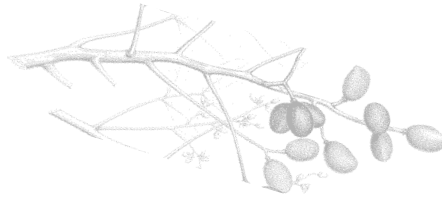


I

KANT

*The English Garden*



For art is only perfect when it looks like nature and nature succeeds only when she conceals latent art.

—Longinus, “On the Sublime”

We cannot help admitting that [Kant] entirely lacks grand, classical simplicity, *naïveté*, *ingénuité*, *candeur*. His philosophy has no analogy with Greek architecture that presents large, simple proportions revealing themselves at once to the glance; on the contrary, it reminds us very strongly of the Gothic style of architecture. For an entirely individual characteristic of Kant’s mind is a peculiar liking for *symmetry* that loves a variegated multiplicity, in order to arrange this, and to repeat this arrangement in subordinate forms, and so on indefinitely, precisely as in Gothic churches. In fact, he sometimes carries this to the point of trifling, and then, in deference to this tendency, goes so far as to do open violence to truth, and treats it as nature was treated by old-fashioned gardeners, whose works are symmetrical avenues, squares and triangles, trees shaped like pyramids and sphere, and hedges in regular and sinuous curves.

—Arthur Schopenhauer,

*The World as Will and Representation*

The use of vegetative metaphors to describe the form of human intellection and appreciation of nature cannot be separated from the late

eighteenth and early nineteenth-century incorporation of an explicitly aesthetic dimension to scientific inquiry. This project had its roots in the philosophy of Kant and in the aesthetico-scientific project of Goethe. Kant's *Critique of Judgment* inspired the philosophical use of organic metaphors to describe human thinking in its relationship to nature conceived as a whole. In *The Mirror and the Lamp*, M. H. Abrams argues that nineteenth-century conceptions of art were distinctive and revolutionary in that they posed and answered aesthetic questions solely in terms of the relation of art to the artist, rather than to the world or to an audience.<sup>1</sup> He describes "German Theories of Vegetable Genius" as having their provenance in the idea that genius is both natural and unconscious, springing forth spontaneously in the mind of one who cannot explain the rule according to which he or she produces a work of art.<sup>2</sup> This explanation does not adequately address the implications of the nineteenth-century German philosophical and literary use of vegetative metaphors. While drawing on already existing literary tropes, Kant's articulation of genius, upon which these thinkers based their understanding of vegetable subjectivity, goes far beyond a description of the provenance of fine art and is not limited to the interiority of the artist. Kant's third *Critique* aims not only to explain art, but to use it as a powerful means of binding together the human needs to understand nature (science) and to gain from it confirmation of the power of human freedom, the objects of his first and second *Critiques*.

Abrams traces the genealogy of the concept of vegetable genius from the publication of the English theorist Edward Young's *Conjectures on Original Composition* (1759), which was translated into German twice within two years of its publication, to Johann Georg Sulzer's dictionary of aesthetic terms (1771–1774), to J. G. Herder's theory of the organic and all-encompassing order of natural growth in "On the Knowing and Feeling of the Human Soul" (1778).<sup>3</sup> All of these works share the common claim that genius, the human capacity for intellectual and artistic greatness, is as much a product of nature as are organisms, and that the inability of human beings to account for the origin of genius is due to its plantlike provenance in unconscious blossoming or flourishing. Kant's understanding of genius plays an important part in his theory of the organism as unconsciously teleological, moving toward a natural purpose of which it is not explicitly aware. His linkage of the theory of genius with his critique of teleological judgment, and thus to the very possibility of delineating an all-encompassing philosophical system, led theorists who followed him to describe the relationship of the human mind to the natural world in terms of vegetative growth. For Kant this linkage provides an important regulative principle for judgment, that is, understanding an organ-

ism as a natural purpose is something that guides human investigation into nature by virtue of an analogy with our own purposiveness.

Goethe, who was respected both for his contributions to the natural sciences and to art, recognized his own fortuitous proximity to Kant—fortuitous, for, while the two thinkers were writing contemporaneously, neither was directly influenced by the other’s work—when he read a copy of the *Critique of Judgment* and proclaimed it in exact accord with his own *The Metamorphosis of Plants*.<sup>4</sup> What both Kant and Goethe strove to accomplish in intertwining the realms or “infinite worlds,” as Goethe put it, of art and nature, was twofold: first, to discredit unreflectively ontological eighteenth-century scientific assumptions of final causes in nature, and second, to reintroduce purposiveness in nature as an *aesthetic* requirement for the creation of satisfactory, that is, systematic, scientific explanations. The use of vegetative metaphors for thinking in post-Kantian philosophical thought assumes the problematic that Kant carefully outlines in the third *Critique*. Adequately understanding “vegetable genius,” then, requires a comprehensive reading of this work. Kant and many of the philosophers who followed his lead sought to reconcile the laws that bind human conceptual understanding and sensory imagination in the observation of the external world with the freedom of human reason in its potentiality to transcend nature through art.

If Schopenhauer’s criticism of Kant’s philosophy in the opening citation initially strikes us as misconceived, it is perhaps because we are accustomed to think, with Derrida, that “a paradigmatics of the flower orients the third *Critique*,” that “Kant always seeks in [the flower] the index of a natural beauty, utterly wild, in which the *without-end* or the *without-concept* of finality is revealed.”<sup>5</sup> What could be farther from the beauty of wildflowers than artificially pruned, geometrically shaped hedges? Schopenhauer’s observation is instructive nevertheless, but here the analogy will be revised. Although Kant structures the entire *Critique of Judgment* around the paradigm of the wild plant, this plant has a unique character in that it is wild only within the strict limits of a gardener’s plan that situates, tends, and prunes it to preserve its appearance of wildness. Kant’s meditation on the purposiveness of nature follows the scheme of the English garden of the eighteenth century. This garden, also known as a “sublime” garden from the tradition of imitating Italian landscape paintings out of which it originated, had the paradoxical quality of being cultivated to look wild; at the same time great care was taken to make sure the wilderness never exceeded predefined limits. For Kant, in the same way, scientific explanations of nature can only be deemed adequate insofar as they are supplemented by or transformed into art. Such an endeavor takes its cue from nature itself, however, projecting onto

nature as a system or as a whole the perfect (and purposive) form observed in the organism. Because of the rigorous limits prescribed by Kant on what can be deemed knowledge of nature, such an explanation remains part of the realm of art rather than strictly speaking of science. Thus, though he will not use the language of vegetable genius, Kant introduces the framework that allows it to arise. This framework presumes that the complex process of creating satisfactory human descriptions of nature follows the forms observed within nature, and that the aesthetic properties of holistic explanations of nature form the basis for judging those explanations to be better or worse, more or less fruitful.

In the first Introduction to the *Critique of Judgment*, Kant discusses the tension that arises between the attempt to describe the natural world solely in terms of empirical observations, on the one hand, and the need that the human mind feels to classify nature under laws and classes, and ultimately as a system, on the other. Kant determines an exigency of going beyond the classificatory system of the *Critique of Pure Reason*, which describes the determinate structures of human cognition as the basis for finding regularity and predictability in nature. Such structures describe a formal pattern that explains the uniformity of human experience of the world of natural appearances, but do not lend a systematic wholeness to this pattern, a wholeness that alone will satisfy the human need to find a purposiveness in nature. Kant calls this demand for integrity and totality “artificial” (*künstlich*) in that it is not derived from ordinary empirical cognition; he goes further to state that “so far as we think of nature as making itself specific in terms of such a principle, we regard nature as *art*.” This necessity of conceiving nature as constituting a purposive whole is something that judgment carries a priori within it. Kant calls the a priori principle that makes only a holistic explanation of nature satisfactory to the human mind a “technic of nature,” taking “technic” from the Greek word, *techne*, for art. Kant also claims that certain natural forms have an absolute purposiveness, by which he means that

their shape or inner structure is of such a character that we must, in our power of judgment, base their possibility on an idea. We must do so because purposiveness is a lawfulness that something contingent may have insofar as it is contingent. Insofar as nature’s products are aggregates, nature proceeds *mechanically*, as *mere nature*; but insofar as its products are systems—e.g., crystal formations, various shapes of flowers, or the inner structure of plants and animals—nature proceeds *technically*, i.e. it proceeds also as *art*. The distinction between these two ways of judging natural beings is made merely by *reflective judgment*. (KU 217–18)<sup>6</sup>

According to Kant, reflective judgment, unlike determinative judgment, is characterized by a certain freedom of expression in that it

results from a spontaneity in the play of the cognitive powers whose harmony with each other forms the basis of this pleasure, a spontaneity that makes the concept of purposiveness suitable for mediating the connection of the domain of the concept of nature with that of the concept of freedom (KU 197).

Kant privileges the form of the natural structures, and of the organism in particular, as the shape or figure that best manifests the nature of the relationship of human cognition to nature. The human mind, Kant believes, is attuned to and reflects forms of nature such as the crystal, the plant, and the animal, and it is this affinity to these forms that requires human thinking to value and preserve nature as its kin. This observation was to have an enormous influence on the literature and philosophy of the nineteenth century in Germany. Kant privileges organized beings in nature, stating that they have an “absolute purposiveness” (KU, First Introduction 217). The absolute nature of the purposiveness of the organism has its origin in the human apprehension of it, and not (at least not demonstrably) in itself. Insofar as humans recognize nature on the basis of cause and effect or dissection of its parts, Kant implies, natural explanations can be mechanical ones. As soon as one attempts to make any claims about the whole, however, Kant maintains the *absolute necessity* of human cognition proceeding *technically*, making of nature an art in which organisms viewed purposively play a central part. Thus, although ultimately Kant’s conservatism and anthropocentrism will not allow him to transgress the boundaries of subjectivity understood as precise individuation, his critique of the science of his day would have a crucial influence on the Romantic and Idealist reconceptions of the organic understood as the relationship between humans and nature, and of Enlightenment descriptions of subjectivity. This is why Kant must be read as providing the grounding for the “vegetative soul” of nineteenth-century German thought.

Understanding the two halves of the *Critique of Judgment*, namely, the Critique of Aesthetic Judgment and the Critique of Teleological Judgment in a similarly organic way, that is, as interdependent and mutually informing components of an attempt to unify the realms of nature and freedom through art, then, allows for a more complete understanding of the third *Critique*. Kant’s seemingly odd juxtaposition of critiques of aesthetic and teleological judgment has a strong inner coherence that cannot be sufficiently demonstrated by merely pointing out that both types of judgment are reflective rather than deterministic. Rather, judgments of teleology in nature can be included in scientific explanations precisely and only because these judgments are aesthetic in nature. Teleological judgments’ status as “art” allows Kant to include them in descriptions of nature without

thereby permitting an unreflective, romantic, or “enthusiastic” element to intrude into science without severe qualification or pruning.

In a well-known passage of the *Critique of Pure Reason*, Kant writes, “Human reason is by nature architectonic. That is to say, it regards all our knowledge as belonging to a possible system, and therefore allows only such principles as do not at any rate make it impossible for any knowledge that we may attain to combine into a system with other knowledge” (KrV A 474 = B 502). Since humans can cognize only by making systems, nature itself will have to be encompassed by that architectonic. Our minds can cognize only what is clearly individuated. This is what we have referred to as the individuation that is based upon the animal body. At the same time, Kant clearly recognizes this projection of unity to be a “false” interpretation, opening the door to multiple possible conceptualizations of the relationship of the human being to nature.

This is the aspect of Kant’s philosophy that Schopenhauer is criticizing when he compares Kant’s philosophy to an artificially pruned garden. Of course, Kant’s point is that it is impossible to speak of nature as a totality “in itself” in terms of knowledge, but imperative nonetheless to do so for aesthetic reasons. The circumvention of the natural such a philosophy implies remained a problem that captivated post-Kantian philosophy in Germany. Thinkers such as Schelling attempted to return to “nature in itself” rather than to a fiction about nature, while, by contrast, Hegel radicalized Kant’s elimination of the natural.

The *Critique of Judgment* attempts to provide a reconciliation of nature—as a system of deterministic laws that conform to human understanding—with human reason as a product of that very natural system that possesses a freedom that exceeds it. Explanations that are teleological for aesthetic reasons force judgment simultaneously to address nature and to go beyond it. Aesthetic judgment has its roots in sensation; at the same time, the explanation of the constitution of aesthetic judgment must make manifest why judgment cannot be derived from rules or determined by concepts. Teleological judgment can never be matched by a corresponding cognition of the human mind, but by assuming that nature is purposive the philosopher can resolve a series of antinomies that the human mind could never otherwise overcome. Kant approaches the lacunae inherent in aesthetic and teleological judgments by immediately emphasizing the performative aspect of aesthetic and teleological judgment. There are always *two* levels on which both theoretical and practical philosophy can be understood, that is, in terms of the principles that ground them, and in terms of applications of these principles. For example, Kant might distinguish between geometry and the practical applications of geometry to illustrate the two levels of the theoretical, and between the categorical imperative and an actual decision to act

morally to illustrate the practical.<sup>7</sup> Reflective judgment, by contrast, manifests only the performative aspect, that which can be reduced neither to the purely theoretical nor to the purely practical. Reflective judgment is always an *act*: it consists in deeming something to be beautiful, sublime, or purposive.

Kant distinguishes between several different types of practical propositions around which rational decisions orient themselves. The first two, a priori and empirical practical propositions, “assert the possibility of an object through our power of choice” and thus always belong to our knowledge of nature and to the theoretical part of philosophy. This is because in such a case the will has no choice but to follow principles according to which the understanding functions. The third type of practical proposition has its principle in the idea of freedom and can give us no insight into the possibility of the object, but rather directs action in such a way that it can be called a moral precept. “All other propositions of performance,” Kant writes, might be called “*technical* rather than practical,” since these performatives “belong to the *art* of bringing about something that we want to exist,” rather than reacting to something that already exists. Immediately after this Kant writes, “Hence all precepts of skill belong, as consequences, to the *technic* of nature.” In addition, Kant specifies that he will “*also*” henceforth use the term “*technic*” in other cases, “namely, where we merely *judge* [certain] objects of nature *as if* they were made possible through art” (KU 199’–200’). These judgments are thus based neither in the theoretical nor in the practical insofar as “practical” is understood to imply grounding in freedom. “Technical” judgments in this specific sense, then, will always rest upon a kind of sophisticated “wishful thinking” in which one desires something to be what one can never *know* it to be, or one behaves as if something were what it is not. Specifically with reference to nature, Kant defines the “*technic* of nature” as “nature’s ability to produce [things] in terms of causes . . . [which is] basically quite identical with the mechanism of nature,” such that “we have *falsely* interpreted the contingent agreement of that ability with our concepts and rules of art . . . whereas it is merely [the result of] a subjective condition under which we judge that ability” (KU 391; my emphasis). Although the interpretation is “false,” we retain it because we have none that better serves to explain nature.

In the transition from the Analytic of the Beautiful to the Analytic of the Sublime in the *Critique of Judgment*, Kant similarly distinguishes between the proximity of beautiful objects and the relative isolation of beautiful (natural) views whose “distance prevents us from recognizing them distinctly.” The distance of the view gives the human being a certain leeway to see nature “as if” it were other than it actually is. Humans

usually find nature (as opposed to crafted objects) beautiful, Kant claims, not because they actually like what is presented before them, but because “taste seems to fasten not so much on what the imagination *apprehends* in that area, as on the occasion they provide for it to engage in *fiction* [*dichten*], i.e., on the actual fantasies with which the mind entertains itself as it is continually being aroused by the diversity that strikes the eye” (KU 243). Nature in itself is not beautiful, Kant implies, but only becomes so by virtue of the fictions that humans create about it. These fictions, in turn, require a certain distance from the object upon which they are based. When we find a bird’s song beautiful, for example, we are, Kant says, projecting our affection for what we consider to be a cheerful little creature onto the song, so that if we heard an artificial reproduction of the exact notes (and knew that they were artificial), we would not find them beautiful (KU 243). Likewise, if we had the anatomy of the bird’s vocal chords before our eyes as we heard its song, we would lose our liking for the sound. Our taste for the beauties of nature is largely constructed on the fictions in which we involve it; from a distance we see nature as alive, animated, and constantly growing, but these are qualities we admire in human creativity that we project onto “nature” as a “false” unity in the sense of falsity indicated above.

The technic of nature is informed by the notion of “organism” or “organized being” as the privileged individual that underlies Kant’s discussion of teleology. These beings, Kant writes:

first give objective reality to the concept of a *purpose* that is a purpose of *nature* rather than a practical one, and which hence give natural science the basis for a teleology, i.e., for judging its objects in terms of a special principle that otherwise we simply would not be justified in introducing into natural science (since we have no *a priori* insight whatever into the possibility of such a causality). (KU 376)

The perception of organized beings as *self-organizing* allows them to be referred to as natural purposes, according to Kant (KU 374). Natural purposes, in turn, form the basis for judging nature as a whole teleologically, as a system of purposes. This principle applies only subjectively as the maxim that “everything in the world is good for something or other; nothing in it is gratuitous” (KU 379), and is a regulative rather than constitutive principle. This principle then relies on the peculiarity (*Eigentümlichkeit*) of human understanding, namely, that it cannot rest satisfied with purely mechanical explanations, but must follow the demand of reason that “subordinates such [natural] products . . . to the causality in terms of purposes” (KU 415). The phrase “causality in terms of purposes” refers not only to final causality in contrast to simple mechanical cause-effect relationships, but also to the creative capacity of



the human mind to conceptualize nature according to the metaphysical possibilities that are closest to its own perceived form.

In writings preceding the *Critique of Judgment*, Kant explicitly opposed the notion of “plant thinking” or “vegetable genius,” instead using plant metaphors to characterize what was most sluggish and unresponsive in human thought. In his *Universal Natural History* (1755), Kant explicitly compares the human being to a plant—precisely at that point where human sensuality occludes the possibility of attaining reason:

When one regards the nature of most men, man seems to be created as a plant, to draw in sap and grow, to propagate his kind, and finally to grow old and die. Of all creatures he least achieves the end of his existence, because he consumes his more excellent fitnesses for such purposes as lower creatures achieve more securely and decently with less. He would indeed be the most contemptible of all, at least in the eyes of true wisdom, if the hope of the future did not lift him up, if there were not a period of full development in store for the forces shut up in him.<sup>8</sup>

He continues, “If one seeks the cause of the obstacles that keep human nature in such deep abasement, it will be found in the grossness of the matter in which his spiritual part is sunk, in the inflexibility of the fibers and sluggishness and immobility of the sap/fluid that should obey its stirrings.”<sup>9</sup> By contrast, in the turn toward the ideal and the totalizing power of reason, the human mind rediscovers its animal vigor (a word that Kant uses to describe the sublime) in its fundamental opposition to the forces of nature.

Kant’s contemporary, the British literary theorist Edward Young, expressed the contrasting popular view when he wrote in his 1758 manifesto *Conjectures on Original Composition* that “an Original may be said to be of a vegetable nature, it rises spontaneously, from the vital root of Genius; it grows, it is not made.”<sup>10</sup> Kant’s description of genius in the third *Critique*, written thirty-five years after the *Universal Natural History*, strikingly contrasts with his earlier description of vegetable nature by following this conceit and making genius the unconscious channel for the forces of nature as they provide the closest possible expression of the supersensible in finite form. For Kant, however, the fact that genius could never know the rules for its own art placed artistic achievement forever below the power of rational thought, for “judgment, which in matters of fine art bases its pronouncements on principles of its own, will sooner permit the imagination’s freedom and wealth to be impaired than that the understanding be impaired.”<sup>11</sup> Finally, Kant’s directive that organic unity may be projected upon products of nature in order to understand them through the subjective a priori principle of reflective judgment ultimately

allows the principle of what we have called “animal” form to direct the way in which we judge nature as beautiful or purposive.

In her study of Kant,<sup>12</sup> Susan Meld Shell observes that in both the *Anthropology* (X:165) and the *Universal Natural History* (I:357), as well as in the *Critique of Judgment*, Kant reworks the traditional divide between the male as active principle (efficient cause) and the woman as passive recipient (material cause) in the sexual act. The obliteration, in Cartesian science, of the traditional Aristotelian distinction between efficient and material causation tended to undermine this hierarchy. Shell suggests that Kant’s description of the predicament of human reason of being hopelessly hindered by sexual desire, physical attraction, and sensory enticements points to a larger problem with generation itself. She writes that the dreaded contingency of “the very act of generation—traditionally the emblem of man’s rational, and formal supremacy—threatens to dissolve into unregulated and hence ‘loathsome’ fecundity.” Against this threat:

only God’s inseminating spirit (which assures, among other things, the eternity of biological species) is proof, while man’s physical generative power descends to the level of the plants. The plantlike passivity traditionally associated with the female principle of generation infects, in Kant’s account, the male principle as well, at least insofar as it remains within the nexus of the physical. It is not in generating, but in resisting generation for the sake of a higher sort of attraction, that man’s spirit uplifts itself.<sup>13</sup>

The same problem can be seen in Kant’s advice to young men in the *Anthropology*: “If we want to keep our power of sensing lively we must not begin with strong sensations . . . we must rather forego them at first and mete them out sparingly so that we can always climb higher.”<sup>14</sup> Here “animality,” or Stoic individuation, would refer to the deferral of the immediate gratification that Kant seems to associate with the untrammelled growth of vegetative life.

Nevertheless, Kant’s description of the involuntary spontaneity of the active, transcendental subject inspired German Idealism’s understanding of *Geist*, or spirit, as the interdependent relationship of this dynamic spontaneity with the ontological ground of nature, often conceptualized as a plant-like, metamorphosing growth. Even Hegel, for example, writes a passage that strikingly follows Kant’s directive in the preface to the *Phenomenology of Spirit*:

The more rigid conventional opinion makes the antithesis of truth and falsity, the more it tends to expect a given philosophical system to be either agreed with or contradicted; and in an explanation of the system sees only

one or the other. It does not grasp the difference in philosophical systems as the progressive unfolding of truth, so much as it sees contradiction in difference. The bud disappears in the bursting-forth of the blossom, and one could say that the former is refuted by the latter; in the same way, through the fruit the blossom is demonstrated to be a false existence of the plant, and the fruit now emerges as the truth of the plant in its place. These forms do not just distinguish themselves from one another, they also supplant each another as mutually incompatible. Yet at the same time their fluid nature makes them moments of organic unity in which they not only do not conflict, but each is as necessary as the other; and this equal necessity alone constitutes the life of the whole. (W 3:12/PS, 2)

While Hegel compares the very movement of historical Spirit to the metamorphosis of a plant, Kant restricts his analogy to the consideration of nature as a system or organized whole. Hegel will reintroduce historical purposiveness in no artistic sense in the very place where Kant forbids the determinative use of final causes in the explanation of nature. The danger that Kant foresees is that any discussion of the necessity of a teleology of nature appears to turn the idea of a natural purpose into a principle that is constitutive of natural purpose itself (KU 405). Kant writes, “The universal supplied by *our* (human) understanding does not determine the particular; therefore even if different things agree in a common characteristic, the variety of ways in which they may come before our perception is contingent” (KU 406). A cognitive power that could proceed synthetically from whole to parts, rather than analytically from concepts to empirical intuitions, would be one of a “complete spontaneity of intuition [*Anschauung*].” Although such a spontaneous intuition can be conceived of by us only negatively, that is, as *not* discursive, we can characterize it as a power of cognition something like the one Kant mentions in the *Analytic of the Sublime*, where he emphasizes that if humans were pure intelligences, there would be no need for judgments of beauty and sublimity (KU 271).

According to Kant, the limitations on the possibility of human understanding of nature lead humans to create artworks; the technic of nature is the primary example of this art. Among all the sensory things that humans cognize, it is only with reference to the beautiful, the sublime, and the purposive, though in different ways, that the mind makes no appeal to concepts. The beautiful and the sublime, along with the teleological explanation, reverse the directionality of cognition: the mind begins from the particulars rather than from a universal. The particular has a contingent aspect that is not present in the universal. Thus, the reflective judgment of beauty or sublimity is faced with a predicament parallel to that of the mind when it attempts to unify the manifold in nature. Our understanding achieves cognition only through a harmony

between natural characteristics and our power of concepts, a harmony that Kant calls “very contingent” (KU 406). Unlike the products of nature, laws of nature are not subsumed under the concepts of the understanding, and thus they are particulars from the point of view of human understanding, since it is unable to determine them. Because the laws are multiple, the mind feels the need to bring them together into a unity (*Einheit*). The technic of nature is deployed as the answer whenever the mind is confronted with a series of particulars that precede any universal concepts it can provide. This is the fundamental connection between aesthetic judgments and teleology: both begin with particulars and work toward a unity. Kant makes this explicit in the first introduction to the *Critique of Judgment*, where he mentions formulas that were in vogue at the time, such as “Nature does nothing in vain; Nature makes no leap in the diversity of its forms; Nature is rich in species and yet parsimonious in genera.” Kant calls these formulas the “transcendental utterance of judgment [by which] it stipulates to itself a principle for [considering] experience as a system, and hence for its own needs.” The basis of such an utterance is a “presupposition” that “judgment makes for its own use, for the sake of unifying empirical laws, so that it can always ascend from what is empirical [and] particular to what is more general.” Only by presupposing such a principle can we “engage in experiences in a systematic way” (KU 399).

Kant indicates a distinction between the way in which he uses the word *aesthetic* with reference to science in the *Critique of Pure Reason* and in the *Critique of Judgment* by indicating the incommensurability of the “aesthetic intuition” and the “aesthetic judgment” (KU 222’). Although in the *Critique of Pure Reason* Kant used “aesthetic” to refer to presentations of the understanding (pertaining to sense perception, *aisthesis* in the original sense of the word), he specifies in the First Introduction to the *Critique of Judgment* that he will henceforth apply the term *aesthetic* solely to acts of the power of judgment. The earlier, broader sense of “aesthetic” is defined in the third *Critique* as one in which “the form is inevitably transferred to the object, though the object only as phenomenon” (KU 222’). In Kant’s earlier works, “aesthetic” always refers to the science of knowledge attained through sense perception. However, Kant specifies that in the *Critique of Judgment* “aesthetic” will henceforth not refer to a way of perceiving that involves a sensible intuition that allows us to cognize objects, but only to a way of presenting that arouses feelings of pleasure and displeasure (KU 410’). Kant juxtaposes the critique of teleological judgment to his discussion of the beautiful and of the sublime because the discovery of a structural consonance within mechanically derived empirical knowledge of nature (through teleological judgment) results in a feeling of

great pleasure: "It is a fact that when we discover that two or more heterogeneous empirical laws of nature can be unified under one principle that comprises them both, the discovery does give rise to a quite noticeable pleasure" (KU 187).

What Kant designates as the "beautiful" is that which pleases by virtue of its form or its sensuous presence, without reference to anything beyond that presence as beautiful. By "sublime," Kant means that which moves human judgment out of the realm of nature as it *is* into the realm of nature as it *ought* to be. Both of these moments inform the technic of nature: the beautiful reveals the essentially technical (purposive) structure of nature and invites the investigation of how such a form is possible. The sublime makes rational beings look inside themselves for "what *use* we can make of our intuitions of nature so that we can feel a purposiveness within ourselves entirely independent of nature." In the combined movements of judgments of the beautiful and judgments of the sublime in nature, the three faculties of the mind come together: in judgments of beauty, the faculties of imagination and understanding cognize the natural scene without bringing it under a determinate concept, whereas judgments of the sublime result from a disruption of the harmony between the understanding and the imagination that flings the imagination toward the ideas of reason. Although the imagination cannot comprehend the magnitude (*Größe*) of what it is observing, and for this reason the understanding cannot subsume the observation under a concept, the unity of the faculties is nonetheless able to feel the superiority of the human mind (through the faculty of reason) over nature. Kant's discussion of sublimity forms a transition to the consideration of nature as purposive, specifically with reference to how the technic of nature informs the notion of organism as the privileged individual that underlies Kant's discussion of teleology. It is in this final relationship of sublime to natural purposiveness that one can most clearly recognize the analogy Schopenhauer makes of Kant's work to the crafted garden. However, the analogy works best not by comparing, as Schopenhauer did, Kant's architectonic to the French gardens of Versailles, but rather by seeing the systematic aestheticization of science as akin to the construction of the English garden, that is, as carefully groomed in order to appear perfectly natural.

In the technic of nature, nature is conceived as art in an explicit attempt to avoid the mechanistic model of the universe. For this reason, the living organized being, which Kant describes as a "product of nature . . . in which everything is a purpose and reciprocally also a means" (KU 376) provides the perfect figure for a vitalistic conception of nature which at the same time precludes the risky move of actually ascribing a kind of subjectivity or living nature to nature as a whole.

What Kant means by seeing nature according to an analogy with art (KU 246) stems from the dual human pleasure in observing nature. While on one level the human being takes pleasure in nature as it is (in its beauty), on another level human pleasure results from seeing nature as it ought to be, in terms of morality (KU 179). This “ought to be” is a picture of nature as teleological, moving toward purposes, that is, toward regulative ideas such as the good, human betterment, and God. But we cannot verify any “artistic,” that is, teleological, judgment of nature, since nature as purposive can only be part of the noumenal realm. Therefore, since the technic of nature remains an art—in the sense of a constitutive metaphor—and not an object of knowledge, the mental capacity proper to it is self-reflective judgment rather than understanding or reason. As we have already seen, Kant specifically calls the technic of nature a “false interpretation” of nature as a kind of production that is in agreement with “our concepts and rules of art.” Seeing nature in terms of final causes as a special kind of natural production is “merely the result of a subjective condition under which we judge that ability” (KU 391). At the same time, nature’s revelation of itself as purposive is a priori for us, but the faculty proper to this necessary yet false interpretation is reflective judgment, which, rather than looking at nature in terms of determinate concepts or external conditioning factors, looks back only at itself.

Kant specifies what he means by “analogy” (in a qualitative, i.e., nonmathematical sense) in a long footnote in the Critique of Teleological Judgment. The analogical relationship allows human beings to make judgments about things they cannot definitively know based on an identity of the relation between causes and effects in the unknown and a known area (KU 464). Human knowledge is limited, according to Kant, to what we can be directly conscious of, but we can make justified inferences on the basis of analogy. Thus, for example, we can infer aspects of animal behavior based on our conscious knowledge of human behavior, that is, we can understand animal behavior on the basis of an “analogue of reason,” and this understanding can be judged “correct.” Similarly, Kant writes, we can legitimately conceive of the purposiveness of the “supreme world” by analogy with the products of human art, although we cannot thereby conclude that the two types of purposiveness have the same properties. In another note, Kant equates analogy with the indirect presentation of an idea according to its effects or consequences (KU 351). Through analogy with art, that is, in outlining nature in terms of final causes, one can organize nature into the interaction of self-enclosed purposive centers, in other words, what we have called the individuation of animal bodies. Just as we project purposiveness onto animals by analogy with the structure of our own cog-

nitive processes, we project the relationship between this presumed purposiveness and the body onto all other natural phenomena.

As with judgments of sublimity, the understanding of the purposiveness of nature can only be formed with respect to culture or civilization (*Kultur*), that is, to the non-natural or *technical* gathering of human beings. Animals do not have cultures, though they form groups. The word for culture or civilization, *Kultur*, comes from the Indo-European root *kwel-*, meaning “to revolve,” “to sojourn,” or “to dwell,” whose extended form, *kwelos*, becomes *telos* in Greek, meaning the “completion of a cycle.” The root forms the basis of the words *cultivate* and *teleology*, in addition to culture. All these words have to do with settling, tilling the land, harvesting, making plans and carrying them out. Kant’s specification of “skill” as a requirement for culture refers us again to *techne*, the quintessential activity that distinguishes humans from all other natural beings. It also links teleology to culture and art, that is, to nondemonstrability.

Culture, which implies discipline (*Zucht*) along with skillfulness (*Geschicklichkeit*), forms “the ultimate purpose that we have cause to attribute to nature with respect to the human species” (KU 431–32). In the Methodology of Teleological Judgment, Kant designates the human being as “Lord of Nature.” If nature is regarded as a teleological system, Kant implies—keeping the conditionality of the technic of nature intact—then the human being is the ultimate purpose of that system. Human beings are the only natural beings to have the capacity to refer both nature and themselves to a purpose that can be independent of and external to nature. It is skill that leads ineluctably, according to Kant, to inequality among people, class structures, and even war. In this case, “nature still achieves its own purpose, even if that purpose is not ours” (KU 432). Teleology is thus used to explain seeming injustices that humans cannot otherwise understand. Discipline, on the other hand, is a “negative” condition that liberates the will from an entanglement with natural things. It is directed toward the progressive elimination of animal characteristics, and thus indirectly leads to the production and refinement of art and morality (KU 433). This movement manifests the privilege given to the perceived separability (at least in principle) of the human from nature.

The point of discussing Kant’s opening up of the possibility of ascribing final causes to nature through the trope of a (necessary) aesthetic fiction is to show how this technic of nature can be (and was) further applied to speculations about the nature of human subjectivity, especially in its relationship to the natural world. It is important to understand the way in which Kant negotiates the sticky problem of final causes, not because this issue is equally pressing in the science or

philosophy of nature of today, but because it can help explain the ways in which alternative conceptions of the subject, particularly ones that do not presuppose separatedness from nature and atomic isolation, can arise and be legitimated. Thus, we will examine Kant's technic of nature at some length.

Kant rejects both dogmatic (intentional) and fatalistic (unintentional) interpretations of the notion of the purposiveness of nature from the beginning. There will be no appeal to a God whose existence can be known, nor to a necessary objective purposiveness inherent in nature (Kant attributes this view primarily to Spinoza). Rather, teleological judgments about nature say nothing about nature itself, but everything about the way in which humans cognize nature. Teleological judgment is not constitutive of determinative judgment, but merely regulative for reflective judgment (KU 396). It deals not with the content of nature, but with the form of the human framing of nature. Teleological judgment is a human *techne*, which means that although it may be necessary for the possibility of any other human achievement, primary among all other *techne*, and even though it may stand in for a deity that cannot be proven, it remains a *techne* and nothing more.

Kant calls the concept of natural purposes a foreigner (*Fremdling*) in natural sciences, but a foreigner that looks strangely familiar to human reason. Nature itself gives us the hint (*Wink*) that if we were to use the concept of final causes "we could perhaps reach beyond nature and connect nature itself to the highest point in the series of causes" (KU 390). Reason has an intimation (*Ahnung*) that this is the right direction in which to go, even if this "rightness" cannot ever be proven. The words *hint* and *intimation* intentionally convey a certain reserve with respect to teleological judgment. Like judgments of beauty and sublimity, which must both be universally communicable—even though they cannot be expressed in the language of concepts—and exemplify a universal rule that we are unable to state, the justification of the use of teleological judgment can only be indirect. This principle "is of such a kind that we can only point to it (*anzeigen*), but can never cognize it determinately and state it distinctly" (KU 412). Like the sublime, which works its effects only from a distance, the judgment of purposiveness can be effective only when the *as if* holds it at bay.

The relationship between human understanding and the perceived final causes of the particulars of nature (either products or laws), like that between understanding and imagination in the judgment of beauty, is called a harmony (KU 407). The word *harmony*, which recurs constantly in the critique of aesthetic judgment and the critique of teleological judgment, comes from the Greek *harmos*, meaning "joint," and is related to the English words "arm" and "art." A harmony is a fitting together of



parts, a jointure, and for Kant this word always retains its relationship to *techne*. The technic of nature, which understands nature as purposive, is necessary for us in addition to the mechanistic picture of nature in terms of natural laws and causes because our understanding proceeds in one direction only, according to Kant. We can cognize natural objects only by beginning with a universal, supplied by our understanding, and then by subsuming particulars under it. If our understanding could proceed from particulars to universals, Kant implies, there would be no need to distinguish between mechanistic principles and teleological ones. However, since we always begin with universals, only then making judgments about particulars, “the particular, as such, contains something contingent.” Even laws of nature can be taken as particulars by the faculty of reason, which then demands a unity (*Einheit*) in which these particulars can be joined. The principle under which even the contingent becomes law, or the “lawfulness of the contingent,” is called purposiveness (KU 404).

The relationship of unity or systematicity and final causes is brought to the fore in the final section of the Critique of Teleological Judgment, entitled “Of the Union [*Vereinigung*] of the Principle of the Universal Mechanism of Matter with the Teleological in the Technic of Nature” (“*Von der Vereinigung des Prinzips des allgemeinen Mechanismus der Materie mit dem teleologischen in der Technik der Natur*”).<sup>15</sup> This is the union Kant has been waiting for, the union to which he must appeal, inasmuch as all divisions in his work up to this point still stand apart in apparent dispersion. The technic of nature must specifically reconcile the assumption that every particular in nature can be subsumed under a universal with the obviously wide range of specifics that distinguish one particular from another of the same general kind by explaining the diversity in terms of purposiveness. Reason must be disciplined into neither being seduced into a transcendental explanation of pure purposiveness without mechanical causes (“poetic raving”), nor explaining everything natural only mechanically (“fantasizing”) (KU 410–11).

The union [*Vereinbarkeit*] of explanations in terms of mechanical causes and teleological accounts lies in “nature’s supersensible substrate,” and Kant admits that “for human reason both ways of representing [*Vorstellungsarten*] how such objects are possible cannot be fused together [*zusammenschmelzen*]” (KU 414). Thus, they must be used in conjunction with each other to the extent that such a practice results in a better understanding of nature. The same implicit assumption is made in terms of the *ranking* of final causes. Kant rests the reconciliation on a conditional statement:

[Human] existence itself has the highest purpose within it; and to this purpose [the human] can subject all of nature as far as he is able, or at least

he must not consider himself subjected to any influence of nature in opposition to that purpose.—Now *if* things in the world, which are dependent beings with regard to their existence, require a supreme cause that acts in terms of purposes, then the human is the final purpose [*Endzweck*] of creation. For without the human, the chain of mutually subordinated purposes would not have a complete ground. It is this legislation, therefore, which alone enables man to be a final purpose to which all of nature is teleologically subordinated. (KU 435; my emphasis)

The “if” is crucial here, for it reminds us that in the *Critique of Judgment* we are always dealing with a conditional, human creation, a technic of nature formed around, and as a system of, natural purposiveness, which can never be matched by a corresponding cognition of the human mind. We can never *know* that nature is purposive, though to behave as if it were is the only way to resolve a series of antinomies that the human mind can never otherwise overcome. Nietzsche criticizes this move of Kant’s, this way of slipping purposiveness in through the back gate, more than any other aspect of the critique of teleological judgment. Like the sublime English garden of the eighteenth century, meticulously planned and landscaped to look wild, the technic of nature is, at least on one level, a paradox. Nature is most “itself” for us when it is most unnatural, that is to say, when it is art, or at least when it is understood in analogy to human art.<sup>16</sup>

A little farther down, in the same section, Kant goes on to distinguish between beautiful objects and beautiful views: “In beautiful views of objects, taste seems to fasten not so much on what the imagination *apprehends* in that area [*Feld*], as on the occasion they provide for it to engage in *fiction* [*dichten*], i.e., on the actual fantasies with which the mind entertains itself as it is continually being aroused by the diversity that strikes the eye” (KU 243). The notion of *fiction* that we have referred to above is crucial for understanding the relationship between Kant’s understanding of aesthetics and the principle of natural teleology. As we have seen, Kant understands the technic of nature in terms of an analogy with human art. We recall that in the *Critique of Pure Reason* Kant defined an “analogy of experience” as “a rule according to which a unity of experience may arise from perception” (KrV A180 = B223). In the third *Critique* he calls the particular kind of art he is employing “fiction,” based on a distinction first made in the first *Critique*<sup>17</sup> between a being of our reasoning (*ens rationis ratiocinantis*) and a being of reason (*ens rationis ratiocinatae*) (KU 468), or between an objectively empty concept used merely for reasoning (*conceptus ratiocinans*) and a rational concept that is a basis for cognition confirmed by reason (*conceptus ratiocinatus*) (KU 396). The former term of each of these distinctions is also called “fiction” (*dichten*) by Kant (KU 467).<sup>18</sup> In “fic-

tion,” in this very specific sense, our reason is unable to prove the objective reality of what it posits, but can only use what is posited regulatively for reflective judgment (KU 396). Kant gives, as an example of an *ens rationis ratiocinantis*, the notion of spirits that exist in the universe that think but have no bodies. The fiction we engage in if we try to think of such things (by taking away, in the spirit of Descartes, “everything material and yet suppos[ing] that it retains thought”), can never be established as objective reality (KU 468). In the case of considering things of nature as natural purposes, Kant insists that “we do not know whether the concept is an objectively empty one that [we use] merely for reasoning (*conceptus ratiocinans*), or is a rational concept, a concept that is a basis for cognition and is confirmed by reason (*conceptus ratiocinatus*) (KU 396). We can never know, then, whether the teleology of nature is a fiction or a rational concept. Kant says that we will have to be satisfied with calling it a fiction while we continue to assume that it mirrors the ideas of human reason, since without it we would not be able to cognize nature at all. Again, we can see the importance of the *distance* that the “as if” introduces into the analogical structure.

It is important to note that in these theoretical sections, as opposed to the actual discussion of the art of poetry (*Dichtungskunst*), Kant always uses the verbal form of the word *dichten*. Perhaps “fictioning” or poetizing, then, would be a more appropriate, if awkward, translation for this word. One should also keep in mind that *dichten* does not simply mean to write fiction or poetry, in the literary sense of the word, but, like the Latin root of the word “fiction,” which comes from *facere*, “to do,” “to fictionize” means “to make,” or “to compose”; this etymology links “fiction” to *techne*. In this sense it is related to the jointure of the word “harmony.” In addition, *dichten*, in German, can mean “to seal” or “to close tightly,” or “to thicken or jell,” and Kant may have this double entendre in mind, especially with reference to the technic of nature, which provides closure to an otherwise open-ended system.

Kant bases the technic of nature upon the figure of the organism. By contrasting the structure of an organized natural being with a mechanical human creation, such as a watch, Kant cautions the reader against understanding the technic of nature *merely* in analogy to human art. Kant’s fear stems not from the suspicion that the technic of nature will be understood as an artwork in itself, but that it will be read as an extension of the human artist-artwork relationship, that is, as the product of some explicit intention on the part of a divine being. The possibility of proving the existence of a god who orchestrates the technic of nature has never been broached; Kant brackets such issues as undemonstrable. He writes, “We say far too little if we call [nature and the ability it displays in organized products] an *analogue of art*, for in that case

we think of an artist (a rational being) apart from nature” (KU 374). Organized being “is not conceivable or explicable on any analogy to any known physical ability . . . not *even* . . . to human art” (KU 375, my emphasis). In order to understand the seeming contradiction between this statement and the passages we examined earlier that explicitly described the technic of nature in analogy to art, we must return to the first introduction to the third *Critique*:

When we consider nature as technical (or plastic), because we must present its causality by an analogy with art, we may call nature technical in its procedure, i.e., as it were, artistic. For we are dealing with the principle of merely reflective and not of determinative judgment (determinative judgment underlies all human works of art), and in the case of reflective judgment the purposiveness is to be considered *unintentional* and hence can belong only to nature [but not to art]. (KU 251')

Purposiveness cannot be understood in analogy to art when art is linked to intention and to an artist. Indeed, Kant draws a very sharp distinction between the notion of purposiveness *within* the organism itself, and the notion of purposiveness extrapolated *from* the organization of the organism. The organism is the sole natural entity whose possibility can be thought *only* with reference to natural teleology, even when it is considered *apart* from any relation to any other thing. The structure of the organism therefore justifies the practice of introducing the notion of purposiveness into natural science in the first place (KU 375). Kant defines the organism as a natural product “in which everything is a purpose and reciprocally also a means,” in which nothing is gratuitous (purposeless) or attributable to a mechanism” (KU 376). Any natural scientist who has dissected a plant or animal body, says Kant, cannot but recognize the inherent purposiveness of its every part, both in serving its own individual purpose and in working in conjunction with the other organs (KU 376). The natural body is also purposive in that it can reproduce itself without aid from external causes. To this limited extent, purposiveness has an “objective reality.” The problem arises when people want to extend the notion of purposiveness from the internal workings of an organism to the natural world itself, as if the latter were nothing but a huge organism in which we, as well as all other natural things, are interdependent organs. This move has no external justification, warns Kant. Just as we cannot assign the purposiveness of nature an objective reality in analogy to art (as if God were a supreme craftsman with the intention of crafting the natural world), we also cannot assign it objective reality in analogy to the body of an organism.

Indeed, the whole structure of the Analytic of Teleological Judgment suggests that, rather than projecting the fiction of the organism

onto the natural world, the fiction of the natural world (the technic of nature) delimits the structure of the organism, and from this, the structure of the architectonic. Shell explains this phenomenon in the following way:

Nature becomes organismlike to—and only to—the extent that man himself, in his capacity as *user* of nature (rather than as God's or nature's *tool*), enacts the form-giving role that had to be referred, at the level of organic life, to the supersensible substrate. Man himself, in other words, by virtue of a *Tauglichkeit* [affinity] that “grows” in him with nature's help and yet without prejudice to his freedom, straddles the otherwise mysterious boundary between mechanism and intentional causation.<sup>19</sup>

As we noted earlier, the Greek *organon*, from which the word *organism* stems, means “tool.” In *Die Lebrlinge zu Saïs*, the German Romantic writer Novalis speculates about the beginning of naming and conceptual thought and the influence of this development on the way in which the universe was viewed by human beings, and in ruminating on this phenomenon both explicates and illustrates Kant's imperative that descriptions of nature most naturally and pleasurably follow organic form. Novalis tends to privilege light and crystal formation rather than vegetative growth, but the principle is identical: organic form is a tool that human beings use to systematize and organize the manifold of nature as a whole:

It must have been a long time before people started to think of indicating the manifold objects of their senses with common names and of setting themselves over and against them. Repetition [*Übung*] developed this practice, and with this development came divisions and articulations that one can readily compare to the refraction of a stream of light. So gradually our inner nature split up into manifold powers and with perpetual practice this tendency towards fragmentation intensified. Perhaps, if human beings have lost the power to remix these dispersed colors of their spirit and thus to recreate the old simple state of nature at will or to bring about new, manifold connections between them, it is just due to the pathological tendency of later human beings. . . . We can, for this reason, consider the thoughts of our ancestors about things in the world to be a necessary product, a self-representation of the state of earthly nature at that time, and we can accept these in particular as the most fitting tools [*Werkzeugen*] of the observers of the universe, as the primary relationship at that time, of the universe to its inhabitants, and of its inhabitants to it. . . . At the very least one feels certain of a contingent, mechanical [*werkzeugliche*] origin of [explanations of nature], and even for the despisers of the rule-less creations of the imagination this portrayal is

meaningful enough. . . . For this reason poetry has become the favorite tool of the true friend of nature, and in poetry about nature this radiates most brilliantly.<sup>20</sup>

As we have also already noted, Friedrich Hölderlin used the word *organic* to refer to the natural world subsequent to human intervention, not to a biological or chemical classification. Thus, the organic, at least for Hölderlin, was explicitly aligned with the technical, but with a technical that does not presume any specific intention in the sense of an efficient cause. Hölderlin called the natural world prior to any human imposition upon it the “aorgic”; the alpha-privative prefix indicates that which has nothing to do with the *organon*. There is much in the *Critique of Judgment* that suggests that Kant, too, shared this understanding of the organic as being thoroughly stamped by the technical. The technic of nature precedes art as such, for it dictates the conditions under which such a thing as art can arise. Only within the limits prescribed by the technic of nature (which cannot be traced back to an intention, thus to an artist) does the conception of artist—an individuated body capable of having intentions that separate it from any other individuated body and allow it in turn to create something outside of itself to stand on its own, in the world, as another individuated body—make sense. According to Kant, determinative judgment underlies all human works of art understood as intentionally created by an artist (KU 251’).

Perhaps, in the spirit of the *Critique of Judgment*, where the beautiful is that which causes liking without interest, and the sublime is that which is large without being measurable or fear-inducing without any immediate threat of danger, the technic of nature is art without an artist, contrary to what Abrams claims. Nature (subjectively) figured as an organized being by analogy with an artist manifests in human cognition characteristics of both symbolic and schematic hypotyposis. The presentation of nature as organized being is a symbolic presentation in that it manifests itself according to a particular image (that of an organism), but at the same time Kant goes to great lengths to demonstrate that no image outside the realm of the organic is possible. In “The Sublime Offering,” Jean-Luc Nancy aligns symbolism and fiction in “a logic of representation (something in the place of something else),” and counterpoises them to the schematism of the aesthetic judgment, which, as Kant writes in §35, is a “schematizing without a concept” (KU 36–37). However, Kant keeps discussions of fiction and symbolization separate, and fiction is not to be confused with making something nonimagistic present in the form of an arbitrary and alterable figure. Rather, fiction seems precisely to take the role of the schema, and does so “without a concept.” We must keep in mind the close etymological relation of *dichten* to *logos* itself.

The first introduction to *The Critique of Judgment* calls the propensity to understand nature as art judgment's "own concept" (KU 204'). The concept of the technic of nature is a priori for judgment in order to allow it to investigate nature, as a principle of its reflection. However, judgment "can neither explain this technic nor determine it more closely" (KU 214'). Judgment creates the technic for two reasons: in order to reflect in terms of its own subjective law, and in order to investigate nature in a way that harmonizes with natural laws (which are its own laws in turn). Kant explicitly calls this performance "artificial" (*künstlich*) (KU 215'). Kant contrasts *techne* in the form of a technic of nature with a mechanical instrument because the mechanical explanation of the universe is modeled upon something like a machine, which is a product of intentional human *techne*. The process of reflective judgment is called "technical" when it judges nature purposively; Kant specifies that in this process "[reflective judgment] deals with [given appearances] *technically* rather than schematically" (KU 213'). Here the technic of nature stands in for the schematism as an a priori principle for reflective judgment.

Both aesthetic and teleological judgments "need" the critique of judgment: teleological judgments need it because "if left to themselves" they "invite reason to inferences that may stray into the transcendent"; aesthetic judgments need it because they "require laborious investigation in order to keep them from limiting themselves . . . to just the empirical, and hence to keep them from destroying their claims to necessary validity for everyone" (KU 241'). Aesthetic and teleological judgments are reciprocally disciplinary, then, for opposite reasons. If the technic of nature, in the end, can make no definitive claims as to the "nature" of nature in itself (noumenal nature), this is not because it is arbitrary, merely one in many possible interpretations of nature. Kant stipulates that the teleological is the place to which the mind turns when it is incapable of conceiving the possibility of a natural object through the principle of mechanism alone:

All we can do is this: if we happen to find natural objects whose possibility is inconceivable to us in terms merely of the principle of mechanism (which in the case of a natural being always has a claim [to being applied]), so that we must rely also on teleological principles, then we can presume that we may confidently investigate natural laws in accordance with both principles (once our understanding is able to cognize [how] the natural product is possible on the basis of one or the other principle) without our being troubled by the seeming conflict that arises between the two principles for judging that product. For we are assured that it is at least possible that objectively, too, both these principles might be reconcilable in one principle (since they concern appearances, which presuppose a supersensible basis). (KU 413)

Judgment turns from the mechanistic to the teleological explanation in the same way that within the judgment of the sublime the imagination turns to reason when the imagination is incapable of comprehending the sublime. Kant assumes that the teleological principle is the only possible supplement to a purely mechanical world view, that without reference to final purposes humans could not make sense of nature at all.

The fiction (*dichten*) human minds create about nature seems to have something of the same relation to human reason that time has to the understanding. The teleology of nature schematizes human cognition of nature. There is a mutual interplay between nature and human thinking about nature/creating from nature, in which each determines the other. At one point, Kant calls the aesthetic idea “the counterpart [*Gegenstück, Pendant*] of a *rational idea*” (KU 314). The aesthetic idea is a presentation of the imagination which prompts much thought, but to which no determinate concept is adequate, and therefore no language can express an aesthetic idea completely. A rational idea is a concept to which no presentation of the imagination can be adequate. Both types of idea are necessarily mediated by the presentation of the imagination. The impact of each on the other forever changes its direction. A strange materiality emerges from the encounter of the natural and the spiritual, which becomes, in the end, what we refer to as “nature.”

Like a plant, the technic of nature grows without consciousness, and like the English garden it is a studiedly “wild” art, designed to look like untamed nature, but still ruled by the “form” of reason. Nature read as organized being requires human science to mediate its possible flight into fantasies of divine beings and supernatural causes whose existence can never be known. The Abbé du Bos wrote in 1719 that genius “is . . . a plant which shoots up, as it were, of itself; but the quality and quantity of its fruit depends in a great measure on the culture it receives.”<sup>21</sup> Similarly, Kant’s technic is a garden that must be cultivated and pruned. Through the technic of nature the notion of the organism, and from it the conception of the human as technician arises. If the technic of nature is a garden, its product, paradoxically, is not a plant but an animal, an animal whose structure derives from its separability from other organisms, its self-sufficiency, its autonomy, and its ultimate security in the face of the power of nature that threatens to overwhelm it. Kant’s technic of nature sets the scene for a new way of considering nature and scientific study of nature. From Goethe through Nietzsche, every philosopher in Germany will have to confront Kant’s critique, and the portrayal of science as an (at least partially) aesthetic endeavor opened the doors to the possibility of creating new paradigms of nature and consequently of culture, including the cultivation of plant life that grows outside of the confines of a formal garden.



At the end of the *Analytic of the Beautiful*, Kant comments that nature is most agreeable to human taste when it is diverse, luxuriant, “subject to no constraint from artificial rules” (KU 243). The description resonates with theories of the new garden, called the landscape garden, expounded by architects, poets, and essayists from the late sixteenth to the early nineteenth century in England. In his essay “Of Gardens,” Francis Bacon directs a gardener to have at least a part of the garden “framed, as much as may be, to a *Natural wildnesse*.”<sup>22</sup> Joseph Addison, one of the earliest proponents of the cultivated-to-look-wild landscape garden, writes, “Tho’ there are several of these wild Scenes [of nature], that are more delightful than any artificial Shows; yet we find the Works of Nature still more pleasant the more they resemble those of Art.”<sup>23</sup> The English garden was designed in explicit opposition to the formal constraints of French classical gardens, exemplified by the grounds of Louis XIV’s palace at Versailles. These French gardens were characterized by angular geometrical lines, severely clipped greenery, and disciplined flower beds. Yet if the English landscape garden *looked* more natural, it remained equally cultivated.

The German taste of the time followed that of the English garden planners. In “On the Sublime,” Friedrich Schiller writes, “Who does not prefer to tarry among the spiritual disorder of a natural landscape rather than in the spiritless regularity of a French garden? Who would not marvel at the wonderful battle between fecundity and destruction in Sicily’s plains, or feast his eyes on Scotland’s wild cataracts and mist-shrouded mountains, Ossian’s vast nature, rather than admire in straight-diked Holland the prim victory of patience over the most defiant of the elements?”<sup>24</sup> In a footnote to “Naive and Sentimental Poetry,” Schiller comments on the necessity of the *contrast* of art and nature in order for humans to find something “naive.” Schiller’s use of “naive” follows Kant’s aesthetic of the beautiful closely, except that it refers only to things that are revealed as fresh, natural, innocent, and of course unattached to any determinate purpose. Schiller writes, “Nobody would find naive the spectacle of a badly tended garden in which the weeds have the upper hand, but there is certainly something naive when the free growth of spreading branches undoes the painstaking work of the topiarist in a French garden.”<sup>25</sup> Thus, nature in Schiller’s understanding of Kant (the account follows the third *Critique* closely) can be seen as truly natural only with reference to the artificial, even if only by contrast. It has even been argued that the new congruence between the human mind and nature propounded by thinkers such as Kant and Goethe and developed by writers of the Romantic movement had its provenance in the landscape gardening movement of the eighteenth century.<sup>26</sup> We will read this relationship not in terms of the

linear model of “influence,” but rather as a chiasmic figure; we do not assume a preexisting view of nature that somehow shapes philosophical thinking, but rather insist that nature itself is created in human thinking about it, from which new philosophical thinking gains its character in turn. Finally, as a natural being, human being itself is profoundly affected by shifts in thinking about nature.