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material itself. While each essay focusses on a different aspect or specific text, they are all threaded through with the same overarching sense that I hope to convey in this review; that Hemsterhuis presents us with a persistently attractive conundrum. How are we to reconcile these seemingly disparate elements of human experience, the beautiful with the analytical, the systematic with the chaotic, that which is remembered with that which is anticipated?

Anyone interested in learning more about Hemsterhuis, or indeed about the history and continued importance of 18<sup>th</sup> and 19<sup>th</sup> century European philosophy, should read these volumes, introductions and all. This is another large step in the editors' already impressive repertoire of under-explored or marginalised figures in the mainstream modern European canon of philosophy, one that can perhaps encourage a re-examination of what philosophy is concerned with doing, perhaps even with something as romantic as a philosophical spirit.

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**Dalia Nassar, *Romantic Empiricism: Nature, Art, and Ecology from Herder to Humboldt*, Oxford, Oxford University Press, 2022, 328 pp. ISBN 9780190095437**

Dalia Nassar's rich and compelling *Romantic Empiricism* sets out to argue that the central term of her title is not an oxymoron but refers to "a philosophical tradition that deserves renewed attention today" (1). This tradition, which stretches from Herder to Goethe to Alexander von Humboldt, "developed a distinctive methodological approach to the study of nature—an approach that drew significantly on the arts and aesthetic experience" (1). Nassar wants to reclaim this aesthetic-scientific mode of knowing for modern thought, in particular with regard to the ecological crisis of the twenty-first century. Following a brief introduction, the first chapter turns to Kant to outline the problems Nassar convincingly shows Herder, Goethe, and Humboldt to take up, namely "how can we develop a natural history that takes account of nature's diversity without overlooking the significant relations between various beings? And how can we grasp organization within nature?" (9) As Kant articulates, mechanical causes cannot *explain* everything in nature, in particular the relations between the parts of forms of nature—this requires

reflecting judgment (20-21). Famously, Kant designates the kind of reflecting judgment required here as having an analogical structure. Nassar's analysis illuminates a difference in Kant between two kinds of analogy: a first type based on shared properties of two objects, versus the second, which comes from the *way* a thinker reflects on the objects (23-25). This second kind of analogy applies both to Kant's presentation of beauty as a symbol of morality, Nassar explains, and to the perception of organisms or the organization nature writ large in the same way as a work of art: "we can experience and think organization in nature *only through* symbolic presentation." (27) Further, in the Antinomy of Teleological Judgment, "Kant is also assessing the significance of analogical reflection and symbolic cognition in our understanding of nature. In short, he is determining the place *and* the limits of analogy in knowledge." (43) It is worth highlighting Nassar's skill in explicating Kant's work and its import—in clear language, she incisively explains the problems Kant raises and why they are central to Herder, Goethe, and Humboldt.

Nassar sees Kant as opening these questions, in particular the difference between explanation and observation, without, however, fully exploring the possibilities of the latter as a mode of (we will learn) embodied, affective, and ethical knowing. Pursuing the question of analogy's role in knowledge, she reads analogy in Herder as "a crucial means by which to expand and deepen our understanding of the natural world" (55); indeed, based on a discussion of Herder's "Treatise on the Origin of Language," Nassar demonstrates that for Herder, "knowledge itself is anagogic," and as such, "we [humans] are essentially *interpretive* beings" (55). The key problem for such interpretation is that of nature's wholeness. Herder first works out his hermeneutics in the interrelated arenas of works of art, the human individual's relation to her culture, and finally with regard to language and living beings as such. Considering Herder's early essays on Thomas Abbt and on Shakespeare, Nassar deepens the well-known view that Herder calls for artists to be understood as in and of their times to show how for Herder, the "world" or culture of artist is not abstract and external but something the artist lives in and senses, shaping and shaped by the artist's work (62-63). Nassar turns to Herder's notion of the "world" / "circle" in a threefold sense: of the work itself, the hermeneutic circle of the interpreter, and the world of the author; she then extends the idea to Herder's essay on language, where the animal develops its capacities in response to its world (67ff).

Nassar's treatment of Herder's "Essay on the Origin of Language" is a tour de force; after outlining prior thinkers' positions on the topic, she shows that Herder rejects a historical account of how language developed, one that

imagines pre-linguistic humanity, and strives instead for a synchronic account, in which he describes and observes the characteristics of human beings that make plausible the emergence of language as a response to their environment (69). The idea of world or circle (“Kreis”) is crucial here, as for Herder, there is an “intimate relation between the animal and its environment, such that its abilities fit or map onto what Herder calls the animal’s ‘circle’ or ‘world’” (70). Moreover, the smaller and more specific a creature’s circle or world, the more precisely its capabilities (including its senses) develop in response (70). Thus, whereas bees are suited to beehives, roaming mammals who traverse broader areas are not as specialized, and human beings are the least specialized of all, because “the human being does not live in any one environment but can inhabit a multitude of geographic contexts. Human capacities are, accordingly, not aligned with any particular context” (71). Without a defined context and skills to match it, the human being is unskilled, weak, and has dull senses in contrast with other animals; nor do humans have an “animal language” like the communication between, say, wolves or deer. Based on the analogy of the human and her environment with the reciprocity of the animal and its world, language and reason may plausibly be considered to develop to allow the human being to navigate its open, indeterminate world. Nassar’s account has the powerful advantage of not requiring Herder to explain (or fail to explain) how human beings made the transition from natural, animal-like language to conventional language with its artificial signs, a stumbling block for theorists who rejected the divine origins of language (83).

Herder’s famous example of the person who recognizes the sheep on its second appearance as “the bleating one” thus is not a fable of pre-linguistic man but an example of how, “in light of the lack of fitness between human capacities and any one context, it is *intelligible* that human beings find some other way of making sense of their world” (74). In particular, this making-intelligible occurs through “*Besonnenheit*” or “taking awareness,” such that “a human being takes awareness, becomes interested in the phenomenon as a phenomenon, because she is not determined to see the phenomenon in a particular way. Language, in turn emerges through taking awareness” (75). Nassar turns to “On Cognition and Sensation in the Human Soul” to consider the question of how sensation is related to language and language to cognition (80), elucidating Herder’s view of cognition as cooperation between the senses (79). Moreover, the process by which cognition “unif[ies] and transform[s]” the senses and enables language is analogical: “What the mind is doing, then, is *forming* an object through an analogical process. By seeing the sensation *as* an image, it *forms* the image; by seeing the image *as* a

concept, it *forms* the concept” (80). Herder thus makes two key (previously unrecognized) contributions (and Nassar’s contribution is thus to identify them). First, Herder “transforms the very process of understanding,” to a more expansive view of understanding as the result of “concrete description, comparative analysis, and analogy,” which enables him to see “a dynamic relationship between a living being and its world, a relationship of mutual and ongoing influence” (84). And, second, Herder deepens Buffon’s rather superficial account of climate to the idea of “world,” which “displaces the abstract idea of nature with a notion of nature as ... a context of reciprocal and ongoing influence among its inhabitants” (85). This, per Nassar, makes Herder an ecological thinker, and she emphasizes the emergence of Herder’s interpretive method from his engagement with works of literature (85).

Chapter Three, “The Science of Describing: Herder, Goethe, and the *Hauptform*” takes as its starting point the shared “hope” of Buffon, Kant, Herder, namely the: “hope of establishing a coherent and meaningful account of natural order and diversity” (96). Nassar provides a historical-contextual overview of the debates on form versus force emerging from mechanical philosophy and continuing in the debates over epigenesis as the context for Herder’s and Goethe’s views. Perhaps surprisingly, given that the traditional interpretation of Herder holds that he views force (*Kraft*) as a key principle of nature, Nassar asserts his valorization of *form*: “In contrast to those who posit an unknowable force as a means of ‘explanation,’” he argues that we cannot see forces but their “effects and forms [*Wirkungen und Formen*]” (87). For Herder, forms both differ from and “reiterate” each other (93), enabling the viewer to find “meaning (lawfulness) in what at first sight appears meaningless or chaotic” (93). On the basis of such continuities—which are internal to the organism, not from an external system of classification—Herder arrives at idea of *Hauptform* or prototype (of, say “a land mammal”). This *Hauptform* appears only in and through its variable instances, and is therefore not present as such in the world; hence, for Herder, the need for analogical reflection to help “see how this one form re-emerges (variously) in different beings.” (94) Nassar does not mention, however, that Herder extends this to *human* types that, despite his rejection of the term “race” per se, appear to be both environmental and heritable, phenotypical and intellectual, leading to some of his most repugnant statements about Africans, Greenlanders, and the Chinese in the *Ideen*. Indeed, although she later references “skin color” in discussing the distinction between “cause” and “condition” (189) and contrasts Herder and Goethe with comparative anatomists Blumenbach, Camper, and Soemmerring (all of whom played key roles along with Kant and Herder in

establishing the concept of race) Nassar does not address the violent aspects of this epoch's efforts to find an order in nature. One could, and I think should, argue that these systems are a perversion of the dynamic yet coherent conception of nature that Nassar wants to reclaim from Herder, Goethe, and Humboldt; but Kant and Herder, at least, did not see them this way.

The *Hauptform*, Nassar argues, is a dynamic rather than static conception of form, one that focuses on the ways and conditions in which something appears “rather than why it appears (the causes of its appearance)” (95); Goethe and Herder share this view such that Goethe takes up Herder's *Hauptform* as a “key scientific tool” (97). Goethe explicitly connects his discovery of the intermaxillary bone in humans to Herder's *Ideen* (97): he could find the intermaxillary bone when other comparative anatomists did not because he was guided by the idea of a *Hauptform*, and understood that if the bone appears in humans it will appear differently than in animals, fitting human context and capabilities (98). Goethe thus shares with Herder a “hermeneutics of natural forms” that underscores the importance of the researcher's standpoint and so requires new “organs of perception,” such that (especially for Goethe) scientific knowledge also entails self-education and self-transformation (103). Nassar expands on this point in Chapter Four, “Aesthetic Education and the Transformation of the Scientist,” noting (as the chapter title suggests) that the self-transformation required is “an *aesthetic education*” both as “education of our perceptual capacities” and as “education *in and through art*” (106). Examining Goethe's collection *On Morphology*, Nassar shows how this adds an ethical dimension to the project of knowledge, as it requires “knowing well” and transforming the self to do so (105). She outlines, further, Goethe's coming to see a “link between ...scientific knowledge, artistic practice and technique, and self-knowledge,” in part through his engagement with the visual arts and artworks (110). In order to show how Goethe conceives of seeing and knowing *well*, Nassar draws on Goethe and Schiller's unfinished “On Dilettantism,” which outlines three steps of “learning to see”: a “general impression” of the whole, followed by “differentiation” that perceives its components and parts, and then a “return from differentiation to the feeling of the whole,” which Goethe and Schiller hold is an aesthetic process (115). (One service of Nassar's here is to take Schiller seriously as a philosopher.)

This, in turn, guides Nassar's reading of *On Metamorphosis* and its quest for a mode of representing nature and its processes. For Goethe, representation needs to follow object progressively or developmentally (117-8); thus the essay “Metamorphosis of Plants” “performatively traces the sequential development of the plant: it proceeds step by step, focusing on a

different part of the plant in each step” (118). Goethe’s strategy here likewise strives to transform the reader and “her way of seeing the world” such that she can “begin to undertake investigations herself” (123). The essay’s (and Goethe’s broader) emphasis on transformed and transforming seeing raises the question what he means by “seeing”—perhaps most famously in his encounter with Schiller where he claimed to be able to “see” an idea, his “symbolic plant” (128). Goethe later distinguishes between seeing with the eyes and with the “eyes of the mind [*Augen des Geistes*],” which “always have to work in a living union with the eyes of the body” (129); Nassar explains that Goethe thus presents a view of knowledge as “collaborative...based on a dialogue between the knower and the known” (130). Only through the relation of the eyes of the body and of the mind, experience and idea, can the observer overcome the challenge (outlined in “The Experiment as Mediator between Subject and Object”) of losing the relation to the whole while focusing on individual parts (131).

As Nassar shows, for Goethe, the answer to his question, “how can we wed experience and idea such that the two inform and complement one another?” is that it cannot be done in discursive argumentation, but instead only in poetry. Poems resolve problems of reconciling parts and wholes, sequential unfolding and unified perception through the recursiveness of poetry, as Nassar demonstrates in a reading of “Die Metamorphose der Pflanzen” (she makes the wise decision to reprint the entire poem in German in the main text, with translation in a footnote and brackets within the text). She shows convincingly that the poem not only has the kind of part/whole structures and relations that Goethe perceives in organisms, but that it explicitly calls attention to the problem of seeing unities and particulars in nature. This is entirely convincing, and yet because *all* poems, in varying ways, work with self-referential and recursive structures, the question arises as to what extent this argument can be particular to Goethe. Does it apply to all poems about nature? All of *Goethe’s* poems about nature, or his poetic oeuvre in its entirety? Only poems that thematize part/whole relations? We might, indeed, extend this line of questioning to Nassar’s more general claims about the affinities between “the practices of the arts” and “those of science”—does *all* art viewing or practice train the eyes and mind in such a way? Nassar omits, further, the erotic/sexual dimension of the poem, in which the development and reproduction of plants is mapped onto the “Paar” of the poet and his “Geliebte” (Nassar uses the translation “friend,” whereas the one she cites, by Frederick Turner and Zsuzsanna Osvàth, has “my love” [268]), the development of whose own relations culminate with “Hymen,” the god of marriage. This matters because Goethe places plant reproduction

and (suggested) human reproduction in parallel, weaving the human being as natural and social organism into his poem to *perform* the relation of human being and all of nature.

In the book as a whole, Nassar does not address how art-making practices come from and shape human responses not only to nature but to history, culture, convention, and other artists. Thus for example Goethe's choice to use elegiac distiches in "The Metamorphosis of Plants" not only "mirrors the expansion and contraction of the plant's development" in the alternation between hexameter and pentameter but also writes itself into the entire tradition of the elegy and form and genre: as poem of exile and love poem (Ovid), didactic poem (Lucretius), and philosophical poem (Schiller). Of course, a single volume cannot say everything there is to be said about a poem, but the fact that the relation to poetic tradition has no place in Nassar's account is revealing. I am further interested in how the relationship to tradition might shape what Goethe (and Herder, and Humboldt) say about nature, humans, and knowing and whether we might derive further insight from this relation.

In Chapter Five, "Intuitive Judgment and Goethe's Ethics of Knowledge," Nassar continues her investigation of the ethical import of Goethe's recasting of epistemological questions and the responsiveness of the observer it requires. She takes up Goethe's "notion of intuitive judgment" as important for a modern environmental ethics because he raises "questions concerning our relationship to and responsibility toward the natural world" (148). Goethe reacts to but adapts Kant's conception; for Goethe, "Intuitive judgment is focused on appearance and the ordering and presentation of appearances." (153); the activities of ordering and tracing connection between and within organisms are this kind of judging, seeing "with the mind's eye," in Goethe's terms. To grapple with how intuitive judgment apprehends the natural world without reducing that world to atomized parts or abstract schematics, Goethe introduces the idea of the "archetypal or pure phenomenon (*Urphänomen, das reine Phänomen*)" (156). The *Urphänomen* relies not merely on perceiving forms but, as Goethe's morphological thought teaches us, "the formation of form, the ways in which the different parts *transform and are transformed by and in relation to* one another." (159). This involves a mode of perception that oscillates between forms and in the self-reflection of the knower in her "ability to see and discern unity in the multiplicity" in a kind of "*collaboration* between knower and known" (161). The *Urphänomen* comes not from material nature nor from human mindedness but the relation between human being and nature, such that it is "both real and ideal at once." (162) Nassar outlines once again the continued

relevance of Goethe's (and, as we will see, Humboldt's) approach to nature, which has an ethical import because "knowledge involves and draws on the individual scientist's capacities and judgments—and her willingness to transform those capacities in light of the task at hand" (166). This, for Nassar, renders Humboldt and Goethe an important corrective to traditional environmental ethics, as they avoid "apply[ing] principles derived from human ethical norms ... (sometimes problematically) ... onto the more-than-human world" (173) by returning to the concrete phenomenon and working in relation with and to the object (172). Nassar describes this as "collaboration" (168-69), but the term strikes me as the kind of anthropomorphizing she otherwise strives to avoid. I would argue that one can have responsibility as "an epistemic virtue" and knowledge "*for the known*" (174) through Goethe's understanding of knowing as self-transformation through the object as fellow-being, without attributing human-like activity in "collaboration."

The sixth chapter, "Organism and Environment: The Aesthetic Foundations of Humboldt's Ecological Insight" articulates what Alexander von Humboldt adds to (or how he goes beyond) Nassar's prior interlocutors: "While Humboldt's predecessors (including Buffon, Kant, Herder, and Goethe) had recognized that living beings are affected by their environments, they had not considered how living beings themselves affect their environments" (177). The fact that Humboldt does so, and that he was able to do so because of the aesthetic of his thought, helps Nassar reveal "a crucial and largely understudied *aesthetic element* at the very heart of ecology" (179). She shows that like Goethe, Humboldt develops a kind of "thinking observation" (180) that unites thought and perception, rule and sensory experience (180); Humboldt also shares Goethe's attention to form and insistence on the inseparability of "ethical and scientific questions" (181). For Humboldt, Goethe solves the "problem of metamorphosis" through "the notion of an 'ideal form'" (182); Humboldt views this notion of form as providing the key to resolve the competing claims of unity and diversity, an idea he works out first in considering landscape painting (183). And Goethe's concept of relational form will become central to Humboldt's ecology, with the distinction that Humboldt "mov[es] beyond individual forms" to emphasize the relation of individual beings to "their relations in the wider world." (184)

As Nassar explains, precisely this kind of characteristic and meaningful interrelation of elements of the natural world is what Humboldt calls the "physiognomy of nature": "Humboldt contends that it is through the physiognomy of plants that we can go on to develop a physiognomy of *nature*—that is, an understanding of the context, regions, or environments in



which the plants grow.” (192) To comprehend the characteristic physiognomy of a given region, Humboldt attends to “reappearing forms,” including the different ways forms appear in different geographical areas; the similarities in types of plant or differences within a single plant species in different places reveal the relations between form and context (193-4). Nassar emphasizes again the importance of landscape painting for Humboldt as an aesthetic model for depicting and comprehending the way individual and context appear and mutually shape one another (196-7). Her overview of Humboldt’s conifer, grass, and myrtle forms as they change from region to region succinctly exemplifies how his approach illuminates the way “form—as persistent as it might be—is *also* sensitive and plastic, growing in dialogue with its context” (203). Plants, for Humboldt, offer the clearest view of the way forms collaborate to make up an entire landscape or region, because they are more fixed in their locations than animals; because plants are reasonably static in their respective regions, and because of the reciprocal relation between individual and context, plants in fact shape the region in which they appear: “A region *is* what it is (cool and humid, for instance) because of the kinds of plants within it” (208). Humboldt thus extends Goethe’s understanding that living beings’ “environments are the conditions in which they develop. To this Humboldt added: living beings are *also* the conditions in which environments develop.” (210)

Nassar opens Chapter Seven, “Humboldt and the Art of Science” with a letter of Humboldt’s to Schiller, in which the former celebrates Aristotle and Pliny for having “connected human aesthetic sense and education with the description of nature” (cited 212). Nassar links Humboldt’s interests with Schiller’s *Letters on the Aesthetic Education of Humanity*, in particular the latter’s argument that artworks can overcome human diremption by harmoniously engaging “both our sensible and rational sides,” (214-15), while “for Humboldt, the aesthetic experience of nature plays a crucial role in the realization of both *scientific* and *moral* ends ... by aesthetic experience, Humboldt means the direct experience of being in nature as well as the indirect experience of nature through works of art.” (216) Humboldt makes clear that artworks are not merely tools for observation but that the emotional, embodied experience of art is key for understanding nature (218), and he turns to literary works to exemplify what he calls “truth to nature” as combined perceptual (in the robust sense of meaningful perception) and emotional experience (219). Literature, in particular, can balance the subjective-emotional and objective-perceptual aspects of “human participation in nature,” thus linking Humboldt’s arguments in *Kosmos* to broader eighteenth- and early-nineteenth century debates over the merits of various

art forms, from Lessing onwards (223-24). Influenced again by Schiller, and in particular his “Elegy” / “The Walk [*Der Spaziergang*],” Humboldt points to poetry as particularly able to “depict a dynamic or living nature” (226; 228-230), inspiring him to write essays with a “leading idea” and “vivid detail” along with feeling to achieve “truth to nature.” (232) Nassar then draws on this to analyze the contemporary problem that many or even most people know about the climate catastrophe, but do not act; she suggests that “know[ing] in an embodied and visceral way” “has the potential to move and motivate use.” (240-241) Human forgetfulness of our participation in nature has proven disastrous (242).

Nassar makes an insightful, erudite, and persuasive case that “the romantic empiricist approach challenges us to think differently about the practices and ideas of knowledge, and about the relationship between epistemology, ontology, and aesthetics” (245). At the same time—precisely because her argument is so compelling—I found myself wondering about the steps *between* the transformation of individual knowers and the averting of ecological disaster. More broadly, Nassar’s account does not address the social or the political, although I do not think her views here would preclude their role in the epistemological, aesthetic, and ethical questions she raises. Her story of how Herder, Goethe, and Humboldt offer resources to combat modern environmental catastrophe still awaits a discussion of what human beings as part of their environment do *together*. In both aesthetic and scientific cases, then, we seem to have a perceiver almost always alone with the perceived, although Nassar does address the question of the responsibility a knower who knows well or badly to her community, as well as to herself. While I agree that the virtues of knowing well are “social and ethical ones” (171), as well as the ethical responsibility of the knower “to the phenomena that are to be known” (172), I missed an account of the ways social activity or political organization of knowers together might put into action an environmental ethics derived from “epistemological and ontological questions, and in *their* ethical status” on a scale sufficient to address the climate catastrophe (173). This is, I think, beyond Nassar’s scope here, but I hope that she will build on the ethical questions she elucidates so convincingly here to envision how *communities* of human beings in collaboration with nature might transform our world through an ecological ethics on the scale required to mitigate the mass death that is beginning to seem inevitable.

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