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Goethe's Morphology: *Urphänomene* and Aesthetic Appraisal

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Abstract. This paper examines the relationships between Goethe's morphology and his ideas on aesthetic appraisal. Goethe's science of morphology was to provide the method for making evident pure phenomena [*Urphänomene*], for making intuitable the necessary laws behind the perceptible forms and formation of living nature, through a disciplined perception. This emphasis contrasted with contemporary studies of generation, which focused upon hidden formative processes. It was his views on aesthetic appraisal that informed these epistemological precepts of his science. His study of antique artefacts convinced Goethe that these should be prototypes for all art, since they made perceptible the ideal of art, its archetypes or objective forms. His ambition was to eliminate the subjective elements he contended were leading contemporary art astray. He argued that the techniques he developed for cultivating the perception of the ideal exemplars of art could become a model for science, enabling the intuition of the objective forms of nature through a similar disciplined and cultivated perception. This paper also examines some of the wider motivations for the particular emphases Goethe gave to his science and aesthetics, noting a similar impulse to discipline unruly forces in his life – in his work as an administrator for the Weimar court and Jena University, in his vision of an ideal German culture centred on the aristocracy, and in his literary productions and biographical writings. Finally it discusses the extent to which those unruly elements nevertheless remained a potent and disturbing presence in his understanding of nature, his art and his life.

Keywords: aesthetic appraisal, disciplined perception, Goethe, morphology, objectivity, pure phenomena, symbolic plant

As Germany's most famous poet and cultural representative, Goethe's activities have attracted considerable interest. But since he was already a cultural icon during his own lifetime, interpreting Goethe's work is problematic. His status as a poet and the abundance of his achievements can color views of his contributions in particular areas. Goethe wrote on a vast range of topics, and it seems problematic to sever his achievements in one area from the rest, yet the current state of scholarship is such that it is virtually impossible to master the whole. Nicholas Boyle's biography of Goethe, which attempts to understand the poet in the context of his age, has already reached over 1700

pages and still awaits a third volume.[1] It presumes a knowledge of all facets of the extraordinarily complex period of German and European history that touched on the poet's life, an understanding of ideas and events that must surpass the insights of any single individual. At times it seems that a vision of the life of the man is lost amidst the detail. The ambition here is necessarily modest – to consider Goethe's morphological studies, with an emphasis upon the epistemological considerations informing those studies. But it does argue that Goethe's scientific epistemology needs to be understood in the light of his developing ideas on aesthetic appraisal.

Goethe's morphological studies were stimulated in the 1780s by his responsibilities as an administrator in the Duchy of Weimar, responsibilities that placed him in charge of the ducal mines and forests, and that led him to serious studies of mineralogy, botany and other sciences. To inform himself about these subjects, Goethe not only read widely, but in addition drew upon the expertise of scientific colleagues in Weimar and Jena. He also formed his own views about the proper method for scientific inquiry. In his science of morphology, his study of the diverse forms of plants and animals and their transformations in development, Goethe sought the necessary laws determining these forms and their modifications, which he conceived in terms of *Urformen*. The intuition of these primordial forms was to be based upon perceptible forms, rather than abstract ideas. Although not readily visible parts of a plant or animal, *Urformen* were to be determined through disciplined perception and carefully constructed experimental investigations, not philosophical reflection.

To understand the development of Goethe's conception of the science of morphology, and its method of inquiry in particular, it is necessary to turn to his ideas on aesthetics. It is not simply that Goethe had a poetic vision of nature, seeing nature in its wholeness and harmony as well as in its fecundity and transformations. His reflections on science and art were more epistemologically sophisticated. As Nicholas Jardine has argued, the way of seeing which enabled Goethe to intuit a series of anatomical structures as derivations from an ideal type was guided by aesthetic appraisal.[2] Goethe did not regard this appeal to aesthetic appraisal as a model for the judgment of organic form as introducing subjective elements into scientific methods of inquiry; quite the contrary, it was to provide an objective basis for scientific investigation. His study of antique artefacts convinced Goethe that these should be prototypes for all art, since they made perceptible the ideal of art, its archetypes or the objective forms for all art. Friedrich von Schiller represented Goethe as

[1] Boyle, 1991–2000.

[2] Jardine, 2000, pp. 37–43. See also ch. 10 for a wider discussion of the influence of aesthetics on science.

possessing an intellectual intuition that could see the general in the particular, as a natural genius, who, like the ancients, had no sense of distance from nature. Schiller contrasted such a "naïve poet" with the modern poet who reflects upon his sense of the disharmony between nature and culture, reason and experience. The contrast is apt, for Goethe's writings on aesthetics are at odds with new romantic attention to the fragmentary or incomplete nature of all artistic production, the irreducible gap between the ideal of art and its realization, and accordingly to the process of creation of the work of art. Goethe held the techniques he developed for cultivating the perception of the ideal exemplars of art could become a model for science, enabling the intuition of the objective forms of nature, its pure phenomena, or *Urphänomene*, through a similar disciplined and cultivated perception. He was critical of the interest of contemporary science in the hidden forces of nature, in particular the forces or activity postulated to lie at the basis of the generation of organic form. He was also critical of contemporary science for leaving space for speculation and subjectivity in the construction of theories. What he did not acknowledge was the extent to which his own methods for making evident *Urphänomene* involved acts of construction or artifice, in the arranging of experiments or the appeal to images of the *Urformen* of plants or animals.

If no attempt is made here to understand Goethe's science of morphology and the epistemological and aesthetic reflections informing it in terms of the whole of the life and times of the poet, it is nevertheless important to reflect upon the wider motivations for the particular emphases Goethe gave to his science. Looking beyond his scientific and aesthetic writings to his work as an administrator for the Weimar court, to his specific interventions into the organization of the university, the museums and scientific societies of Jena, to his vision of an ideal German culture centred on the aristocracy laid out in the journals *Horae* and *Propyläen*, to his literary productions and biographical writings, a similar impulse to discipline unruly forces can be discerned as in his morphology and aesthetics. Although the scientific and aesthetic ideas of Germany's most famous poet did attract attention, his contemporaries largely rejected the ideals of science, art and German culture that he advocated. The energy that he nevertheless gave to such projects can be understood as offering a structure and discipline to his life, as acting as counterparts to the erratic imaginative and passionate impulses of the poet. Yet his literary and biographical works also reveal the extent to which those unruly elements remained a potent and disturbing presence in his understanding of nature and his life.

A Science of Morphology

Goethe's interest in science developed through his work as an administrator in the small Duchy of Saxe-Weimar-Eisenach. In the early 1770s, prior to his move to Weimar, Goethe's poetry and early major work, *The Suffering of Young Werther*, made vivid the inner workings of the human heart and spirit through images of the creative energy of nature.[3] In these years Goethe also experimented with alchemy, and shared the genteel fascination with natural history.[4] But upon entering the services of the young Duke Carl August in 1775, his responsibilities for first mining and then the ducal forests led him to a systematic study of science. One of his first tasks in Weimar was to reopen the copper-silver mine at Ilmenau, which brought him into contact with a group of mineralogists associated with the prestigious Freiburg Mining Academy, such as Johann Carl Wilhelm Voigt, and led him to take up the study of mineralogy and to establish his own collection of minerals.[5] He also began to study anatomy with the young professor of medicine in Jena, Justus Christian Loder; it was through his work with Loder that Goethe made his discovery of the intermaxillary bone in human beings in 1784. After the publication of his study of the intermaxillary bone, and its rather cool reception by the scientific community, Goethe became increasingly concerned with the study of botany; he studied the pharmacological uses of plants, pursued the natural history of plants under the guidance of a local youth, Friedrich Gottlieb Dietrich, diligently studied the works of Carl Linnaeus, took instruction from the botanist August Johann Georg Karl Batsch at the University of Jena, and began his own botany collections.[6] Goethe's numerous administrative duties required discipline and organization, and brought structure into his life.[7] They also changed his attitude to nature. In contrast to his earlier poetic vision of nature, in which he viewed natural phenomena primarily as a medium for the depiction of human feeling, Goethe now studied minerals, mammalian skeletons and plants with a view to finding a principle of order, a guiding thread [*Leitfaden*] through diverse appearances. Goethe became critical of speculative approaches to the study of nature that appealed to hidden forces on the basis of subjective judgment rather than empirical study. But he also grew increasingly dissatisfied with the system used by the Linnaeans,

[3] Lange, 1982, pp. 71–76; Boyle, 1991–2000, 1: 152–178.

[4] See Boyle, 1991–2000, 1: 75–76; Goethe, "Geschichte meines botanischen Studiums," in Goethe, 1948–1963, hereafter cited as *GA*, 17: 64–83; Koerner, 1993.

[5] Hamm, 2001.

[6] On Goethe's scientific studies whilst in Weimar, see Goethe, 1947–, hereafter cited as *LA*. The morphological writings are found in *LA* I 9 and I 10, and II 9A, II 9B, and II 10A. Also see Boyle, 1991–2000, 1: 336–337, 346–357; Koerner, 1993; Hamm, 2001; Jackson, 1994.

[7] Boyle, 1991–2000, 1: 240f; Reed, 1980, pp. 56–57.

which produced at best a fragmentary and artificial taxonomy based on a few perceptible parts, seeking instead a more unified and natural ordering of phenomena. It was this natural order that his morphology, the science of the necessary and primordial forms of living bodies and their transformations, sought to express. Goethe's problem was to provide a basis for the intuition of the ordered whole in perception rather than speculation.

Goethe represented morphology as a science [*Wissenschaft*], and his attempts to articulate it as such must be distinguished from his early explorations of nature and natural history as a part of the pastimes of a well-educated young gentleman.[8] When he finally published his collection of writings on morphology, it was in a journal entitled *On Science in General, On Morphology in Particular*, which he published between 1817 and 1824, and his earlier notes from the mid-1790s, "Preliminary Notes for a Physiology of Plants," sketched a science of morphology in relationship to other extant sciences. The German word *Wissenschaft* refers to scientific knowledge in the sense of an ordered or coherent region of knowledge. The notion of a natural science or *Naturwissenschaft* was used in several German texts during the course of the eighteenth century as synonymous with *physica* or natural philosophy, with Christian Wolff and Immanuel Kant providing the most influential deliminations of this conception of natural science. It designated the study of the forces of natural bodies in contrast to spirit, and, whilst conceiving the natural world as God's creation, it was to pursue this study through empirical and rational inquiry.[9] Thus the notion of a scientific study of nature was widespread in German texts when Goethe began his inquiries into nature. Under the influence of Kant's critical philosophy, by the end of the eighteenth century the notion of scientific knowledge also included the critical examination of the conditions of that knowledge, which in the natural sciences meant particular attention to the methods used in inquiry. Hence when Goethe set out his science of morphology he was concerned to indicate not only its nature as a coherent body of knowledge, but also the requisite methodology for acquiring this knowledge.

Goethe defined his new science of morphology as "the theory of form [*Gestalt*], formation [*Bildung*] and transformation [*Umbildung*] of organic bodies" (*GA* 17: 115). He conceived morphology as having a unique character and place amongst the sciences not with respect to its subject matter, which was familiar, but with respect to its "viewpoint and method." It was

[8] Lisbet Koerner's representation of Goethe's botany studies, in Koerner (1993), are thus misleading. For a discussion of the shifting senses of natural history in the late eighteenth century, see Jardine, 2000, pp. 11–55.

[9] König, 1984. On the developing conception of science at the turn of the nineteenth century, see Cunningham and Jardine, 1990; Cunningham, 1988.

to provide a means to: "recognize living formations as such, to grasp their externally visible, tangible parts in relation to one another, to take these parts as indications of what lies within and thus to acquire a degree of mastery over the whole in intuition (*GA* 17: 13)."

Goethe did not argue that morphology was to replace existing sciences of living organisms, but rather, as an auxiliary science, it was to link together the considerations that lie scattered throughout the other sciences. It was to draw upon the material of natural history, which studied form in general and the relation and combination of parts. Goethe found that contemporary natural history, however, was restricted to the outward appearance of organic forms. Moreover, although he admitted to learning much from Linnaeus, he was highly critical of Linnaeus's fragmentary approach to natural history, his analysis of the organic world into distinct categories, and his artificial and arbitrary classifications of plants (*GA* 75–76). Yet Goethe also held that those sciences that penetrated into the internal parts and processes of the organic body – anatomy, chemistry and physiology – presented isolated phenomena. Physiology attempted to reconstruct the living creature from basic elements, both animate and inanimate, through mental operations in order to provide "an account of the whole insofar as it lives and acts." Quite justifiably, Goethe argued, a force was ascribed to this life for the purposes of discourse. But as so many of the elements of the organic body remained unknown, and so many of its actions and effects a mystery, the syntheses put forward in physiology remain incomplete and speculative (*GA* 17: 111–119). Morphology, in contrast, by studying the perceptible form and formation of living beings, was to provide a vantage point from which the organic whole could be intuited and made objective.[10]

Goethe's proposal was to represent the different parts of the organic body as transformations of an *Urform*, a primordial form. Although primordial forms are not simply visible appearances found within nature, neither are they ideas of nature existing only in thought. Rather, primordial forms were depicted by Goethe as general images, *Urbilder*, abstracted from experience; through a disciplined perception idealized forms could become discerned as the pure phenomena of an intuition in which thought and experience are collapsed into one. These primordial forms are the necessary forms of organic bodies in which the specific forms realized by specific organisms are contained as possibilities. Thus Goethe portrayed the plant as formed through

[10] Goethe's original conception of his science of morphology was to include the study of minerals, and he wrote Schiller as late as 1796 that "without which the famous *morphology* would not be complete" (*LA*, II 9B: 90), but he eventually restricted it to the study of the organic world. I thank Ernie Hamm for this point.

the progressive modification of a single fundamental organ, the primordial leaf [*Urblatt*], and the vertebrate skeleton as a modification of a primordial vertebra. Such primordial forms offer a guiding "thread through the labyrinth of diverse living forms" (*GA* 17: 58). Through primordial forms the unity of the organic realm is established, as an ideal unity, in contrast to the superficial and fragmentary knowledge of contemporary natural history. But these primordial forms are to be intuited as a result of disciplined perception, in contrast to the subjective speculations of physiology. The study of morphology, the study of form, is important as it focuses upon what is necessary as well as objective in the formation and transformation of organic bodies.

Goethe's 1790 *An Attempt to Explain the Metamorphosis of Plants* was written before he had worked out his conception of a science of morphology in the mid-1790s, yet it was the only published text in which he offered a detailed treatment of the different parts of the organic body as transformations of an *Urform*. In this essay Goethe presented "the laws of transformation according to which nature produces one part through another and achieves the most diversified forms through the modification of a single organ" (*GA* 17: 22). Identifying the leaf as this primary form, he described how it can be clearly recognized in the seed, and traced in its successive metamorphosis into the stem, leaves, flower and organs of fructification. The transformations of the leaf are produced through the interaction of the nutritive juices and the generative force ascribed to them with the organs of the plant. Thus, for example, once the calyx is formed from several leaves clustered around a central axis, its vessels, tightly crowded and pressed together, are capable of the most delicate and refined filtration of the juices it receives. These purified juices proceed to transform the leaves arising beyond the calyx into flowering parts with the finest form (*GA* 17: 29, 33). The original quality of the nutritive juices in turn affects which transformations are possible through such filtration. Frequent nourishment can present the plant with excessive coarse juices, rendering the formation of the flowering parts that require highly purified juices impossible (*GA* 17: 30). The forms that arise when the nutritive juices have been refined Goethe represented as a perfection [*Vervollkommnung*] or enhancement [*Steigerung*] of the original form. Goethe further represented the metamorphosis of the leaf as a successive expansion and contraction: "the same organ which expanded on the stem as a leaf and assumed a highly diverse form, now contracts in the calyx, expands again in the petal, contracts in the reproductive organs, only to expand finally as the fruit" (*GA* 17: 56). A regular metamorphosis according to the law of alternating expansion and contraction results in a progressive transformation ascending from the first seed leaves to the formation of the fruit.

In *The Metamorphosis of Plants* Goethe did not make reference to contemporary theories of generation. Parts of his account are, however, actually similar to that of Caspar Friedrich Wolff, who described the motion of the nutritive juices under control of a generative force, and how their action transformed the structure of the organs of the plant. Goethe did not discuss Wolff's work on generation directly until a brief essay, "Discovery of an Excellent Predecessor" written between 1816 and 1817, but he had learned of Wolff's theory through Johann Gottfried Herder in the mid-1780s.[11] Goethe had also met Johann Friedrich Blumenbach in 1783, corresponded with him, and was familiar with his publications (*LA* II 9A: 281). Indeed, the numerous notes and outlines for works on botany Goethe made prior and subsequent to writing *The Metamorphosis of Plants* reveal a general knowledge of contemporary debates regarding generation. But he discussed the weaknesses of the explanations of generation offered by the system of preformation and the system of epigenesis, and distinguished his work from both approaches, claiming that these "hypotheses have [had] no influence on [his] exposition" (*GA* 17: 129).[12]

It is instructive to compare Goethe's discussions of plant formation to those of Wolff and Blumenbach, and to make clear the difference in his interpretation and approach. In a note on Blumenbach's notion of the *Bildungstrieb* or formative impulse from 1817 Goethe subscribed to Kant's positive assessment of Blumenbach's achievement, and praised Blumenbach's refinement of the notion of a force of generation by anthropomorphizing the phrasing of the problem and calling the object of discussion a formative impulse or activity (*GA* 17: 175). But although frequent references to the *Bildungstrieb* can be found in Goethe's notes on plant formation,[13] he did not examine formative activity in Blumenbach's sense. He was interested in the transformation of manifest organs in generation, not the hidden formative activity underlying this metamorphosis. This emphasis can also be seen in his appraisal of Wolff. In "Discovery of an Excellent Predecessor" Goethe praised the extent to which Wolff recognized the identity of plant parts in spite of their variation during generation and criticized his failure to recognize that the contraction of parts alternates with their expansion in a path toward perfection of form (*GA* 17: 101–102). But he did not mention the distinctive feature of Wolff's treatment, the action of the nutritive juices working under the action of a *vis essentialis* in forming and transforming organic parts. It was

[11] See *LA*, II 9A: 305 and 505. Goethe actually received Wolff's works in 1807. See *LA* II 9B: 271.

[12] See also *GA* 17: 201–202, 204.

[13] See in particular *GA* 17: 174–176, 237–239.

precisely such speculative physiology Goethe sought to avoid. Morphology was to provide objective knowledge of organic bodies by discerning from experience the pure forms guiding their formation.

It is the primal form that gives necessity to the transformation of organic bodies. In his "First Sketch of a General Introduction into Comparative Anatomy, Starting from Osteology," written in 1795, Goethe discussed a law binding the action of the *Bildungstrieb*, that "nothing can be added to one part without subtracting from another, and conversely" (*GA* 17: 237, 192, 206). This "law of compensation" has similarities to the laws of *Bildungstrieb* or *Lebenskraft* or vital force put forward by Blumenbach, Carl Friedrich Kielmeyer and others in the early 1790s. But Goethe was interested in the limitations imposed on the possible forms of the organized body, whereas the laws proposed by Blumenbach and Kielmeyer were concerned with the relationships between the extent of the generative, irritable and sensible activities in different living beings. The laws of *Lebenskraft* were purely functional; Goethe's law, in contrast, addressed strictly formal constraints. "The number of parts and their modifications, the alterations of form allowed become endless," if not opposed by a tendency to fixed, definite forms (*GA* 17: 237, 238–242). Goethe was interested in how a boundary is set to nature's structural range through the laws of metamorphosis. His discussion of the variations of types under the influence of external factors did have similarities to Blumenbach's discussions. But whilst Blumenbach attributed such variations to the action of environmental factors on the *Bildungstrieb*, Goethe attributed them to the influence of variations on essential forms (*GA* 17: 191–195). Goethe did refer to a forming force or *Bildungstrieb*, but he represented its action as subject to the laws of metamorphosis or changes of form as determined by the primordial forms.[14]

Goethe's morphology is also distinct from Schelling's *Naturphilosophie*. Goethe was, of course, instrumental in securing a position for Schelling at the University of Jena. But even before Schelling arrived in Jena to begin teaching in the fall of 1798, Goethe had begun to realize that he and Schelling had fundamentally different approaches to the study of nature. Writing to Schiller in January of 1798, after a careful reading of Schelling's *Ideas for a Philosophy of Nature*, Goethe criticized Schelling's attempt to approach nature through the laws of the mind (*LA* II 9B: 128–129). Goethe instead articulated a "rational empiricism [*rationellen Empiricism*]," in which "pure phenomena" [*reine Phänomen*], such as the *Urform*, stand before us "as a

[14] See *GA* 17: 200, 204, 287. Timothy Lenoir makes a similar point Lenoir, 1987, pp. 17–28.

result of our observations and experiments."[15] Goethe did continue, however, to read Schelling's works and to maintain friendly relations and correspondence with Schelling. He also found Schelling's development of the notion of polarity useful in his own studies of natural phenomena. Schelling, in turn, referred favourably to Goethe's study of metamorphosis, incorporating the notion into his 1798 *On the World Soul.* He also described the progressive individualization of matter in the growth of a plant as a refinement of the nutritive juices, and the growth as involving the alternation of extension and contraction of parts, after Goethe (*SW* 2: 532–533). He even stated that the endless metamorphosis of forms in nature expresses itself in accordance with a rule, in accordance with an internal relationship of forms based upon an archetype [*Grundtypus*]. But such phenomena were not his primary concern: "even with such a product we have not that of which we are in quest" (*SW* 3: 300). Schelling insisted that empirical science is directed "only at the surface [*Oberfläche*] of nature." His speculative science, in contrast, was to be directed "at the inner spring-work [*Triebwerk*]" of nature. Accordingly, it was necessarily a subjective or purely theoretical science. If empirical physics is directed to what is "objective" in nature, it only "views its objects in being," as a finished product; a speculative physics, in contrast, is directed to what is "non-objective in nature," and "regards its object in becoming," in its productivity.[16] Schelling described the productivity of nature as the "*Proteus of nature*" which lies hidden within the diverse appearances or forms of the products of nature (*SW* 2: 382). Goethe also referred to the "Proteus" of nature, but in his case it denoted the primordial form that provided the law for the transformation of form (*GA* 17: 239, 128).[17] Schelling was interested in the activity underlying manifest forms, the process by which a positive principle or pure productivity concurred with a negative principle or material conditions to give rise to determinate products in nature, determinate products in which nevertheless "the permanence of productivity is secured" (*SW* 3: 300). Goethe, in contrast, was interested in perceptible forms, what Schelling would characterize as merely products of the primary processes of nature. When Schelling wrote Goethe a long letter early in 1801 outlining an extension of the notion of metamorphosis to the origin of life in the terms of polarised productive principles, in his reply Goethe distanced himself from Schelling's speculations (*LA* II 9B: 177–178).[18]

[15] See Goethe's letter to Schiller, 21 February 1798, in Goethe, 1962–1967, 2: 333; and the essay "Erfahrung und Wissenschaft," completed in January 1798, in *GA* 23: 24–25.

[16] Schelling, 1856–1861, hereafter cited as *SW*, 3: 274–275, 282–283.

[17] Compare *GA* 17: 239, 128, and 11: 413.

[18] See also Goethe's letter to C.G.v. Voigt, 27 February 1816, in Goethe, 1962–1967, 3: 341–344; Boyle, 1991–2000, 2: 593-600, 618–22.

Timothy Lenoir has suggested that the primordial forms, or what he terms morphotypes, that Goethe regarded as guiding and delimiting the forces that give rise to nutrition, growth and reproduction are similar to what Georges-Louis Leclerc Comte de Buffon described as the *moule interieur*.[19] Goethe certainly repeatedly praised Buffon for his use of the correct method of comparative anatomy, one that provided him with an overview of diverse animal forms.[20] Moreover, his close friend Frau von Stein did see an analogy between Goethe's description of his developing vision of the *Urpflanze* during his travels in Italy and Buffon's model, whose *moule interieur* was translated as *Urbild* or primordial image in the 1752 German edition of his *Histoire naturelle*.[21] But whereas Buffon's conception of a *moule interieur* was purely speculative and referred to no perceptible structures, Goethe insisted that the *Urform* was to be intuited on the basis of a properly directed study of perceptible form.

In fact, Goethe was probably more influenced by Herder in the development of his ideas on morphology. During the winter of 1783–1784, renewing their friendship from Goethe's student days in Strasbourg, they discussed in detail Herder's work on the *Ideas for a Philosophy of the History of Humanity* and the analogy Herder drew between world history and the history of nature. Herder was interested in the succession of forms of plants and animals, and the analogy of their organization. Through his conversations with Herder, Goethe became convinced that each creature is only "a shade of a great harmony, which one must study as a whole, otherwise each individual is a dead letter."[22] It was to his conversations with Herder that Goethe attributed his first conception of the *Urform* (*LA* II 9A: 286).

In extending his science of morphology from plants to animals, Goethe regarded the methods of comparative anatomy as the method best suited to discerning primordial forms, especially one based on the principle of comparing "all animals with every animal and every animal with all animals," rather than "comparing animals to human beings" as was traditional in anatomy in the eighteenth century. Through such a comparative method, he argued, it would be possible to abstract a general anatomical type [*Typus*], "a general image [*Bild*] containing the forms of all animals as potential, and one which will guide us to an orderly description of each animal" (*GA* 17: 233). For developed animals Goethe proposed the skeletal structure as "the clear framework for all forms" (*GA* 17: 242). His emphasis was upon the constant elements in this structure, despite variations in the form, age or size of the

[19] Lenoir, 1987, pp. 23–24.

[20] See *LA* I 9: 121, 201; II 9A: 144; II 9B: 216.

[21] Frau von Stein's letter is from 9 June 1787. *LA* II 9A: 520.

[22] Letter to Knebel, 17 November 1784. *LA*, II 9A: 303.

animal, and in the separation or adhesion of parts. Goethe repeatedly emphasized the importance of having the guidance of a primordial form or type. It was the concept of a vertebrate type which, Goethe claimed, made sense of his discovery of the intermaxillary bone in human beings and led him to represent the skull as well as the spinal column as modifications of a primordial vertebra.[23] Physiological considerations did enter into Goethe's studies of anatomy. He argued, for example, that a bone like the intermaxillary, which, as well as being present in most vertebrates, serves an important feeding function, is likely to belong to a primordial form. He also stated that "one has to look not merely into the relative juxtapositions of parts, but into their living, reciprocal dependence, influence and effect" (*GA* 17: 278). But in practice Goethe's work was dedicated to using comparative anatomy "to fill in the holes of physiology" (*GA* 17: 272).[24] In contrast to the growing interest in the complex alterations within organic bodies underlying the activities of generation, irritability and sensibility in the work of Blumenbach, Alexander von Humboldt and others during the 1790s, Goethe's study of living beings concentrated on their perceptible forms.

The emphasis Goethe placed upon the perceptible formal aspects of generation becomes explicit in his discussions of the similarities between the metamorphosis of plants and that of insects. The metamorphosis that Goethe represented in plants as a series of stages in which one and the same organ takes different forms is even more conspicuous with insects in which the parts are manifestly connected, ordered and developed in a certain series. The example Goethe gave of the caterpillar, in which each form taken during its radical transformation is completely different from the preceding one, particularly encourages an understanding of metamorphosis in terms of the evident formal qualities of its distinct stages rather than a continuous formative activity (*GA* 17: 199, 282–284).

In writing an introduction for the publication of the collection of his morphological fragments in 1817, Goethe did caution that attention solely upon the structured form of an actual being, the *Gestalt*, what is fixed and defined, excludes what is changeable. He emphasized that in organic forms nothing is at rest or defined. Rather, everything is in a flux of continual motion. "That is why [the German] language quite properly is accustomed to using the word formation [*Bildung*] for the product as well as the process of production. Thus if we intend to introduce a morphology, we should not speak of form, or if we use the term we should only mean by it the idea, the concept or to what is held fast in experience only for a moment. The formed is immediately again transformed (*GA* 17: 13–14)."

[23] See Bräuning-Oktavio, 1956, pp. 4–144; Lenoir, 1987; Jardine, 2000, pp. 37–43.

[24] See also *GA*, 17: 231–267, 269–288, 371–380.

Yet Goethe's morphological fragments reveal an emphasis upon the forms which can be "held fast in experience," rather than on the hidden organic activity generating these forms. Goethe acknowledged formative forces or activity in the transformation of living beings, but his primary interest was in representing the formal constraints upon these forces, ideal types abstracted from experience through a disciplined perception. But having argued that the basis for the intuition of the ordered whole lies in perception rather than speculation, Goethe needed to provide a methodology for realizing that intuition objectively.

Urphänomene: Aesthetics and Epistemology in Goethe's Vision of Science

Goethe's science of morphology was to provide the method for making evident pure phenomena [*Urphänomene*], for making intuitable the necessary laws behind the perceptible forms and formation of living nature, for a rational empiricism. It was his developing views on aesthetic appraisal that informed these epistemological precepts of his science. Goethe's growing sense of himself as an artist, especially from the time of his Italian journey, led him to reflect increasingly upon the problems of aesthetic appraisal and to take an interest in the aesthetic theories of Johann Joachim Winckelmann, Carl Philipp Moritz and Schiller. His reading of Kant's 1790 *Critique of Judgment*, in which "aesthetic and teleological judgment illuminated one another," provided him with a further stimulus for bringing together his disparate interests in the products of art and nature.[25] Particularly important for his scientific epistemology was the poet's interest in the visual arts that was fostered during his sojourn in Italy; the methods he learned for an informed viewing of artistic products became a model for the study of natural products. Goethe argued that the subjective and speculative tendencies of contemporary science could be domesticated and disciplined through a similar mode of cultivated perception as disciplined the subjective tendencies in art, and thus the ideal form in nature intuited on a similar basis as the ideal form in art. But there was a tension within his attempt to model scientific epistemology upon aesthetic appraisal; works of art are constructed products in contrast to those of nature. Goethe's method for making evident *Urphänomene* in nature would involve similar acts of construction, carefully arranged experiments or the drawing of the *Urformen* of plants, starting from a nature already cultivated or already given form.

[25] Goethe, "Einwirkung der neueren Philosophie," in Goethe, 1948–1960, hereafter cited as *HA* 13: 25–31.

Goethe explicitly wrote aesthetics into his study of nature in his account of his Italian journey from September 1786 to June 1788. His *Italian Journey* is his reconstruction of his travels in Italy from letters, diaries and memories some twenty-five years later, and since he subsequently destroyed most of the documents he used in its writing, it cannot be known to what extent it is a reliable account of his actual experiences and thoughts at the time. Yet it is clear from the documents that do remain that Goethe was deeply engaged with the study of both organic forms and art, and began to develop interesting connections between the two pursuits. Freed from the social and emotional constraints of the Weimar court, Goethe found himself stimulated by the lush landscape, antique artefacts and free lifestyle of the artists' colonies he found in Italy, and rediscovered himself "[a]s an artist!" – as he enthused in a letter to Duke Carl August shortly before his return to Weimar.[26] Goethe was not simply referring to himself as a writer with these words, for although he completed several unfinished works whilst in Italy, it was not a particularly productive or creative period for his writing. Indeed, he spent much of his time in Italy studying the visual arts, through his efforts to cultivate his perception of classical artefacts and his attempt to learn to draw and paint. Rather, Goethe was referring to a new sense of his vocation as an artist and a new sense of the significance of artistic sensibility. He was encouraged in these views by his conversations with Moritz in Rome, whose essay "On the Plastic Imitation of the Beautiful," reflecting those conversations, privileged artistic creativity and elevated artists like Goethe to the status of a demi-god. Every beautiful whole that proceeds from the hands of such an artist, Moritz argued, bears the imprint of the supreme beauty of the great whole that is nature.[27]

It was Goethe's study of the visual arts that became significant for his study of morphology, as he drew direct analogies between his quest for the laws of art and the laws of plant form. Visual images were important for Goethe throughout his life. "I should like to lose the habit of conversation," he remarked in 1809, "and, like nature, express myself entirely in drawings"[28] – a remarkable comment for a poet. Goethe had some instruction in drawing and art from his early childhood and studies at the University of Leipzig, and had been concerned with the correct method for drawing anatomical forms in the years prior to his trip to Italy, taking drawing classes at the Drawing Academy in Weimar and adopting the method of Petrus Camper for the illus-

[26] Goethe, 1962–1967, II: 85. See Boyle, 1991–2000, II: 491.

[27] Boyle, 1991–2000, II: 496–500; Moritz, 1962.

[28] Remark from one of Goethe's conversations, written down by J.D. Falk, incorrectly cited as a letter to Falk in Goethe, 1980, p. 73. I thank Ernie Hamm for this correction.

tration of anatomical form.[29] But it was during his Italian journey, living as an artist amongst artists, that he came to recognize drawing as a means to focus the eye on realities that must be the same for artist and scientist, even as he came to recognize his own limitations as a visual artist. Goethe was initially overwhelmed by the difficulties confronting him in these tasks. In his study of the artistic products of antiquity, he thus took Winckelmann's letters and 1764 *History of the Art of Antiquity* as his guide. Winckelmann praised the coherence and proportion, the ideal beauty, of classical art, claiming it to be indicative of a state of mind of exemplary coherence in its creators. He argued that the formal and spiritual values represented in classical art are not directly present to an uncultivated eye. To be able to discern their essential and spiritual value, their proportion and coherence, requires serious study and reflection, a kind of moral discipline. Only thus could one's aesthetic judgment become objective. But in his appreciation of antique sculpture, Winckelmann emphasized not only their formal beauty, but also their sensual qualities, their smooth, unblemished, graceful contours. He insisted that the judgment of a work of art must be a response to its visual presence, not simply its rational study.[30] Although disagreeing with details of Winkelmann's study of art, Goethe found that the principle of his approach "exactly fits my method of investigating" (*GA* 11: 162). It was in the context of working to refine his visual sensibility according to such "Winckelmannian threads," seeking to discern the classical ideal in the antique ruins and statues of Italy, that Goethe claimed to conceive the organizing idea of his morphology. Amidst the lush vegetation of Italy, he envisaged that it might be possible to derive all varieties of plants from an ideal original plant or *Urpflanze*.[31] Although he was not yet able to discern the *Urpflanze* exactly or see the full implications of "this model," he became convinced that it was "the key" to "the secret of plant generation and organization."[32] At the same time as his study of art led him to a principle, "a master key," by which he could "explain works of art and unlock the secret that artists and art experts since the Renaissance have been laboriously trying to discover," Goethe claimed to develop his key to the diversity of plant form, his law of plant organization (*GA* 11: 435–436).

[29] For Goethe's early instruction in drawing see Boyle, 1991–2000, I: 53–54, 63–64; and for his studying of anatomical drawing see *LA* II 9A: 277, 288–289, 296, 305.

[30] On Winckelmann, see Potts, 1994; Barasch, 1990, pp. 97–121; Lange, 1992, pp. 105–109.

[31] See *GA*, 11: 63, 241–243, 291–292, 385. In his retrospective accounts of his Italian journey, Goethe would attribute to this time his first ideas on the metamorphosis of plants and the *Urblatt*. See *GA* 17: 58–62, and 11: 412–420, 442–452.

[32] Letter to Frau Stein, 8 June 1787, in *GA* 19: 84–85, and included in *Italienische Reise* as a letter to Herder, *GA* 11: 351–353.

What Goethe transported from his study of art in Italy to the study of nature was not his original idea of an *Urform*, for he had first formed this idea through his conversations with Herder before his travels to Italy, but the method for discerning this primordial form. Winckelmann had concluded that beauty is a means to truth, that the study of art could also teach one to see and comprehend nature more clearly.[33] In Italy Goethe also concluded that the antique "masterpieces were produced by man in accordance with the same true and natural laws as the masterpieces of nature" (*GA* 11: 435–436). Although convinced that the *Urpflanze* was the key to plant organization, the perception of its exact form eluded him. Goethe concluded that if he was to uncover the organizing principle of plants, it was to be through culture and cultivation, through the kind of disciplined perception that Winckelmann argued was necessary to discern the essential form of art. Indeed, although Goethe spent a great deal of time travelling through countryside, even traversing the relatively wild interior of Sicily, it was always in gardens that his insights into the order underlying the diversity of plant forms seemed to occur. He claimed his most important epiphany occurred whilst he was in the Public Garden in Palermo, Sicily. The poet infused the moment with the drama of discovery and disappointment. Intending to meditate on a poetic project, one inspired by a classical theme, he was seized by another. Surrounded by rich variety of "new and renewed structures [*Gebilde*]" brought together and cultivated in the garden, his thoughts turned to the *Urpflanze*. He sought to make this thought more precise by examining the different plant forms, but without success (*GA* 11: 291). Goethe concluded that a disciplined perception similar to the one advocated by Winckelmann in art is needed to form an objective judgment of the masterpieces of nature. What became clear from his experiences in Italy was that such an objective judgment remained an unrealised ideal, and that such a judgment could not be based simply upon an immediate perception of uncultivated nature.

In the decade following his return to Weimar, Goethe continued to develop his ideas on art and nature, and the methods for their study. He again took up anatomical studies with Loder, and began to investigate the phenomena of colour. In his own drawings and paintings Goethe tended to temper the classical ideal of artistic beauty with a sense of colour and rhythm. In fact, he began inquiries into colour in the hope of finding guidance for the artistic use of colour, although they soon expanded into the study of all the phenomena associated with colour, from the physical and chemical to the physiological and psychological, from the objective to the subjective aspects of colour phenomena. In the ideas on art that he sketched shortly after his

[33] Lange, 1992, p. 107.

return from Italy, Goethe similarly argued for a balance between objectivity and subjectivity, diligent imitation and free invention, the tangible and the essential. If in his own artistic practice, his art collection and his reviews of artists Goethe tended to oscillate between an enthusiasm for the imitation of nature and imaginative mannerism or sketches, he aimed to bring both tendencies into balance in an enhanced or more perfect form of art, which he called style.[34] Indeed, polarity became a frequent motif in many of Goethe's writings of this time. He sometimes described polar opposites as the primary principles behind appearances, such as the encounter of light and darkness giving rise to colour or the interchange of extension and contraction in the metamorphosis of plants. But more significant is the pervasive polarity between a free, subjective, creative impulse and a disciplining, objective, structuring element or law. It is this sense of polarity that is fundamental to Goethe's 1790 essay *The Metamorphosis of Plants*, in which he represented the formation [*Bildung*] or perfection [*Steigerung*] of a plant as the result of the interaction between the activity and forces of the nutritive juices of the plant and the form of the primal leaf. As Jardine has argued, the terms polarity, enhancement and perfection found in Goethe's studies of colour and plant metamorphosis are terms of aesthetic appraisal. "[T]hey are used as terms of critical and art-historical appraisal to describe the relationship between art works and their prototypes" – thus Goethe's *Torquato Tasso* is an enhancement of *Werther* – and they "are used to describe the process whereby the artist derives the particular work of art from the source of his inspiration."[35] Nicholas Boyle also notes how *Wilhelm Meister's Years of Apprenticeship*, an ongoing project that Goethe finally brought to a close in 1796, can be read as applying the metaphor of plant metamorphosis to the pattern of formation of Wilhelm's life – with the first stage of Wilhelm's symbolic existence encapsulating its future structure like seeds, the next stage of his life unfolding in a simple, chronological and unidirectional process like the development of the plant stem, and the necessity of halting that process in order for his life to flower, as depicted in the final books – whilst acknowledging the limitations of that metaphor in accounting for all elements of the structure of the work.[36] In two poems written in 1798 and 1800 respectively, "The Metamorphosis of Plants" and "The Metamorphosis of Animals," the relationship between organic and intellectual development are made central. The opposition between an inner force and the constraint of form are also depicted, most explicitly in the later poem. During the 1790s Goethe thus developed the relationships between ordering principles for both art and

[34] See Goethe, "Einfache Nachahmung der Natur, Manier, Stil," in *GA* 11: 66–71.

[35] Jardine, 2001, p. 41. See also Wilkinson and Willoughby, 1962, chs. 6, 10 and 11.

[36] Boyle, 1991–2000, II: 410–425.

nature, and the methods for the study of both, that he had begun to explore in Italy.

When Goethe tried to explain his views on the metamorphosis of plants to Schiller in 1794, he did not use the term *Urpflanze* but spoke of sketching for Schiller "a symbolic plant" (*GA* 16: 867). The two became engaged in their first extended conversation after a meeting of the Jena Scientific Society, and Goethe was stimulated by the younger poet's criticism of the fragmented treatment of nature in the lecture they had just heard to give an account of his own method of inquiry. The symbolic plant was a symbol that Goethe contended he could sketch for Schiller; that is, make it into a concrete, perceptible image [*Bild*]. Goethe represented the "symbolic plant" as following directly from observation. Schiller objected: "That is not an experience, it is an idea." Goethe's riposte at the time was that "I can only be pleased that I have ideas without knowing it, and can even see them with my own eyes" (*GA* 16: 867–868). To Schiller, who had been deeply engaged with Kantian philosophy during the previous three years, Goethe's claim to be able to see ideas was problematic at best. Goethe's reputation and talent as a poet was also problematic for the younger Schiller, who, despite successes with works like *The Robber*, had recently become preoccupied with reflections upon and doubts about his own creative processes.[37] Schiller's response to his encounter with Goethe was to express the differences in their ways of perceiving, understanding and representing nature epistemologically and artistically in Kantian terms.

Schiller's first attempt to articulate these differences was in a letter to Goethe a month after their first exchange. In his letter Schiller was also attempting to persuade Goethe to become involved in a new critical journal that he was founding, *Horae*, and so was concerned to represent Goethe's ideas in a positive light. To this end, Schiller played with the two meanings of intuition [*Anschauung*] in Kantian philosophy. He characterised Goethe's approach to nature as intuitive, as starting from sensory experience, and as raising itself from material and particular things to general laws. He contrasted this approach to nature to speculative or rational approaches, such as his own, which start from abstract a priori principles, and deduce laws that are then to be demonstrated in the particular. But Schiller also honoured Goethe with an intellectual intuition, an inspired intuition that can see the general in the particular, a "genius which under the dark but certain influence of pure reason combines [the given] according to objective laws" (*GA* 20: 13). In an essay written in 1795, *On Naive und Sentimental Poetry*, Schiller elaborated this contrast between the intuitive and speculative ways of thought into a distinction between two types of poetic perception. The naive poet is intui-

[37] Reed, 1980, pp. 68–69.

tively in harmony with nature. In this category Schiller included the poetic genius of the Greeks and Shakespeare. The sentimental poet, in contrast, is aware of his separation from nature, of the artifice and convention in his poetic products. Such is the condition of the modern poet. Schiller's essay started from the sentimental poet who reflects upon his sense of disharmony between experience and reason, nature and culture, and compares it wistfully with the natural poetry of antiquity. The naive poet has no consciousness of such a distinction, as he has no sense of distance from nature.[38] Schiller represented Goethe as a naive poet, who has a simple, natural genius like the ancients, and himself as a sentimental poet, reflective and speculative, thus articulating his private, tormented meditations on his own talents in relationship to the genius of Goethe.

But if Schiller thus dignified Goethe's naive *Geist*, he also asserted the artistic potential of the modern reflective poet. In an elaboration of Kant's analysis of aesthetic judgment in his *On the Aesthetic Education of Humanity*, first written as a series of letters to his Danish patron, Duke Friedrich Wilhelm Augustenberg, in the summer of 1793 and then revised for inclusion in *Horae* at the beginning of 1795, Schiller argued for the potency of reflection upon the juxtaposition of the sensory and rational impulses of the human being. The material impulse, the *Stofftrieb*, is directed to the material conditions of humanity binding us to the sensory and transient; the formal impulse, the *Formtrieb*, is directed to unchanging formal conditions and is the basis of our sense of identity and freedom. The aesthetic state of mind arises from the play [*Spiel*] between these two tendencies. Through contemplating this play and the beautiful material forms created through it, Schiller proclaimed, the human being cultivates his or her highest capacity, a state of wholeness. The *Spieltrieb*, as the harmony of the sensory and rational impulses, provides a symbol in the real world of the ideal of humanity – virtuous, free and happy, the beautiful being. Art, in showing us beauty, shows us freedom or moral perfection in appearances; in art morality and life are represented as fictions, as semblances, as something with which both the minds of the artist and his or her audience plays, and so thus are able to bring into harmony. Schiller argued that it is through such aesthetic reflection and play that the modern poet can aspire to the natural unity of the naive poet.[39] Schiller was just beginning to conceive these aesthetic ideals when his meeting with Goethe took place.

Schiller's assessment of Goethe's poetic genius was thus not born simply out of a need to establish a relationship with the established poet to support his own literary ventures, but out of a deep intellectual interest in aesthetic theory.

[38] Schiller, 1962, 20: 413–503.

[39] Schiller, 1967. See also Boyle, 1991–2000, 2: 229–232.

He was able to translate Goethe's epistemological and aesthetic commitments into the predominant Kantian terminology. The unequivocal systematicity of his letter of 1794, however, exaggerated their differences. Goethe, if not overly reflective on his poetic gifts, did not enjoy a free-flowing unconscious creativity, nor did his poetry confine itself to the visible and tangible.[40] But Goethe was pleased by Schiller's assessment of his genius. If in a later note on Kant's philosophy he treated ironically the claim to the intuitive judgment of an *intellectus archetypus* or a godlike understanding (*GA* 16: 877–879), he also set as the purpose of his science of morphology an understanding of the whole through intuition (*GA* 17: 13).[41] In his reply to Schiller's letter in 1794 Goethe enthused that it had laid out the sum of his existence (*GA* 20: 16–17). Within days he sent Schiller a suggestion for an essay applying the concept of beauty that Schiller had derived speculatively to the natural world. The perfectly structured living organism, he argued, is beautiful if it is regarded with respect to its organization, perfection, coherence and function.[42] This piece illustrates Goethe's representation of the ideal form in the concrete particular, in contrast to Schiller's more abstract analysis. Although Schiller's influence can be seen in a greater emphasis upon form and in a greater philosophical sophistication in his subsequent writing, Goethe continued to insist upon the need to intuit the idea on the basis of the empirically given. Schiller and Goethe never became intimate friends, never addressing each other with *Du*, and Schiller continued to remain deferential to the elder poet. But their meeting in 1794 was the beginning of a long and close collaboration on *Horae* and other ventures, made possible by their acceptance of their differences and their mutual respect.[43]

Goethe's essay "The Collector and his Circle," published in the *Propyläen* in 1799, does not, however, fit neatly into Schiller's aesthetic theory. Goethe concluded this essay with a diagram in which six different tendencies of artists are polarized into oppositions between earnestness and play. Perfect art, he argued, is the result of a balance between earnestness and play (*GA* 13: 319). But in *Aesthetic Education* Schiller represented play as the result of reflection upon the relation of the material and formal tendencies of the human spirit. Although he increasingly shared with Goethe an ambition to establish norms for German art and culture, Schiller was also interested in reflecting upon the creative process itself, as presented in play. Goethe mini-

[40] Boyle, 1991–2000, 2: 224–225.

[41] See the discussion of Goethe's treatment of Kantian archetypal intuition in Jardine, 2000, pp. 40–42.

[42] *HA* 13: 21–23.

[43] On the relationship between Goethe and Schiller, see Boyle, 1991–2000, 2: 222–233, 258–260, 285, 453, 467–469; Mayer, 1973, pp. 57–65.

mized reflection upon the creative process in his aesthetics as well as in his inquiry into nature. Represented as a naive poet, he could claim his artistic creations as spontaneous. Represented as an intuitive intellect, he could claim to intuit in *Urphänomene* the identity of the real and the ideal, to make evident natural necessity, and thus to establish an objective science of morphology. Schiller sought to cultivate play, in the process perhaps domesticating and taming the unruly elements in the creative process. Goethe seems to have had an anxiety about delving too deeply into the dark realm of the imagination. The process by which the real is united with the ideal was not explored by Goethe, and he was critical of preoccupation with the subjective process of creativity by the new generation of romantic writers and artists. When Goethe organized art competitions in Weimar between 1799 and 1805, the governing principle was the antique as the prototype of the ideal. Although Goethe sometimes expressed a fascination with romantic art, its attempts to represent the activity of reflective thought and the imagination, and its preoccupation with freedom in art, was alien to Goethe. Similarly, in his morphology Goethe left the formative forces, the *Bildungstrieb*, unexplored and unspecified, rather seeking objective knowledge of nature by discerning the ideal archetypes giving necessity to the transformation of form through a disciplined perception, the pure phenomena that could be represented through images.

"The symbolic," Goethe wrote in a maxim on art, "transforms the appearance into an idea, the idea into an image [*Bild*], and in such a way that the idea in the image remains always endlessly effective and unreachable, and even if expressed in every language, still remains inexpressible" (*HA* 12: 470). In contrast to allegory, which speaks to the intellect alone, signifying directly and with its perceptible face having no reason save to transmit a meaning, a symbol speaks to both perception and intellect. Signifying only indirectly, it is present first of all for itself, and only secondarily do we discern what it signifies. For Goethe, the symbolic is the exemplary, what allows itself to be considered as the manifestation of a general law.[44] In a true symbol "the particular represents the general" (*HA* 12: 471).

Goethe's characterization of the symbol reflects the broader theory of art that he articulated at the turn of the nineteenth century, which he conceived in terms of primordial images or *Urbilder*. Goethe held that the ideal of art is not to be found in any particular work of art, yet particular works of art can resemble or present these archetypes, which he contended the works of the Greeks have done most closely. These ancient artifacts, complete in themselves and the most perfect of artistic forms, became for Goethe the canon of art, prototypes for contemporary artistic production. Accordingly, in

[44] On Goethe's conception of the symbol, see Todorov, 1977, pp. 201–207.

explicating the concept of style as the most perfect form of art, Goethe did not offer a philosophical clarification of the problem of its form in the abstract, but made reference to the criterion of certain prototypes. In the plastic arts, classical artefacts embodied this typifying style; for the verbal arts, he sought to exemplify these ideals himself. Thus the ideal archetypes remain invisible and are in principle only intuitable. Works of art such as antique artifacts, however, can and should resemble these archetypes by making perceptible in a particular content the intuited ideal.[45] Goethe regarded the relationship between the intuited ideal and the perceptible content of art as a necessary one, and attempted to determine the direction of German art according these ideals, with Greek art as its prototype, through his articles on aesthetics and establishing art competitions. The conception of a necessary relationship between the intuited ideal archetype and perceptible content that became the central tenet of Goethe's aesthetic theory also became the central tenet of his scientific epistemology. That the ideal archetypes of art were not the creation of artists, but existed prior to all created work as the necessary or natural forms of all art, made Goethe's ambition to intuit the *Urphänomene* in nature inseparably intertwined with his ambition to intuit the ideal of art.

Goethe's problem was, however, how to make evident *Urphänomene* in nature; in art, after all, they were only visible through prototypes or actual artefacts. In several brief essays written during the late 1790s Goethe outlined his method for evident *Urphänomene* in nature, drawing upon the method for the appreciation of works of art he was working out in his aesthetic essays. In his journal on "nature and art," the *Propyläen*, Goethe argued that a true work of art strips from its object "everything which is not essential" to it, to extract "the significant, the characteristic, the interesting."[46] He illustrated this ideal through exemplars, such as the antique sculpture Laocoön, which "is a model of symmetry and diversity, of rest and motion, of opposition and gradation, which present themselves together, partly sensibly and partly intellectually, to the viewer" (*GA* 13: 164). In his notes on scientific method, Goethe argued in a similar manner that the empirical phenomena that everyone finds in nature needs to be raised to the level of pure phenomena [*reine Phänomene*]. "To represent it, the human mind determines the empirically variable, excludes the accidental, separates the impure, unfolds the complicated." The scientific researcher must thus strive to grasp "not only how phenomena appear, but also how they should appear" (*GA* 16: 869–871). *Urphänomene* were such pure phenomena, how natural phenomena necessarily appear or laws of nature. Lacking exemplars that he could point to, as in art, Goethe contended that such *Urphänomene* could "stand before [the investigator] as a result of all

[45] Benjamin, 1996a, pp. 179–181.

[46] Goethe, 1980, pp. 8–9.

experiences and experiments" (*GA* 16: 71). To obtain empirical evidence of this "higher sort" in practice, in his essay "Experiment as Mediator between Subject and Object" he proposed setting up a spatial array of contiguous experiments. "Studied thoroughly and viewed as a whole, they could make up a single experiment, merely representing a single experience under its most manifold variations." Such an experiment would have the objectivity of a mathematical proof, he argued, which leaves no gaps between the succession of arguments (*GA* 16: 852). The need to conceive or imagine the links between the successive stages, for example, in the development of a plant, would be eliminated in such a visible array. Goethe regarded his experiments with the phenomena of colour experiments of this sort. His criticism of the method of the Newtonians was that they built their theories on the basis of isolated experiments; they went astray because they had to construct the whole mentally, subjectively, through theories or systems of purported relationships.[47] Instead, he sought a method of disciplined perception in which the interconnection of phenomena is presented objectively. What he did not recognize in these essays was that such a series of experiments needed to be arranged so that the interconnections between phenomena could be perceived. The similarities between his aesthetics and scientific epistemology were perhaps other than Goethe intended; the pure phenomena he envisaged in nature were to be artefacts of scientists' experimental constructions, and perception disciplined according to scientists' normative ideals. The objectivity Goethe sought in nature was one of the scientists' own making.

A similar situation arises in Goethe's appeal to *Urbilder* in his morphology. In claiming that he could make the symbolic plant into a concrete, perceptible image [*Bild*] for Schiller, Goethe offered to sketch it. Since the *Urformen* are hidden behind the diverse appearances of nature, an artistic image could make them present in the form of a likeness.[48] It was Goethe's intention to publish illustrated editions of his morphological works, although he never realized this plan. In the work he did do on this project, he was able to draw upon his training in drawing and painting that he had taken up in earnest during his Italian journey. The illustrations that he prepared, or had prepared by others, for a projected new edition of *The Metamorphosis of Plants* emphasized the formal and spatial relationships of the different parts of the plant, with reference to the basic leaf form. In such illustrations the process of transformation itself, the internal processes by which one form transforms into another, the linkage between the different forms, could not be represented. Indeed, the extant illustrations focus upon single

[47] For a detailed discussion of Goethe's colour theory and its reception, see Sepper, 1988.

[48] Benjamin, 1996a, pp. 180–181.

plants, rather than depicting a series of images in analogy to the array of contiguous experiments Goethe suggested should form the basis of empirical evidence of *Urphänomene*. Perhaps his attention to particular exemplars of the ideal form of art led him to conceive his images of the *Urformen* of plants also in terms of particular exemplars. In any case, such images, rather than eliminating speculation in favour of objective form, depicted Goethe's, an artist's, particular vision of the ideal form.

When Goethe characterized the science of morphology as a means "to understand living formations as such, to grasp their externally visible, tangible parts in relation to one another, to take these parts as indications of what lies within and thus to acquire a degree of mastery over the whole through intuition" (*GA* 17: 13), he did so in the terms of the methods of disciplined perception that he had outlined his aesthetic and epistemological essays. His ambition was to eliminate the subjective elements he contended were leading contemporary art and science astray and to provide an objective vision of science in their stead, an intuition of *Urphänomene* on the basis of a disciplined perception. In art Goethe could make evident this ideal by selecting particular artefacts to exemplify it. In science he needed a similar appeal to artifice, to carefully arranged experiments or the drawing of the *Urformen* of plants, to a nature already cultivated or already given form. Yet his insistence on embedding ideal forms in perceptible materials exposed his science to elements that eluded his attempts at discipline and domestication.

Envisioning a Culture, Writing a Life

Goethe's scientific and aesthetic projects fell far short of his ideals. In contrast to his literary productions, his writings on morphology and scientific methodology found only a small receptive audience, and like his publications on the intermaxillary bone and colour theory they were largely ignored or dismissed by the scientific establishment. His aesthetic projects, the journals the *Horae* and the *Propylaea* as well as the art competitions he organized, similarly were met first with resistance and then indifference. Indeed, it is not clear that there would have been interest in these projects, either during his lifetime or in the present, if it were not for his reputation as a writer.[49] It is thus important to understand Goethe's scientific pursuits in the context of the life he tried to make for himself as a writer, in the context of his reflections in his literary works and his diaries and letters upon his role as an artist within a developing German culture and of his attempts to contribute to and shape official German culture.

[49] For modern appeals to Goethe's science and epistemology, see Seamon and Zajonic, 1998; Amrine, Zucker and Wheeler, 1987.

The impossibility of a life as a writer in the late eighteenth century led Goethe to accept a position as administrator for the Duchy of Weimar. The demands of his life as an administrator made, at times, the life of the writer difficult, yet it also provided a context and structure for that life, making writing possible. The interest in scientific studies that he developed in this new role did not act as a supplement to his poetry, nor offer him with a new identity, but rather, like his administrative duties, provided a new discipline in the life of the poet. A persistent theme in Goethe's scientific and aesthetic writings is a polarity between an internal creative force and the constraint of form and order, between imagination and discipline. A similar opposition can be seen in his literary works, and indeed seems to have been a persistent theme of his life. As he noted in the last book of his autobiography *From My Life: Poetry and Truth*, completed short before his death in 1832:

> In the course of this biographical recital, we have seen in detail how the child, the boy, the youth tried to approach the metaphysical by various paths – first affectionately looking to natural religion, then attaching himself lovingly to the positive one, next testing his own abilities by withdrawing into himself, and at last joyously yielding to the universal faith. While meandering in the spaces between these areas, seeking and looking about, he encountered some things that seemed to fit into none of these categories, and he became increasingly convinced that it was better to divert his thoughts from vast and incomprehensible subjects. – He believed that he perceived something in nature (whether living or lifeless, animate or inanimate) that manifested itself only in contradictions and therefore could not be expressed in any concept, much less in any word. It was not divine, for it seemed irrational; not human, for it had no intelligence; not diabolical, for it was beneficent; and not angelic, for it often betrayed malice. It was like chance, for it lacked continuity, and like Providence, for it suggested context. Everything that limits us seemed penetrable by it, and it appeared to do as it pleased with the elements necessary to our existence, to contract time and expand space. It seemed only to accept the impossible and scornfully to reject the possible. – This essence, which appeared to infiltrate all the others, separating and combining them, I call "daemonic" [*dämonisch*], after the example of the ancients and others who had perceived something similar. I tried to save myself from this fearful thing by taking refuge, as usual, behind an image.[50]

Goethe's science of morphology and the methods he advocated for its study, with its emphasis upon the intuition of *Urbilder* on the basis of disciplined

[50] *HA* 10: 175–176, as translated by Stanley Corngold in Benjamin, 1996b, p. 316.

perception, sought to bring unruly tendencies in living nature and human nature to order, and helped him temper his own unruly imaginative and passionate tendencies. Yet the need to provide a carefully arranged set of experiments or drawings of plants and animals to construct a context in which "a degree of mastery over the whole in intuition" (*GA* 17: 13) would be possible, meant that others might construct such contexts differently. And his insistence upon embedding the study of ideal forms in material particulars, in the perceptible phenomena, meant that others might perceive them differently. In his literary works, the ambition to present an exemplar of the ideal form of writing was tempered by the complexities of his actual writing, by what remained implicit in the material of his writing. Indeed, his most interesting literary contributions seem to be when he did not follow his own aesthetic precepts, and when the discipline of his administrative duties and scientific studies did not dominate his life.

In contrast to his preoccupations with his writing, his public role as an artist and his relationship to a developing German culture, Goethe had an ambivalent relationship to his scientific productions. He never provided a comprehensive statement of his conception of morphology to which his contemporaries could refer. Before the publication between 1817 and 1824 of his "fragmentary collection" (*GA* 17: 12) of writings on morphology in his journal *On Morphology*, Goethe's only published account of his morphological studies was the 1790 essay *The Metamorphosis of Plants*. Moreover, the first volume of Goethe's scientific journal seems more concerned with reflections upon the formation of his ideas on morphology than with their content or development. It began with an apology and statement of intent, both written in 1807, followed by a preface, a brief history of Goethe's botanical studies and an excursus on the origin of the essay on the metamorphosis of plants, all from 1817. Only then did the essay on plant metamorphosis appear, followed by essays on the fate of the original manuscript and the fate of its first printing.[51] Perhaps some of this reticence arose from his early deep disappointment with the reception of his work on the intermaxillary bone in humans and colour theory. The rejection of his colour theory, to which he responded highly polemically, confirmed Goethe in his view of his scientific activities as outside the contemporary scientific establishment.[52]

Goethe's most confident interventions into scientific activity were as an administrator in Weimar. He not only regarded the administration of science in Weimar and Jena as a part of his official duties, he also regarded science as of import to official culture. He took a direct interest in the University of Jena,

[51] Hamm, 1997. Hamm is currently completing a monograph on Goethe and geology, which will include a chapter on Goethe's self-fashioning as a scientist. See also *LA* I 9.

[52] On the reception of Goethe's colour theory and his polemical response, see Sepper, 1988.

being instrumental in the appointment of Schelling as Professor of Philosophy and working with Voigt to secure for the medical faculty Loder and Christoph Wilhelm Hufeland. Together with Voigt, he persuaded the Duke Carl August of the necessity of scientific studies to the practical improvement of his estate, which led the Duke to establish new chairs in chemistry, botany and mineralogy, and to provide the facilities for their study.[53] Goethe turned the Jena Mineralogical Society into a state society over which he could have direct control, and had it moved into the Ducal Museums. He attempted the same with the Jena Scientific Society, although less successfully, for it dissolved shortly thereafter.[54] He also had considerable influence on the management of the scientific collections in Jena, on which he was able to imprint his own conceptions for their arrangements. Goethe enjoyed the discipline of these concrete projects. Many of these projects were collaborative efforts, in keeping with the ideal of collaborative scientific work set out in his essay "Experiment as Mediator Between Subject and Object," but Goethe also enjoyed the authority that his position at Weimar gave him in these activities.

It was Goethe's position as an administrator at the Weimar court, his involvement through this position in the institutions at Jena and his frequent contact with the intellectual figures who gravitated to Jena, that enabled him to generate interest in his science of morphology and the methods for its study. The anatomists and naturalists with whom Goethe worked in Jena took the most direct interest in his morphology – Loder, A.K. Batsch, J.G. Lenz, and F.S. Voigt. Voigt, in particular, proved to be a true disciple of Goethe. A nephew and student of Blumenbach, Voigt became close to Goethe after 1803, becoming appointed as director of the Ducal Botanical Gardens and professor at Jena in 1807. He allowed Goethe to guide him in his experiments on growth and generation, and promoted Goethe's ideas on metamorphosis in all his writings.[55] Alexander von Humboldt, a frequent visitor to Jena, was also influenced by Goethe's morphological ideas. Humboldt dedicated his 1807 *Ideas towards a Geography of Plants* to Goethe and *The Metamorphosis of Plants*. Like Goethe, he sought the original plant forms, what he termed a "physiognomy of plants." Criticizing Linnaeus' approach for producing but "miserable registries of nature," his physiognomy of plants was to group the myriad species of plants into a few *Urformen* or original forms. He argued that these are to be determined from the overall "character of the vegetation and thus the impression that the sight of the plants and their groups make upon the mind of the observer."[56] Like Goethe, in Humboldt's work "nature and art

[53] Ziolkowski, 1990, pp. 235–236.

[54] Hamm, 2001.

[55] See Jahn, 1994, pp. 85–86; Uschmann, 1959; Mandelkow, 1980, 1: 190–200.

[56] Humboldt 1989a: p. 64.

are close siblings," for him the impression that a region made on the mind of the observer was an aesthetic impression.[57] But Karl Friedrich Burdach was the first to actually use the term "morphology" in print in his 1800 *Prepatory Course to the Study of the Entire Healing Art*, one of the numerous textbooks he published to help support himself until he was able to secure a position as a professor of anatomy in 1811. He subsequently included morphology as a section in the numerous physiological textbooks and encyclopaedias he produced in the early nineteenth century. These sections on morphology in his textbooks would include reference to standard anatomy texts, but also to Goethe's writings. Burdach made explicit, like Goethe, morphology's concern with the visible structures of plants and animals, defining morphology as having form as its object, that is the way in which "things represent themselves in space, and relate themselves to one another."[58] In an encyclopaedia of medical literature published in 1810–1811, Burdach indicated, like Goethe, the import of aesthetic sensibility to the concept of morphology by reference to works by the artists Albrecht Dürer and Peter Paul Rubens, next to traditional anatomical treatises.[59] This juxtaposition emphasized that it is the image [*Bild*] of the living form that Burdach, like Goethe, understood to be the object of morphology.

Burdach provided a striking institutional materialization of Goethe's conception of morphology at the new Königsburg Anatomical Institute when he was appointed Director in 1817. Burdach incorporated Goethe's method of disciplined perception and his science of morphology into the structure of both the curriculum and the displays of specimens. In a lecture delivered at the opening of the institute, *On the Task of Morphology*, Burdach explained how, through methodical empirical investigation, framed by the structures of the institution, the order of the organic world would be made present to the students and the necessary bonds between individual phenomenon made manifest in a direct intuition. At the end of their study, as a result of the careful arrangement of materials, the student would have an experience "in which living forms and their interconnections become evident in his soul."[60] Burdach's institute actually offered a much more vivid and direct expression of Goethe's conception of morphology than Goethe's own publications of the same year. It also highlighted the extent to which the experience of the

[57] Humboldt to Goethe, Jan. 1810, cited in Hein, 1985, pp. 51–52. For the relationship of Humboldt's physiognomy of plants to Goethe's morphology, see Steigerwald, 2000.

[58] Burdach, 1809, p. 18. See also Burdach, 1810–1811, pp. 376–378; Nyhart, 1995, pp. 35–48; Lichtenstern, 1990.

[59] Burdach, 1810–1811, pp. 376–379.

[60] Burdach, 1817, p. 62.

interconnection of living forms is dependent upon their correct framing and arrangement.

In physiology, anatomy and natural history texts in the early nineteenth century several of the terms emphasized by Goethe in his morphological writings can be found – *Typus*, *Gestalt*, *Form*, *Bildung*, *Stufenfolge* – and the term metamorphosis was often used to describe the transformations of structure that occur in development. But these terms were used in ways that reflected specific interests of specific scientists in the structures of plants or animals and their development, rather than Goethe's directives for a science of morphology. Even Humboldt, despite dedicating his own work on plant physiognomy to Goethe, developed his studies in a unique way. Humboldt was interested in groups of vegetation, rather than in individual plants, in how the vegetation and physical environment combine to produce the character of a region and in how that character varies across time and space under the influence of the environment.[61] In keeping with his emphasis upon "nature in its greatness" rather than individual plants, in characterizing and cultivating a visual aesthetic Humboldt appealed to the contemporary developing fashion for landscape painting, rather than the individual classical masterpieces which Goethe studied. He argued that the "delicate artistic appreciation of nature" of the landscape painter is especially suited to portraying the collective phenomena of vegetation, vegetable forms occurring in large masses, in which the form and distribution of leaves, of branches and stems, lose their individuality.[62] Moreover, in his study of plant physiology, Humboldt was concerned not only with the visualization of its basic forms, not only with an aesthetic response to the character of a vegetation, but also with meticulous physical measurements of their environment, and to this end employed an extraordinary number of physical measurements in his geography of plants. If concerned with a disciplined perception of plant form, one informed by aesthetic appraisal, Humboldt nevertheless had a singular vision of how to pursue such study. Indeed, by emphasing the necessity of studying *Urphänomene* in particular perceptible materials Goethe had opened the possibility that these materials would take different inquirers in different directions. Unlike the authority he could exert in his interventions into scientific activity as an administrator in Weimar, his science of morphology was open to reinterpretation in individual scientific practices.

In pursuing his aesthetic projects, it was again through his position as an administrator at the Weimar court that Goethe was able to shape German cultural life in general most directly, through his involvement with its cultural

[61] On Humboldt's geography and physiognomy of plants, see Dettelbach, 1996a, 1996b; Hagner, 1995; Nicolson, 1987; Hein 1985.

[62] Humboldt, 1902, pp. 221–223.

institutions such as the Weimar Court Theatre, the Weimar Library, and the University of Jena. He also became involved through the persuasion of Schiller in a grander ambition of forming German culture through its aesthetic education, collaborating with Schiller on the journal *Horae* and starting his own journal *Propyläen* to this end in the late 1790s. These aesthetic projects were a part of his exploration of his own vocation as an artist and the place of the artist within German culture. More confident interventions than that of his scientific projects, they laid out a vision of an official German culture associated with the courts that included artists as of central significance. These aesthetic projects set out the principles of his aesthetic theory and its exemplars for a wide audience, but, much as his scientific projects failed to gain the support of the scientific establishment, these projects failed in the end to gain the support of either artists or the German public.

Schiller convinced Goethe that an aesthetic education was necessary to the foundation of a moral society that ensured individual freedom and that enabled each individual to develop fully their humanity. Schiller's conception of aesthetics was deeply political, formulated as it was in the shadow of the French Revolution. His reaction to events in France, however, was complex; if regarding its initial stages with some optimism, he was opposed to its more radical elements and horrified by the treatment of the king. But he was certain that one could not be indifferent in the face of such events.[63] It was the idea that aesthetics provided the solution to the political turmoil of the day that led him to found the journal *Horae* in 1795. As he stated in the prospectus of his new journal:

> At a time when the sounds of war trouble the nation, when the struggle of political opinions and interests carries this war into almost every circle, and only too often drives away the muses and graces ... it must seem risky, yet perhaps, meritorious, to invite readers who are so thoroughly distracted, to a diversion of an altogether different sort. ... The more the narrow interests of the present excite, confine and subjugate our minds, the more urgent is the need, through a universal and more elevated interest in what transcends all present conflicts, to reunite the politically divided world under the flag of truth and beauty.[64]

In *On Grace and Dignity*, completed in 1793 after his study of Kantian philosophy and his reassessment of the French Revolution, Schiller first introduced the notion of the life of a beautiful soul as virtuous, as performing the obligations of moral law with ease, and the notion that such a disposition was not innate but acquired. He developed these arguments in *Aesthetic Educa-*

[63] Beiser, 1992, pp. 96–107.

[64] Schiller, 1965–1967, 5: 870.

tion, elaborating upon the political significance of the aesthetic. In the original letters to the Danish Crown Prince Schiller noted that the French had tried to base their constitution on the principles of reason, but recent events had made clear that the people were incapable of acting upon them. It was this problem, the gap between theory and practice, that the letters sought to address. For Schiller, the solution lay in an aesthetic education that not only imparts knowledge of correct concepts, but also an incentive for action – an aesthetic education, because it is the aesthetic which is capable of exciting and refining feelings, of cultivating sensibility, so that citizens take pleasure in the form of things and are thus ready to act according to rational principles. Schiller developed these ideas in the revised text published in the *Horae* in early 1795, but with a less explicit political agenda. Again, Schiller emphasized the importance of feelings in motivating action, but he also stressed that these feelings must be educated to ensure that individuals act in accordance with rational principles rather than out of self-interest. Thus, in opposition to political revolutionaries, he argued that a stable republic could only be achieved gradually through an aesthetic education. And in contrast to Kant's writings on moral philosophy, he did not subordinate sensibility to a principle of duty, but emphasized the role of sensibility in executing our moral intentions.[65] It is the aesthetic that alone is capable of resolving the conflict between duty and inclination, between reason and sensibility. The play drive that acts according to our whole nature as rational and sensible beings gives rise to the aesthetic state of mind, to beauty. It is "through beauty that the human being achieves freedom," a freedom which is based neither on arbitrary action nor on external law.[66]

When Goethe agreed to collaborate with Schiller on the *Horae* it was not with such a developed sense of the political nor the place of the aesthetic within it. But he agreed with Schiller that a journal dedicated to producing a canon of critical and reflective work would contribute to producing the clearer principles and moral attitudes upon which any improvement in social conditions depended. Goethe thought he could contribute to this end through his own exemplar, by submitting his own poetry, such as the Roman Elegies, and thus giving legitimacy to his aesthetic ideal and illustrating a disciplined fusion of naive and reflective poetic impulses. He also contributed didactic pieces, and increasingly came to see the role he might play in the *Bildung* of a German culture, in the shaping of German society according to his ideals, by laying out the precepts for its aesthetic education. Schiller, in turn, increasingly saw the role he might play in educating the German people to an aesthetic state of mind, in thus determining what is necessary for freedom.

[65] Beiser, 1992, pp. 96–107.

[66] Schiller, 1967, third letter.

But the *Horae* adopted such a high-handed and severe tone that many of its initial contributors withdrew their support and subscriptions decreased, and the journal had to cease publication two short years after the appearance of its first issue. Goethe vented his frustrations in a series of distichs he called "Xenia," arrogant satires of the culture that had rejected his and Schiller's cultural program. After the failure of the *Horae* Goethe immediately started a new journal, *Propylaea*, which was intended as a forum for a small group of individuals sharing his aesthetic vision to discuss the theory and practice of art. But it continued its polemical attitude to contemporary German culture, critically evaluating modern works of art against ideal antique prototypes, as in his essay "Laocoön." The new journal failed as well. Goethe also started art competitions together with the rather pedantic painter and critic Heinrich Meyer, a former student of Winckelmann's that Goethe had met in Italy, in which the principles, the laws, for an aesthetic ideal were clearly specified. Many of the most interesting entries, such as one by Otto Philipp Runge, were excluded because they did not follow the dictated rules.[67] The failure of these aesthetic projects was in part due to their arrogant and polemical tone, but also in part due to Goethe insisting on necessary and objective ideals of art in an age increasingly preoccupied with reflection upon the subjective, imaginative forces in artistic production. Indeed, he insisted on an ideal of art modelled on classical prototypes to which his own artistic material did not conform.

These aesthetic projects also need to be understood as a means for Goethe to explore the social and political forms of German culture and the place of the artist within it as a part of his own exploration of his place in that culture. Goethe was dismayed by the politics of his time, and had originally insisted that the Revolution not be discussed in the *Horae*, despite Schiller's prospectus. He regarded the revolution in France as the "most terrible of all events," born of lawlessness and corruption (*HA* 13: 39 and 12: 380). His involvement with Duke Carl August in the disastrous Prussian campaign against France, his immediate experience of the inhuman suffering of the retreating army, led him to seek refuge from the political turmoil of the time in the small court of Weimar.[68] But he eventually used the *Horae* to criticize political events in France and to speak for the importance of the aristocracy in creating a civil society and cultivating human sensibility. The *Horae* suffered from Schiller being involved in too many other projects and Goethe not submitting his best writing, but also because it flaunted a preference for aristocratic culture and its cultivated sensibilities whilst writing

[67] On these ventures, see Lange, 1992, pp. 139–142, 147–152; Boyle, 1991–2000, II: 218–222, 270–277, 609–611, 632–635.

[68] For the details of this experience, see Boyle, 1991–2000, 2: 117–136.

for an audience of the urban middle class. Goethe regarded the courts as the site for the formation of German culture, and his conception of his role as an artist included dependency upon the court. He also contended that the artist is essential to court culture. Indeed, since his rethinking of his vocation as an artist in Italy, Goethe had excused himself from many of his former administrative duties and concentrated more of his energy on his writing and cultural projects.[69]

Goethe's literary works of the 1790s showed a similar exploration of the place of the imaginative artist within German culture, and a similar articulation of the civilizing affect of an aristocratic social order. When Goethe began writing *Torquato Tasso*, for example, in the early 1780s the play contained only the love of a poet for his princess, the young man offering intense, spontaneous feeling to a woman constrained in her response by convention. But in the play Goethe finally published in 1790 the passionate and tormented young poet is juxtaposed to a judicious and disciplined elder statesman. *Torquato Tasso* was in part a statement of Goethe's renewed sense of himself as an artist after his Italian journey, a bold claim that the poet was of equal status to the statesman at court.[70] But the play does not place the poet above the statesman, or impulse above discipline; its drama consists in the interaction between the two. And the play ends ambiguously, with it left unclear whether the poet would be able to find his place at court through accepting the assistance of the statesman to temper his creative impulses or whether those same impulses had led him to madness.[71] The polarities in *Wilhelm Meister's Apprenticeship* are more complex. Goethe's unpublished *Wilhelm Meister's Theatrical Mission*, on which he worked between 1777 and 1785, treated the problematic of the place of a spontaneous and imaginative personality in a world in which pragmatic and aesthetic ideals are kept apart. The detached and ironic voice of the narrator, which represents Wilhelm's theatrical mission as misguided, became more pronounced in the 1795 *Apprenticeship* in which Goethe substantially reworked the earlier text. Wilhelm's enthusiasm for the theatre is now just a single aspect in his education [*Bildung*] or perfection [*Steigerung*], which takes place through his interactions with a diversity of contrasting characters. The novel ends when the opposing tendencies represented by the different characters achieve a balance, with Wilhelm's impulsive and enthusiastic tendencies now tempered by the disciplined and cultivated sensibilities of the aristocratic characters.

One of the most interesting contrasts in *Apprenticeship* is that between Mignon and the Tower Society. Mignon is a romantic figure – an intense,

[69] See Boyle, 1991–2000.

[70] See Reed, 1980, pp. 126–27.

[71] Boyle, 1991–2000, I: 605–627.

androgynous, eccentric personality of pure inwardness and the embodiment of myth and mystery. Goethe casts her as a child of incest, as a sickly being, who eventually dies. The irrational force of Mignon is countered by the overarching ordering principle in the novel's narrative, the Tower Society. Goethe's introduction of this Tower Society reflected the eighteenth-century fascination with secret societies and Goethe's own brief flirtation with Freemasonry in the early 1780s, and added a sense of mystery to the narrative. The Tower Society, however, as a group of men who watch over and guide the destinies of others, is a secular rather than religious instrument. Significantly, this society of men does not actually directly bring about Wilhelm's transformation, but represents a symbol of necessity, and an aid to compositional order.[72] It is an image of a higher, universal, invisible society of secular, rational humanity. But it is a society that is treated ironically in the text, with its weighty purposes and rituals presented as outmoded. At the work's end, it is displaced by Natalia, Wilhelm's true counterpart, as the image of ideal human dignity and wisdom objectified in an aristocratic figure. Thus this work emphasizes the necessity for discipline and the preference for the civilizing effect of the aristocratic social order that Goethe advocated in the *Horae* and *Propylaea* and enacted in his own life.

But *Apprenticeship*, like *Tasso*, ends ambiguously, with it left unresolved as to whether Wilhelm will stay and marry Natalia or whether he will leave for Italy with his son. With this indeterminate ending, the ideal order is never made explicit, but is left implicit throughout the text, in individual concrete events that stimulate Wilhelm to rethink or redirect his life in small ways. Implicit in the text, however, are also many coincidences, discontinuities, self-deceptions, mysteries. The final vision of the work is that of a life never in control of itself.[73]

In Goethe's *Elective Affinities*, completed in 1809, the civilizing effects of aristocratic culture and the elemental forces within human nature are presented in more problematic relationships than in these earlier works. Goethe began *Elective Affinities* only a year after his marriage to his lover of twenty years, Christiane Vulpius – a marriage in a sense forced upon him by fateful pressure, by Christiane's defence of him during the invasion of Weimar, and a marriage that was troubled within a year by Goethe's love for the young Marianne von Willemer. The novel does not present a justification of marriage by appeal to the laws or ethical principles of a civilized society; rather, it presents the dissolution of a marriage, the forces arising from a decaying marriage. The civility of the landed gentry and the morality informing it are found ineffectual and vacuous in the face of such forces.

[72] See ibid., ch. 6; Bruford, 1975, ch. 2; Swales, 1978, ch. 3.

[73] See Boyle, 1991–2000, II: 367–392, 417–425.

Cultural conventions turn into mere appearances as more mythic elements come to the fore. Although a novella within the novel offers an image of a transcendental love, the attraction between the husband Eduard and the young niece of his wife Ottilie in the novel is a passion founded on physical beauty. The affinity holding them under its spell is not a spiritual harmony, but a connection at the level of subterranean strata that is slightly amiss and seemly. Mythic powers pervade the unfolding of events, menacing a civil society apparently free of superstition – water acts as a primeval element, an enigmatic calm, that symbolizes the lovers ruin as they succumb to the unfathomable; omens of death go unheeded and a ritual sacrifice is enacted in a quest for atonement. The powers that emerge from the disintegration of the marriage are those of fate, as the nexus of guilt among the living. Embedded within the narrative of *Elective Affinities* is the presence of something dark, a shadow in the existence of the human being, an incomprehensible and ambivalent nature, given expression in the image of fate. Goethe deliberately hid these mythic elements in the material of his text, but their excavation reveals a struggle kept secret within his own life story.[74]

As Goethe admitted in his autobiography short before the end of his life, he "believed that he perceived something in nature ... that manifested itself only in contradictions and therefore could not be expressed in any concept." He tried to save himself from this irrational something, that he called "daemonic," by taking refuge "behind an image" (*HA* 10: 175–176). In his science of morphology, he tried to minimize its presence in the hidden forces of nature and scientific speculation by arguing for the intuition of *Urformen* in living forms and their representation in perceptible images; in his aesthetic theory, he countered its presence in the romantic fascination with internal creative forces by advocating the ideal of *Urphänomene* and their representation in prototypes; in his life, he tempered its presence by engaging in the discipline of administrative, scientific and aesthetic projects and by participating in official court culture; and in his writing, he muted its presence by making the characters embodying it problematic, irrational, erratic, or even having them die, and balancing them with more judicious and disciplined characters. In these projects advocating an idealized science, art and German culture Goethe was at odds with many of his contemporaries. Moreover, for all Goethe's attempts to avoid this "daemonic" force in his own science, his art and his life, it clearly remained a predominant preoccupation. Indeed, his most engaging writing seems to be when it pervades the text.

[74] See Benjamin, 1996b, pp. 297–360.

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