



## Nature

### Alexander von Humboldt

In considering the study of physical phenomena, not merely in its bearings on the material wants of life, but in its general influence on the intellectual advancement of mankind, we find its noblest and most important result to be a knowledge of the chain of connection, by which all natural forces are linked together, and made mutually dependent upon each other; and it is the perception of these relations that exalts our view's and ennobles our enjoyments. Such a result can, however, only be reaped as the fruit of observation and intellect, combined with the spirit of the age, in which are reflected all the varied phases of thought. He who can trace, through by-gone times, the stream of our knowledge to its primitive source, will learn from history how, for thousands of years, man has labored, amid the ever-recurring changes of form, to recognize the invariability of natural laws, and has thus, by the force of mind, gradually subdued a great portion of the physical world to his dominion. In interrogating the history of the past, we trace the mysterious course of ideas yielding the first glimmering perception of the same image of a Cosmos, or harmoniously ordered whole, which, dimly shadowed forth to the human mind in the primitive ages of the world, is now fully revealed to the maturer intellect of mankind as the result of long and laborious observation.

Each of these epochs of the contemplation of the external world—the earliest dawn of thought and the advanced stage of civilization—has its own source of enjoyment. In the former, this enjoyment, in accordance with the simplicity of the primitive ages, flowed from an intuitive feeling of the order that was proclaimed by the invariable and successive reappearance of the heavenly bodies, and by the progressive development of organized beings; while in the latter, this sense of enjoyment springs from a definite knowledge of the phenomena of nature. When man began to interrogate nature, and, not content with observing, learned to evoke phenomena under definite conditions; when once he sought to collect and record facts, in order that the fruit of his labors might aid investigation after his own brief existence had passed away, the philosophy of Nature cast aside the vague and poetic garb in which she had been enveloped from her origin, and, having assumed a severer aspect, she now weighs the value of observations, and substitutes induction and reasoning for conjecture and assumption. The dogmas of former ages survive now only in the superstitions of the people and the prejudices of the ignorant, or are perpetuated in a few systems, which, conscious of their weakness, shroud themselves in a veil of mystery. We may also trace the same primitive intuitions in languages exuberant in figurative expressions; and a few of the best chosen symbols engendered by the happy inspiration of the earliest ages, having by degrees lost their vagueness through a better mode of interpretation, are still preserved among our scientific terms.

Nature considered rationally, that is to say, submitted to the process of thought, is a unity in diversity of phenomena, a harmony, blending together all created things, however dissimilar in form and attributes; one great whole animated by the breath of life. The most important result of a rational inquiry into nature is, therefore, to establish the unity and harmony of this stupendous mass of force and matter, to determine with impartial justice what is due to the discoveries of

the past and to those of the present, and to analyze the individual parts of natural phenomena without succumbing beneath the weight of the whole. Thus, and thus alone, is it permitted to man, while mindful of the high destiny of his race, to comprehend nature, to lift the veil that shrouds her phenomena, and, as it were, submit the results of observation to the test of reason and of intellect.

In reflecting upon the different degrees of enjoyment presented to us in the contemplation of nature, we find that the first place must be assigned to a sensation, which is wholly independent of an intimate acquaintance with the physical phenomena presented to our view, or of the peculiar character of the region surrounding us. In the uniform plain bounded only by a distant horizon, where the lowly heather, the cistus, or waving grasses, deck the soil; on the ocean shore, where the waves, softly rippling over the beach, leave a track, green with the weeds of the sea; everywhere, the mind is penetrated by the same sense of the grandeur and vast expanse of nature, revealing to the soul, by a mysterious inspiration, the existence of laws that regulate the forces of the universe. Mere communion with nature, mere contact with the free air, exercise a soothing yet strengthening influence on the wearied spirit, calm the storm of passion, and soften the heart when shaken by sorrow to its inmost depths. Everywhere, in every region of the globe, in every stage of intellectual culture, the same sources of enjoyment are alike vouchsafed to man. The earnest and solemn thoughts awakened by a communion with nature intuitively arise from a presentiment of the order and harmony pervading the whole universe, and from the contrast we draw between the narrow limits of our own existence and the image of infinity revealed on every side, whether we look upward to the starry vault of heaven, scan the far-stretching plain before us, or seek to trace the dim horizon across the vast expanse of ocean.

The contemplation of the individual characteristics of the landscape, and of the conformation of the land in any definite region of the earth, gives rise to a different source of enjoyment, awakening impressions that are more vivid, better defined, and more congenial to certain phases of the mind, than those of which we have already spoken. At one time the heart is stirred by a sense of the grandeur of the face of nature, by the strife of the elements, or, as in Northern Asia, by the aspect of the dreary barrenness of the far-stretching steppes; at another time, softer emotions are excited by the contemplation of rich harvests wrested by the hand of man from the wild fertility of nature, or by the sight of human habitations raised beside some wild and foaming torrent. Here I regard less the degree of intensity than the difference existing in the various sensations that derive their charm and permanence from the peculiar character of the scene.

If I might be allowed to abandon myself to the recollections of my own distant travels, I would instance, among the most striking scenes of nature, the calm sublimity of a tropical night, when the stars, not sparkling, as in our northern skies, shed their soft and planetary light over the gently-heaving ocean or I would recall the deep valleys of the Cordilleras, where the tall and slender palms pierce the leafy veil around them, and waving on high their feathery and arrow-like branches, form, as it were, "a forest above a forest;" or I would describe the summit of the Peak of Teneriffe, when a horizontal layer of clouds, dazzling in whiteness, has separated the cone of cinders from the plain below, and suddenly the ascending current pierces the cloudy veil, so that the eye of the traveler may range from the brink of the crater, along the vine-clad slopes of Orotava, to the orange gardens and banana groves that skirt the shore. In scenes like these, it is not the peaceful charm uniformly spread over the face of nature that moves the heart, but rather the peculiar physiognomy and conformation of the land, the features of the landscape, the ever-varying outline of the clouds, and their blending with the horizon of the sea, whether it lies spread before us like a smooth and shining mirror, or is dimly seen through the morning mist. All that the senses can but imperfectly comprehend, all that is most awful in such

romantic scenes of nature, may become a source of enjoyment to man, by opening a wide field to the creative powers of his imagination. Impressions change with the varying movements of the mind, and we are led by a happy illusion to believe that we receive from the external world that with which we have ourselves invested it.

When far from our native country, after a long voyage, we tread for the first time the soil of a tropical land, we experience a certain feeling of surprise and gratification in recognizing, in the rocks that surround us, the same inclined schistose strata, and the same columnar basalt covered with cellular amygdaloids, that we had left in Europe, and whose identity of character, in latitudes so widely different, reminds us that the solidification of the earth's crust is altogether independent of climatic influences. But these rocky masses of schist and of basalt are covered with vegetation of a character with which we are unacquainted, and of a physiognomy wholly unknown to us; and it is then, amid the colossal and majestic forms of an exotic flora, that we feel how wonderfully the flexibility of our nature fits us to receive new impressions, linked together by a certain secret analogy. We so readily perceive the affinity existing among all the forms of organic life, that although the sight of a vegetation similar to that of our native country might at first be most welcome to the eye, as the sweet familiar sounds of our mother tongue are to the ear, we nevertheless, by degrees, and almost imperceptibly, become familiarized with a new home and a new climate. As a true citizen of the world, man everywhere habituates himself to that which surrounds him; yet fearful, as it were, of breaking the links of association that bind him to the home of his childhood, the colonist applies to some few plants in a far-distant clime the names he had been familiar with in his native land; and by the mysterious relations existing among all types of organization, the forms of exotic vegetation present themselves to his mind as nobler and more perfect developments of those he had loved in earlier days. Thus do the spontaneous impressions of the untutored mind lead, like the laborious deductions of cultivated intellect, to the same intimate persuasion, that one sole and indissoluble chain binds together all nature.

## FOR ANALYSIS

1. Paragraph 1 is a statement of Humboldt's main theme. What is that theme?
2. Humboldt writes that in the nineteenth century enjoyment of nature sprang from a definite knowledge of phenomena of nature. What does this statement tell you about the nineteenth century attitude toward science?
3. The new philosophy of nature, writes Humboldt, "substitutes induction and reasoning for conjecture and assumption." What does he mean by this? Can you illustrate his meaning by specific examples?
4. According to paragraph 4, what is the principal pleasure in the contemplation of nature?
5. What does Humboldt mean when he says that nature is "a unity in diversity of phenomena?" For him is this unity in diversity based on physical or spiritual factors? How indebted is he to the tradition of experimental science?

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