I called it, with the superlative which we have now reached, and rejoice in the progress of fifty years."

It is well known that Goethe was an evolutionist, or as he would have called himself, a transformationist. He believed in the plasticity of life and he became firmly convinced that all plants were mere variations of one general type. They are all kin and their variety of form can be explained by metamorphosis or transformation. His enthusiasm for this idea found expression in lines addressed to his wife Christine under the title "The Metamorphosis of Plants." Unfortunately the poem is written in the ponderous meter of elegiac distich. It reads:

THE METAMORPHOSIS OF PLANTS.*

"Thou art confused, my beloved, at seeing the thousandfold medley,
 Shown in this flowery mass, over the garden dispersed;
 Many a name, love, thou hearest assigned; one after another
 Falls on thy listening ear, with a barbarian sound.
 None of these forms are alike but they all bear a certain resemblance,
 And a mysterious law is by their chorus revealed.
 Yea, 'tis a sacred enigma, my loveliest friend; could I only
 Happily teach thee the word, which will the mystery solve!
 Closely observe how the plant is developing little by little,
 How it will grow by degrees changing to blossom and fruit!
 First from the seed it unravels itself, as soon as the silent,
 Motherly womb of the earth kindly allows its escape,
 And to the charms of the light, which is holy and ever in motion,
 Trusteth its delicate leaves, feebly beginning to shoot.
 Simple the force is that slumbers in seeds; 'tis a germ of the future,
 Peacefully locked in itself, 'neath the integument hid,
 Leaflet, and rootlet, and bud, still void of all color, and shapeless,
 Such as the kernel, while dry, holdeth in motionless life.
 Upward then striveth the plant and it swelleth with delicate moisture,
 Forth from the night where it dwelt, straightway ascending to light
 Simple remaineth its shape, when the green first makes its appearance;
 And 'tis a token like this, points out the child 'mid the plants.
 Soon though an off-shoot, succeeding it, rises on high, and repeateth,
 Piling up node upon node, ever the primitive form;
 Yet not always alike: for the following leaf, as thou seest,
 Ever produceth itself, fashioned in manifold ways,
 Longer and more indented, in points and in parts more divided,—
 Forms which were latent till now, sleeping in organs below.
 So it attaineth at length its predestined and noble perfection,
 Which in these numerous forms, fills thee with wondering awe.
 Ribbed it appears here and toothed, on its surface exuberant swelling,
 Free and unending the shoot seemeth in fulness to be;
 Nature, however, restraineth with powerful hand the formation,
 And she perfecteth the plant, gently completing its growth,
 Yielding the juices with lesser abundance, contracting the vessels,
 So that the figure ere long nobler effects will disclose.
 See how the growth of the foliage here on the edge is retarded,
 While there the rib of the leaf fuller becometh in form.
 Leafless, however, and quick the tenderer stem then upspringeth,
 And a miraculous sight will the observer enchant.
 Ranged in a circle in numbers that now are but small, and now countless,
 Gather these delicate leaves close by the side of their like,

* First printed in Schiller's *Musen-Almanach* for 1799, but probably written nine years before that date, simultaneously with Goethe's treatise entitled "An Essay to Explain the Metamorphosis of Plants" (1790). This made no favorable impression but elicited only vehement contradiction on the part of specialists. In order to prepare the public for his ideas Goethe wrote this poem. If, as we must assume, this is correct, his "beloved" mentioned in the poem has reference to Christine Vulpius, afterwards his wife.

Here at the axis embraces them all the well sheltering calyx
 Which the corolla presents, brilliant in hue and in form.
 Nature thus decks them with bloom in a noble and radiant glory,
 Showing, in order arranged, branches with leaves and with buds.
 Wonderment fresh dost thou feel, as soon as the stem rears the flower
 Over the scaffolding frail fringed with its alternate leaves.
 Flowers, however, are only the prophets of further creation,
 Truly the leaf with its hues feeleth the touch of a god.
 It on a sudden contracteth itself; the tenderest figures,
 Stand as yet twofold, divided, but soon will they haste to unite.
 Lovingly then the fair couples are joined in a bridal alliance,
 Gathered in countless array, there where the altar is raised.
 Hymen is hovering o'er them, and scents of an odor delicious
 Sweetly their fragrance exhale for the delight of the world.
 Presently numberless germs on the several branches are swelling,
 Sweetly concealed in the womb, where is made perfect the fruit.
 Here, we see, Nature is closing the ring of her forces eternal;
 And it attacheth a new link to the one gone before,
 So that the chain be prolonged forever through all generations,
 And that the whole may have life, e'en as enjoyed by each part.
 Now, my beloved one, turn thou thy gaze on the many-hued thousands
 Which confuse thee no more; for they will gladden thy mind.
 Every plant unto thee proclaimeth the law everlasting,
 Every floweret speaks louder and louder to thee;
 But if thou here canst decipher the sacred design of the goddess,
 Everywhere will it be seen, e'en though the features are changed.
 Caterpillars are sluggish, and busily butterflies flutter,—
 Man however may change even the figure decreed.
 Oh, then, bethink thee, as well, how out of the germ of acquaintance,
 Gradually habits arose. Seeking each other we met,
 Verily friendship and love began to flame up in our bosoms,
 Finally Amor procured wondrously blossom and fruit!
 Think of the manifold touches which Nature hath lent to our feelings,
 Silently giving them birth, all of them different in form!
 Yea, and rejoice thou to-day in the present! For love that is holy
 Seeketh the noblest of fruits,—which is a concord of thought,
 When our opinions agree,—thus we both will in rapt contemplation,
 Lovingly blending in one,—find a more excellent world."

After Bowring's translation.

Goethe laid more stress on the thoughts of this poem than his contemporaries, and he was greatly displeased that his friends did not see the same deep meaning in it which he had tried to express. He was not less unfortunate with another argument in favor of man's kinship to the animal world which aroused a storm of indignation and of controversy, but the truth of which has since then been recognized. In Goethe's time naturalists maintained that the essential difference between human and animal skeletons was the absence of the intermaxillary bone in the human jaw. Goethe succeeded in

pointing out the existence of this bone, by showing that it had coalesced so thoroughly as to conceal its separate character. The existence of this intermaxillary bone remained a guarantee to Goethe of the truth of the theory of evolution as well as of the interrelation of all life on earth, and this opened to him the great vista of greater possibilities in man's future.

Goethe gave a poetic expression to these thoughts in "Metamorphosis of Animals" presumably written in 1806, in which, besides teaching the theory later on propounded by Lamarck that habits determine the forms of life, he emphasizes mainly the ethical aspect of the plasticity of nature and points out that perfection can be attained only by imitation.

The "Metamorphosis of Animals" (written in hexameters, not in distichs) in spite of its importance has never as yet been translated. We offer the following version:

THE METAMORPHOSIS OF ANIMALS.

"Durst ye ascend to the peak, to the highest of heights on the summit?
Well, then, I proffer my hand, and here you behold from this outlook
O'er the wide province of nature a view. Oh see, how the goddess
Spendeth so richly her gifts! Yet worries she not as do mortal
Mothers who, filled with anxiety, care for the fate of their children.
'Twould not behoove her. She guards the young life by laws that are twofold.
This is her highest degree: She limits the scope of each creature,
Gives it a limited want yet supplies it with means without limit,
Easily found and supplied. In motherly kindness she favors
Those of her children who earn her affection by daring endeavor.
Untrained they swarm into life, each obeying its own inclination.

"Truly's each creature itself its own purpose, for nature creates it
Perfect; and it in its turn begets progeny that will be perfect.
Organs and members are shaped according to laws everlasting,
Even the oddest formation its prototype latent preserveth.
Thus each mouth is adapted to seize the right food and to swallow
That which is fit for its stomach,—the one may be tender and toothless,
While there are others with powerful jaws; but one organ
Always for proper nutrition will cooperate with the others.
Also the feet to the needs of the body are wisely adjusted,
Some of them long, while others are short, in perfect proportion.
Thus the kind mother assureth to each of her several children
Health in good store; and the organized limbs of each animate being,
Always will work for the whole, and ne'er counteract one another.
Therefore the shape of a creature determines its life and its habits,
While *vice versa* the habits of life will react on the organs
Potently. Any formation possesses a definite order
Which yet is subject to change through external effects and conditions.

But in the innermost self of the noblest of nature's creations
 Lieth their power, confined to a holy mysterious circle.
 And these limits removeth no god; they are honored by nature,
 For limitation alone makes possible highest perfection.

"Yet in the innermost self a spirit titanic is also
 Stirring, which fain would arbitrarily break through the circle,—
 Bold innovation begetting new forms! But in vain it aspireth.
 See how it swelleth one part, it endoweth with power
 One for all others, and lo the result! Those others must suffer.
 Thus a onesided preponderance taketh away the proportion,—
 Yea, it destroys all beauty of form and harmonious motion.
 Seest thou then that a creature has preference gained over others
 Look for the shortage at once and seek with confiding inquiry.
 Then, thou, at once, wilt discover the key for the varied formations;
 As, for example, no animal beareth a horn on its forehead,
 If in its jaw it possesseth its teeth in perfect completion,
 Wherefore our mother eternal e'en if she endeavored to do so,
 Could not in all her creation engender such forms as horned lions.
 There's not enough in amount for constructing the horns on the forehead,
 And in the mouth the formation of teeth that are perfect in number.

"'Tis a most beautiful thought to have power and self-limitation,
 Liberty and moderation, free motion and law, and all plastic
 Preference offset by want! O rejoice that the Muses have taught thee
 Gently for harmony's sake to yield to a wholesome compulsion,
 For there's no ethical thinker who finds aspirations sublimer.
 Truly the man of great deeds, the artist, the poet, the ruler,
 He who deserves so to be, thus only his worth can acquire.
 Highest of creatures, rejoice! for thou, thou alone, comprehendest
 Nature's sublimest idea; and what at her best she created
 Thinkest thou over again. Here take thou thy stand and look backward,
 Prove all things and compare, and learn from the Muse what she teaches,
 Better than raving by far is assured and approved comprehension."

The two poems on the metamorphosis of plants and animals appear in the usual editions of Goethe's poetry framed in by three little poems entitled "Parabasis," "Epirrhema," and "Antepirrhema," which strange-sounding titles are chosen in imitation of a custom of the chorus of the Greek stage, whose leader, the so-called Corypheus, addressed the public in a general adhortation not necessarily connected with the plot of the drama. The first address "Parabasis" is followed by the "Epirrhema," a kind of epilogue, and the "Antepirrhema" a counter-epilogue. Like several other philosophical poems of Goethe here quoted they are now translated for the first time.

PARABASIS.

"Joyous, as it me behooveth,
 Did for years my soul aspire
 To experience and inquire
 How creative nature moveth.

"Tis the eternal one and all
 Which appears as manifold,
 Small things great are, great things small,
 Everything has its own mould.

"Same remaining in mutations,
 Near and far and far and near,
 Forming thus by transformations,
 For amazement am I here."

EPIRRHEMA.

"Take in nature-meditation,
 Each and all in contemplation,
 Naught is inside, naught is out,
 For the inside is without.
 Thus shall comprehended be
 Holy open mystery.

"Truth of semblance pleasure giveth,
 So doth serious play.
 Merely one naught is that liveth,
 'Tis a manifold alway."

ANTEPIRRHEMA.

"Behold how nature all achieves,
 How masterly her work she weaves.
 One treadle holds thousands of threads connected.
 Her shuttles hither and thither are flung.
 The fibers in both directions strung,
 And thousand transactions at once are perfected.

"This she has not by chance combined,
 But from eternity designed,
 So the eternal master may
 His web and woof with surety lay."