

David Kenosian

Scholars have observed that Alexander von Humboldt depicted nature as artistically as possible to appeal to a broad audience.¹ But I will show here that language is central to his epistemology of nature that guided his research in key works such as *Ansichten der Natur*, *Ideen zu einer Geographie der Pflanzen*, and his magnum opus, *Kosmos*. In a letter to Varnhagen von Ense, he asserts that a book on nature should produce an impression like nature itself (39).² To this end, he sought to create in his images of nature (“Naturgemälde”) an enhanced form of nature’s own language. Like his brother Wilhelm, he considers how language enables the human subject to render nature intelligible. Alexander in fact collected and published some of his brother’s essays on language in *Über die Verschiedenheit des menschlichen Sprachbaues*. I will argue that they see nature in terms similar to those expressed by Kant in section 42 of the *Kritik der Urteilskraft*:

The charms in natural beauty, which are to be found blended...so frequently with form, belong either to the modifications of light...or of sound....For those are the only sensations which permit not merely of a feeling of the sense, but also of reflection upon the form of these modifications of sense, and so embody as it were a language in which nature speaks to us and which has the semblance of a higher meaning.³

The individual perceives nature, Kant seems to say, as if it were not so much a passive object but as if it were a speaking subject.

1. See for example Cedric Hentschel, “Alexander von Humboldt’s Synthesis of Literature and Science,” *Alexander von Humboldt 1769/1969*, ed. Adolf Meyer-Abich, (Bonn, Bad Godesberg: Inter Nationes, 1969), 111.

2. Humboldt to Varnhagen von Ense, Berlin 24 October 1834, *Briefe Alexander von Humboldts an Varnhagen von Ense*, 23.

3. Immanuel Kant, *Kritik der Urteilskraft*, vol. 5 of Kants *Gesammelte Schriften*, ed. Königliche Preußischen Akademie der Wissenschaften (Berlin: Georg Reimer, 1910-55), 302.

In the quote, nature is in effect the foreign; it is different from us, yet it is capable of communicating with us. What makes it possible to have a dialogue with nature? How do we determine the higher meaning to which Kant refers? And how does language relate to Alexander Humboldt's views on art? The term that connects the different levels and stages of Humboldt's work is a Romantic notion of translation. For Humboldt, translation is a series of potentiations that begin with ordinary experience and encompass conceptualization. It can also be related to the idea of crossing the boundary between the familiar and foreign so as to enjoy intellectual enrichment. The German verb *sich übersetzen* means to cross a body of water and this is precisely what Humboldt did on his journey to the Americas. The roots of another verb for translating, *übertragen*, mean to carry across, an accurate term for the shipment of data and natural samples that Humboldt sent back to Europe. The prefix *über-* in both German terms for translation can also mean above and he sought to elevate the data he collected into a systematic unity. He believed that scientific views demanded a new kind of artistic writing that would depict nature as a dynamic and harmonious whole. It is in his *Ansichten der Natur*, his artistic treatment of the voyage, that he first fused science and art in poetic images of South American landscapes or "Naturgemälde," the term he later uses in *Kosmos* for his depiction of nature as a whole.⁴ Thus, translation circumscribes a process of self-positing whereby the subject raises or posits itself (*sich setzen*) and its object to a higher plane of knowledge.⁵

At its most basic level, Humboldt's notion of translation designates the conversion of our raw sense data into an image of nature. He cites Hegel's observation in the *Philosophie der Geschichte* that external phenomena are translated ("übersetzt") in our inner representations.⁶ Humboldt adds that through this act, the external world is blended, almost unconsciously with our thoughts and feelings. Hegel also links perception to feelings; he likens the process of translating nature to the poet's transformation of material supplied by his emotions.⁷ In this account, then, language establishes continuity among representation ("Vorstellung"), thought and verbal expression ("Darstellung").

To be sure, Alexander von Humboldt does not provide a language-based theory of consciousness. Still, we can find one in his brother's *Über die Verschiedenheit des menschlichen Sprachbaues*. Individuals begin to become

4. See Alexander von Humboldt, *Ansichten der Natur* (Stuttgart and Tübingen: Cotta, 1849).

5. Antoine Berman, *The Experience of the Foreign*, trans. S. Heyvaert (Albany: State University of New York Press, 1992), 108.

6. Alexander von Humboldt, *Kosmos*, (Philadelphia: F. W. Thomas & Söhne, 1869), 34-35. I will hereafter cite the text as *Kosmos*.

7. Georg Hegel, *Vorlesungen über die Philosophie der Geschichte*, vol. 5 of *Sämtliche Werke*, 20 vols. (Stuttgart: Fromann, 1927-40), 25.

aware of the world and of themselves as members of a community when they hear the voice of others. When someone speaks to me, her thoughts and emotions are conveyed by sound into my mind, just as nature enters our inner world in Alexander von Humboldt's discussion of Hegel.

The articulate sound is torn from the breast to awaken in an other individual an echo returning to the ear. Man thereby at once discovers that around him there are beings having the same inner needs, and thus capable of meeting the manifold longing that resides in his feelings.⁸

In other words, when we interact with a conversation partner, we become aware of a third entity, the community. Wilhelm argues that when we respond to an interlocutor, we are in a sense limited because a linguistic community impresses of mind upon its members a certain perspective ("Weltansicht"), i.e. systems of lexical distinctions between objects and states. But it is not only the community that is given through language: the dialogue makes us conscious of another entity, nature. Humboldt maintains that historically, nature is a third person that arises as a second opposition from the primary one between the I and the you.⁹

Limitation does not, however, stifle the creative potential of language. I use a shared vocabulary to express my unique experiences, innermost thoughts and feelings. Hence, a dialogue between two individuals is an exchange in which common terms are continually reinterpreted. Humboldt likens this negotiation to a musical performance.

People do not understand each other ...by mutually occasioning each other ("sich gegenseitig bestimmen") to produce exactly the same concept, they do it by touching in each other the same link in the chain of their sensory ideas and internal conceptualizations, by striking the same note on their mental instruments whereupon matching but not identical concepts are engendered in each.¹⁰

Communicability is ensured by a multi-faceted conception of harmony rooted in the voice ("Stimme"). The expression of our ideas and feelings contain the basis of outer consonance, the harmonizing impulse between speakers.¹¹ Humboldt explains that connected to the terms used by each speaker is a demand for more presentation and development upon the listener "to supply the missing element in accord with what is given."¹²

The voice not only creates a harmony between speakers: it also creates an inner consonance of language with the mental faculties within each speaker.

8. Wilhelm von Humboldt, vol. 7 *Gesammelte Schriften*, ed. Albert Leitzmann, 17 vols., (Berlin: Behr, 1903-36), 36-7.

9. *Ibid.*, 104.

10. *Ibid.*, 169-70.

11. *Ibid.*, 180.

12. *Ibid.* 55.

Indeed, the voice is related to an affective state of mind (in this case “Stimmung”) and cognitive determination (“bestimmen”). Those are the two intellectual processes which, according to Alexander von Humboldt, fuse with our translation of empirical reality when we have an experience of nature. Wilhelm notes that the highest level of reflective consciousness in language is inseparable from what he calls the purest attunement (“Zusammenstimmung”) of all our mental capacities.¹³ Conceptualization is a reflexive linguistic operation through which we give terms higher signification. Since thought begins when we assign a word to a mental event, either in conversation or in silent thought, thinking is inseparable from speech. Thus, our faculties operate as linguistic processes on ever higher levels. Sound deputizes the unity of an object because it becomes the bearer of all of the impressions that the object makes on our inner and outer sense.¹⁴ When we designate a thought with sound, that sound returns to our ear as a representation that we gather with similar ones to form a “manifold unity” and in this manner, we form concepts from representations.¹⁵ The con-sonance within inflected languages corresponds to the harmony among the faculties in the mind of the speakers. We become conscious of our own activity at the highest level of thought when we use inflected languages because inflections arise from the *right recognition* of the intuited.¹⁶ This recognition results when our power of reason reveals the structural affinity between nature and language.¹⁷

What links Wilhelm’s notion of dialogue with Alexander’s understanding of science is the idea of expressive force. For Wilhelm, the utterance is an external manifestation of the mind’s continuous intellectual or linguistic force (“Denkkraft” or “Sprachkraft”) while his brother sees natural phenomena as finite forms produced by the ongoing interaction between animate and inanimate forces. Alexander uses the term expressions of force (“Kraftäußerungen”) to denote properties of matter as well as the cultural achievements of nations.¹⁸ Similarly, Wilhelm von Humboldt describes the relationship between articulation and cognition in physiological terms: Just as thought seizes the mind, sound has a unique penetrating power that makes our nerves tingle.¹⁹ Their common interest in force goes back to 1794 when they collaborated on a series of experiments on animal electricity. Alexander wanted to determine to what extent life processes are responses to forces that

13. Ibid., 157.

14. Wilhelm von Humboldt, *Gesammelte Schriften* 7: 53.

15. Wilhelm von Humboldt, 7: 66, cf. Michael Losonsky, “Introduction” to *On Language* by Wilhelm von Humboldt, trans. Peter Heath (Cambridge, New York: Cambridge University Press, 1999) xvii.

16. Wilhelm von Humboldt, 7: 158; my emphasis.

17. Ibid., 61.

18. See for example *Kosmos*, 26.

19. Wilhelm von Humboldt, 7: 53.

cause irritation (“Reize”). He concluded that different kinds of irritation generated sensation, and in addition, specific feelings (“Stimmungen”).²⁰ Thus, irritation produce a sense of external reality and affective responses, the very same effects brought about by language. Though Alexander did little zoological research in South America, it is significant that his one major anatomical study dealt with the respiratory and vocal organs of animals.²¹ Thus, he was trying to understand how nature literally develops a voice.

More broadly, Alexander von Humboldt called for a language that would mirror his conception of nature. He defined nature as a harmonious whole, a unity in the manifold whose diversity could be explained by universal constitutive forces (e.g. chemical and physical) operating under different local circumstances and in varying combinations.²² Humboldt’s ideal language was one that would present nature as a totality while unifying the sciences. He argues that the fragmentation of disciplines leads to linguistic confusion: too many scientists use indeterminate terminology and incorrectly apply terms from other disciplines, thereby creating false analogies.²³ To use his brother’s terminology, he envisioned a language that would bring harmony to the sciences. Art, more specifically newer genres such as nature writing and poetry, solved two problems raised by the fragmentation of the sciences. It not only presented a livelier and clearer picture of nature than most scientific writing but also, and perhaps more importantly, offered a holistic conception of nature. He shares Schelling’s view that too many scientists see nature as a “dead aggregate” of an indeterminate quantity of objects. Instead, researchers should share with great artists the ability to understand how the part is meaningfully and organically related to a dynamic whole.²⁴ For Humboldt, the writing which best presents this kind of insight could be found in accounts of a few gifted travel writers such as Chateaubriand and Bernardin de St. Pierre who fashioned a poetic language which related the individual species and phenomena to the tropical world in its entirety.²⁵

Humboldt’s choice of genres is surely not accidental as the journey is, I contend, the controlling trope for the incorporation of new scientific knowledge into an expanding though cohesive body of thought. We should recall here that the journey is metaphorically signified by the term *übersetzen* and that the prefix *über-* signifies a dual upward and outward movement. In *Kos-*

20. Adolf Meyer-Abich, *Die Vollendung der Morphologie Goethes durch Alexander von Humboldts* (Göttingen: Vandenhoeck & Rupprecht, 1970), 122.

21. Ilse Jahn, *Dem Leben auf dem Spur: Die biologische Forschungen Alexander von Humboldts* (Leipzig, Jena, Berlin: Urania, 1969), 124.

22. *Kosmos* 7.

23. *Ibid.*, 383.

24. See Friedrich Wilhelm von Schelling, “Philosophie der Kunst in vol. 1 of *Werke*, ed. Wilhelm G. Jacobs, Jörg Jantzen und Walter Schieche (Stuttgart : Frommann-Holzborg, 1976-)1: 389.

25. *Kosmos*, 224.

mos, Humboldt links these two trajectories in the historical context of Europe's age of exploration. He argues that the new knowledge gained about the earth corresponded to the growing understanding of the laws of natural forces, the distribution of heat on the globe, and the variety of organisms.²⁶ The insights gained by voyagers are intuitions which researchers were able in time to merge into a concrete whole. Thus, he defines his own journey to South America as a continuation of that historical development though on a higher plane of knowledge. The expedition was a voyage into a foreign language in which he encountered new expressions of nature that furthered the activity of his mind much as the dialogue, according to his brother, stimulates our faculties and feelings.²⁷ More specifically, the natural wonders he observed produced in him powerful emotions or "Stimmungen," as his brother would have it. He later determined ("bestimmen") scientifically the phenomena that so moved him. In a letter to Karoline von Wolzogen from 1806, Alexander observed that he had an unknown feeling of exuberance in South America. Nevertheless, he came to realize that the awesome spectacles he witnessed were part of a global whole, and he credited Goethe's views of nature for giving him "new organs" that enabled to come to that understanding.²⁸ Humboldt is saying here that German thought prepared him for his work, conceivably because it attuned him to the natural world. In his discussion of notions of world harmony, Leo Spitzer points out that the German Romantic notion of "Stimmung" expresses the unity of feeling humans experience with their environment (i.e. other individuals or a landscape). Spitzer relates "Stimmung" to "gestimmtsein," a kind of attunement that "presupposes a whole of the soul in its richness and variability."²⁹

Humboldt himself thought that landscapes owe their unique character to their plant cover ("Pflanzendecke").³⁰ The term "cover" denotes a surface as well as an ensemble. The individual species is a unique manifestation of inner forces: Humboldt shared Goethe's view that each type has a specific amount of energy. The species develops in response to environmental factors and we can see in that notion of reciprocal relation a homology to Wilhelm von Humboldt's thoughts on inflected languages. In a sentence, the inflected word is a particular form whose meaning depends on its relation to the rest of the sentence. South American ecosystems were not so much unconnected sentences for Alexander von Humboldt as they were poems. In his *Ideen zu*

26. *Ibid.*, 311.

27. *Ibid.*, 9.

28. Alexander von Humboldt, "Brief an Karoline von Wolzogen" 14. May 1806, in *Alexander von Humboldt*, ed. Karl Bruhns 2 vols. (Leipzig: Brockhaus, 1872), 1: 417.

29. Leo Spitzer, *Classical and Christian Ideas of World Harmony*, ed. Anna Granville Hatcher (Baltimore: The Johns Hopkins University Press), 5-6.

30. *Kosmos* 183, cf. Malcolm Nicholson, "Alexander von Humboldt, Humboldtian Science and the Origin of the Study of Vegetation," *History of Science* 25 (1987), 177.

einer Geographie der Pflanzen, his first major work published after his expedition, he stated that the sensations produced by vegetation are closely linked to the effects which imitative arts and descriptive poetry have upon us. In contrast to the study of an individual species, he continues, the appreciation of the plant cover (“Pflanzendecke”) gives us a sense of a whole that stirs our imagination.³¹ Thus, in the context of his field work, he states that nature had a powerful effect on his emotions, imagination, and intellect. These are the very constituents of the aesthetic experience of nature in Wilhelm’s essay, “Über die Einbildungskraft” from 1798. The essay deals with the transformation of real objects into an image (“Bild”) in the imagination of poets and their audience. The imagination owes its special status in the arts because it makes present what is absent, presents what is immaterial as a sensible image, and enables us to transcend the experiential limits of time and space.³² Congruent with this, he compares the artist with a traveler who transports us to a new world.³³ Readers have the sense that they are in the midst of actual nature but at the same time, elevated above it (“über sie erhoben”).³⁴

In effect, Wilhelm has described his brother’s transformative reconstruction of South American nature poems, i.e. ecosystems, in his favorite text, *Ansichten der Natur*. Like the artist in “Über die Einbildungskraft,” Alexander strived to create images (“Bilder” and “Gemälde”) of the landscapes of the Americas as he explained in the preface to the first edition. His images are organized by category (steppes and desert, waterfalls, volcanoes and mountains) and are unified compositions, which depict the dynamic interplay of natural forces as they work in concert. One brief example from his account of the waterfalls of the Orinoco will illustrate how he tried to capture the constant interplay of natural forces with dynamic verbs.

Black cliffs emerge from the plains like ruins and fortresses. Every island, every stone is decorated with luxuriant forest trees. Thick mist hovers eternally over the surface of the water. The crowns of high palms reach up through the steaming cloud of foam. When the damp haze refracts the rays of the sun...colorful arches disappear and return.³⁵

I wish to stress that images such as these present the various stages of his research in condensed form. In *Kosmos*, he remarks that humans have always constructed an internalized image of the world by following inner echoes (“Anklänge”), but only a long process of “Bildung” enabled us to analyze and

31. Alexander von Humboldt, *Ideen zu einer Geographie der Pflanzen* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1963), 24.

32. Wilhelm von Humboldt, “Über die Einbildungskraft,” in *Poesie und Einbildungskraft*, ed. Klaus Müller-Vollmer (Stuttgart: Metzler, 1967), 131.

33. *Ibid.*, 133.

34. *Ibid.*, 123.

35. Alexander von Humboldt, *Ansichten der Natur*, 275-6.

synthesize what historically was a feeling of the world's unity. Likewise, the florid descriptions are intended to convey his immediate sensory and emotional response to nature's expressions. He subsequently examined phenomena in the field and we see in the quote examples of the disciplines that he studied in South America: botany, meteorology, astronomy and geology. Upon his return in Europe, Humboldt recreated the American wilds and situated his representations in ever broader contexts, i.e., as products of geographical and climatic factors unique to South America and as variations of similar though contrasting topographical formations elsewhere in the world. He included parts of his own *Ideen zu einer Geographie der Pflanzen* in which he tried to trace the world's plant life to seventeen basic types. He felt justified in making grand comparisons because on the basis of his research, he concluded the Andes Mountains contained a microcosm of the earth's ecosystems. To support his case, he presented statistics on altitude and temperatures of ecosystems in the appendix to demonstrate under which geographical conditions organic forms develop into the variations that we see in the "Naturgemälde."

But we should not see the poetic images as mere adornments to an otherwise dry treatise. Humboldt wrote the poetic images in *Ansichten* after he had conducted empirical research and published the work in three editions at times that span his scientific career (1808, 1826, and 1849): thus, he could have conceivably removed the images in favor of a more descriptive or quantitative treatment. I would argue that there are epistemological reasons for his decision to keep his "Naturgemälde." Language gives thought grace and clarity and at the same time, it furnishes representations of nature with the "enlivening breath." The breath is the medium through which his intellectual force is projected as vocal expression. His artistic language is intended to give a scientific accurate picture of South America but unlike the statistics, it also conveys a sense of nature's creative power. For these reasons, art represented for him a self-reflective medium that would enable him to consider the logical connections of his conception of nature. In this light, it becomes more understandable that Humboldt published the third edition of *Ansichten* in 1849, more than forty years after his expedition. The text was an example of the kind of writing that Humboldt believed was necessary for the continued growth and diffusion of scientific ideas. Whether intentionally or unintentionally, Humboldt makes the case that his metascience is a potentiated travel writing.