



purpose of aesthetic appreciation; they are not artworks, and in that sense nature is not an artist. But projective nature regularly creates landscapes and ecosystems—mountains, seas, grasslands, swamps—whose properties include overtones of beauty. These aesthetic properties (though not aesthetic experiences) attach to nature objectively. Humans with an ecosystem approach will discover that beauty is a mysterious product of projective nature, an aura of objective aesthetic properties. This aura may require an experiencer with aesthetic capacities for its consummation but requires still more the forces of nature for its production.

When I am enjoying the fall colors of a New England landscape, I may (having taken a philosophy class) check my enjoyment with the thought, "I am just projecting this display of colors onto these trees—the red onto the maples, gold onto the aspen, scarlet and brown onto the oaks, green onto the spruce. There is no color out there, apart from my presence." In a sense that is true; the experience of color is in the eye of the beholder. But the eye is translating into the experience of colored form something that is out there (electromagnetic waves reflected from molecular structural planes; leaf, branch, and crown shapes). This is not being made up; it is being discovered (and translated). The color experience is the means of discovery.

The display out there might be translated via some other sense modality; it might, for instance, be translated by a system of equations that maps the landscape and electromagnetic waves mathematically, rather like a score mapping music. That mathematics would also be in the mind of the beholder, yet it would be mapping the same events out there in the world that color maps. In any method by which the fall display could be adequately mapped and translated—catching in this way or that what is taking place in the rich world—the result would be aesthetically stimulating because the form, symmetry, tonal complexity objectively there in the world is aesthetically worthy, variously caught by alternative modes of detection.

Two dimensions here are noteworthy: the display objectively in the world, and the detection device resulting from eye coupled with brain. Both are natural products, the result of projective nature.

In further truth as well, there is a great deal more going on in the New England fall landscape than our sense modalities ordinarily catch, much of which would be additionally aesthetically pleasing, could we know it. One of the things that

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science does is extend our sense modalities so that we contact these further dimensions of nature. We sometimes use computer images enhanced with colors to increase our sensitivity to events in the world (infrared waves at night; turbulence in gases on Jupiter) that our eyes are incompetent to detect. We may find the spiral symmetries of a DNA molecule aesthetically pleasing when these are mapped by computer simulation.³⁰

Is All Beauty in Nature?

John Muir exclaimed, "None of Nature's landscapes are ugly so long as they are wild."³¹ William Morris agrees: "Surely there is no square mile of earth's inhabitable surface that is not beautiful in its own way, if we men will only abstain from wilfully destroying that beauty."³² While not logically incompatible with Kant's claim, in the unlikely case that humans invariably received all landscapes with favor, Muir's claim is of a different temper. Kant will advise us to take as much of nature as we can with aesthetic pleasure (sunsets, spring flowers, bird songs, waterfalls), and to discard the rest (parasites, burned forests), considering ourselves to be lucky or skilled as we do so.

But Muir claims that landscapes always supply beauty, never ugliness. They should unfailingly generate in us favorable experiences if we are suitably perceptive. Anyone who says that a desert or the tundra or a volcanic eruption is ugly is making a false statement and behaving inappropriately. Ecosystems, at least as scenes, contain only positive aesthetic properties. Rather like clouds, which are never ugly, only more or less beautiful, so too are mountains, forests, seashores, grasslands, cliffs, canyons, cascades, rivers. (Astronomical scenes, too—stars, galaxies, moons—are always more or less beautiful.)

This view does not find all places equally or perfectly beautiful; it maps them on a scale that runs from zero upward but has no negative numbers. It will be possible in some cases to increase natural beauty—by building artificial reefs, for instance. Further, this claim is an area-level judgment. It does not deny that some items in nature are ugly viewed from certain perspectives, only that in a landscape perspective—that is, in locale and ecosystemic perspective—there are only positive qualities. It would seem implausible to say of human works of art that they are never badly done, yet here the positive thesis claims that virgin landscapes are always (more or less) well formed aesthetically.

It is appropriate to say of various landforms and seascapes

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that they are graceful, intense, unified, rich, contoured, fertile, expansive, awesome, sublime, even desolate, turbulent, severe, rugged. This list mixes terms that describe aesthetic experiences with terms that describe aesthetic properties, but that mix is no longer the issue. Here we are concerned only with whether the aesthetic response is, or ought to be, positive. Montanans enjoy their "big sky country," and Down-Easters stroll over a tidal basin at neap tide to sense a vast emptiness. Aesthetic properties "call for" appropriate aesthetic experiences, and it is never "called for" to say that such places are bland, dull, boring, incoherent, chaotic.

"Wild" is often thought to be a negative predicate, as when we say that a field or a child has gone wild. That is so from the perspective of culture, where an untamed wildness is a disvalue. From such a perspective, of course, humans will find many lands—tropical forests, tundras, deserts, moons, other planets—displeasing: that is, inhospitable to culture. But we are here considering not utility but beauty. If we come to a landscape on its own terms, sensitive to its integrity, wild is always a positive predicate. This wildness can produce in us a sense of beauty—"wild, wonderful West Virginia."

Are nature's aesthetic properties always positive? Allen Carlson claims, "All virgin nature . . . is essentially aesthetically good."³³ Initially, this claim seems evidently false; one can hold it only by shamelessly picking the evidence. In one sense, there can be no failures in nature because nothing is to be judged in the light of aesthetic intention. Evaluating works of human art involves judging them in the light of an artist's intention, but nature has no intentions; thus, nature cannot fail, not having tried.

But in another sense, it seems that there are frequent, even omnipresent failures in nature. Both organisms and ecosystems can be ruined. Let us first cite as counterexamples to the positive thesis various *items*, organisms, in the landscape and, second, consider *systemic processes*, which will lead us, third, to *scenic wholes*.

If hikers come upon the rotting carcass of an elk, full of maggots, they find it revolting. Here is a bad example of its kind, disharmony, a putrid elk. Any landscape looked at in detail is as filled with dying as with flourishing things. Everything is in some degree marred and ragged—a tree with broken limbs, a crushed wildflower, an insect-eaten leaf. An eagle chick plagued with ticks is not a pretty thing. Sometimes there are disfigured, even monstrous animals. So why is this not ugliness in the landscape? It is!

We do not enjoy such experiences. Tourists take no photographs of these eyesores.

Ugliness Transformed in Ecosystemic Perspective

If we enlarge our scope in retrospect and prospect (as ecology greatly helps us do), we get further categories for interpretation. The rotting elk returns to the humus, its nutrients recycled; the maggots become flies, which become food for the birds; natural selection results in better-adapted elk for the next generation. The monstrous mutants, unless by luck better fitted for some new niche, are edited out of the system, and the system continues to track new environments by casting forth further mutants. Every item must be seen not in framed isolation but framed by its environment, and this frame in turn becomes part of the bigger picture we have to appreciate—not a "frame" but a dramatic play. The momentary ugliness is only a still shot in an ongoing motion picture.

Life is a dynamic contest in which an organism struggles to express its genotype in a phenotype, with the phenotype supported and limited by the environment, helped and hurt by contingencies in it. With a more sophisticated critical sense the aesthetician comes to judge that the clash of values, pulled into symbiosis, is not an ugly but a beautiful thing. The world is not a jolly place, not a Walt Disney world, but one of struggling, somber beauty. The dying is the shadow side of the flourishing.

One has to appreciate what is not evident. There are lots of marvelous things going on in dead wood, or underground, or in the dark; they are not scenic at all, but an appreciation of them is aesthetic. The usefulness of a tree in the ecosystem is only half over at its death; as an old snag or a rotting hulk it provides nesting cavities, perches, insect larvae, food for birds, nutrients for the soil, and on and on. To say that decay or predation is bad is as incomplete as to say that rain is bad because it falls on my picnic. These things are local disvalues to individuals, but they are systemic values. A system without decay or rain would soon lock up and dry up; without predation the systemic processes could not build up life very far, with resulting benefits for later-coming individuals. To dislike the interlocking value capture is something like looking at a jigsaw puzzle and complaining that the pieces are misshapen. A human does not say that his apple is ugly after biting off a piece, so why should he think a leaf ugly because a worm has eaten some of it?

Lewis Carroll thought he had found something evil in nature:

How doth the little crocodile
Improve his shining tail,
And pour the waters of the Nile
On every golden scale!

How cheerfully he seems to grin,
How neatly spreads his claws,
And welcomes little fishes in,
With gently smiling jaws!³⁴

But there is nothing sinister or evil about the crocodile/fish food chain. Any ugliness here is in the eye of the beholder, any disvalue in fact only a projection—like the big, bad wolf. The objective events in the world, good for crocodiles and bad for individual fish, are a systemic good in an ecosystem in which both crocodiles and fish have a satisfactory place. So far from eliminating the crocodile to help the fish, humans ought rather, when the crocodile is endangered, reduce recreational and commercial fishing privileges in order that crocodiles can fish with more success. (See the Organized Fishermen of Florida versus Andrus case, Chapter 4.)

During his treks through Florida swamps, and after expressing repeated fear of stumbling unawares upon alligators, John Muir wrote:

Many good people believe that alligators were created by the Devil, thus accounting for their all-consuming appetite and ugliness. But doubtless these creatures are happy and fill the place assigned them by the great Creator of us all. Fierce and cruel they appear to us, but beautiful in the eyes of God.³⁵

Doubtless that beauty figured into Muir's claim that every landscape is beautiful so long as it is wild.

Still, there is itemized, individual ugliness in nature; virgin nature is not at every concrete locus aesthetically good: consider a crippled fish that has escaped an alligator. Those who are not programmatic nature romantics will admit this and go on to recover what beauty they can. But ugliness, though present at times in particulars, is not the last word. Realists with a "depth" past a "flat" vision can "see" the *time line* as well as the *ugly space* immediately present; they know that regenerative forces are already present, that over time nature will bring beauty

out of this ugliness, and that this tendency is already present and aesthetically stimulating now. Such aestheticians can see longitudinally as well as cross-sectionally. When the point event, which is intrinsically ugly, is stretched out instrumentally in the process, the ugliness mellows—though it does not disappear—and makes its contribution to systemic beauty and to beauty in later-coming individuals, whether of the same or of other species.

We can expect that humans, like other animals, will have been naturally selected to find certain things repulsive, those things (rotting carcasses, excrement) that they as individuals need to avoid in order to survive. But these processes, abhorrent from the perspective of my individuality, may not be ugly at all in the system, where they are the recycling of resources. Environmental ethics stretches us out from our individualistic, self-centered perspectives into a consideration of systemic beauty. A cultural ethic might find it disrespectful to bury one's mother without embalming and preserving her body; an environmental ethic might oppose embalming on grounds that it locks up resources and that her body's decay is, systemically, a beautiful thing.

There is ugliness, but, even more, there are transformative forces that sweep toward beauty in the midst of this perpetual perishing. There are destructive forces of entropic teardown, and these work against the positive constructive, negentropic forces. When the negative temporarily overcome the positive forces, the result can be local ugliness. Sooner or later every life is so ruined. But the end of the individual is never the end of the story. The individual may be sacrificed for the life of its predator; one way or another its elements will be recomposed as surely as they are decomposed. There is always the resurrection of new life past the destruction of old life. This disorder and corruption are the prelude to creation, and in this perpetual re-creation there is high beauty.

Nature's beauty can be costly and tragic, yet nature is a scene of beauty ever reasserting itself in the face of destruction. When the various items in the landscape are integrated into a dynamic evolutionary ecosystem, the ugly parts do not subtract from but rather enrich the whole. The ugliness is contained, overcome, and integrates into positive, complex beauty. Yet this is not so much *viewed* as *experienced* after one reaches ecologically tutored understanding. It is not so much a matter of *sight* as of *insight* into the drama of life. In many of life's richest aesthetic experiences there is nothing to put on canvas, nothing to take snapshots of.

Are there ugly landscapes? Think of a beach destroyed by a tidal wave, a valley inundated by a lava flow. A windstorm in Idaho in April 1986 destroyed 1,500 acres of forest. The scorched earth after a fire would be thought ugly if it had resulted from a carelessly abandoned campfire. What is the difference if the fire was a result of a bolt of lightning instead? Must one know the origin of the flames to judge whether the scene is ugly or beautiful? Sometimes there are natural catastrophes that alter landscapes for the worse. Has not nature then produced ugly places? Again, in a way this is so. No one would feature these places in landscape paintings; they are not picturesque. But we are dealing not with paintings but with happenings in a living system, and deeper aesthetic sensibilities are required.

Consider how our attitudes toward fire have changed since being informed by ecology. Fire sanitizes and thins a forest, releasing nutrients from the humus back into the soil. It resets succession, opens up edging, initially destroys but subsequently benefits wildlife. It regenerates shade-intolerant trees. Fire is bad for a culture that wishes to exploit a forest or even to view it scenically this year and next; fire is bad for a hiker caught in the flames; but we no longer think that fire is bad for a forest. Rather, it is part of the formative process. Even from the perspective of culture, present management problems (such as insect blights) often result from decades of fire suppression. Soon it becomes difficult to say of a naturally burned forest that it is ugly. It is temporarily ugly, as is the elk carcass, in that the normal growth trends have been halted. But the temporary upset is integral to the larger systemic health.

Some violent forces in nature such as tidal waves and lava flows, are so massive and rare that ecosystems have no adaptations to them. The system cannot "remember" long enough to select strategies for coping with infrequent catastrophes. There may even be periodic extinctions due to astronomical causes, though we poorly understand these (Chapter 4). As disruptions are proportionately common (on the scale of decades up to a century or so), they become integrated into the successional cycles and are no longer bad events for grasslands or forests. Further, our understanding of long-term evolutionary and successional changes at the regional ecosystemic level is incomplete, perhaps the least understood phase of biology; it may be that scientists do not yet have the appropriate ecological categories to understand these events (as earlier we did not understand the place of fire).

Meanwhile, aestheticians may have to accept these ugly events as anomalies challenging the general paradigm that nature's landscapes almost without fail have an essential beauty. Even lava flows and tidal waves in their power and fury are not without aesthetic properties, destructive though they are of life, and there is dramatic beauty in the struggle of plant and animal communities to reestablish themselves after catastrophe. Life comes back, and the return is beautiful; but somehow the going out of life, once it is seen as a preface to its return, is less ugly than before.

Beyond Beauty to the Sublime

Aesthetic properties in nature push the beholder toward the experience of the sublime, something larger than beauty. At the beginning, we search for something pretty or colorful, for scenic beauty, for the picturesque. Landscapes regularly provide that, but when they do not, we must not think that they have no aesthetic properties. James McNeill Whistler complained: "Nature is usually wrong: that is to say, the condition of things that shall bring about the perfection of harmony worthy of a picture is rare, and not common at all. . . . Seldom does Nature succeed in producing a picture."³⁶ And when it does succeed, R. B. Litton, a forest planner, refers to this gathering of the scenic beauty that nature has produced as the "visual harvesting of scenic resources."³⁷

But nature is not always to be treated as though it were material to be harvested for a picture postcard. "Harvest" is a word that belongs with agriculture; "picture" is a word that belongs with art; neither is adequate for interpreting spontaneous nature, landscapes, ecosystems. To try to understand the beauty of wilderness with a resource model or with pictorial criteria is inevitably to misunderstand it. It is trying to interpret a sunset as a kind of crop, or a gazelle and its grace as a kind of cow, or an ecosystem as a kind of postcard. These are dreadful category mistakes.

We ought not to tour Glacier National Park interested only in a view—stopping at overlooks and examining rugged mountains as though the parts of nature that cannot serve us ought at least to please us. We rather discover that nature can throw us off balance, overwhelm us with the howling wind, the shifting sand, the frozen tundra, the vertigo of time and struggle. We find ourselves exhausted before the inexhaustible. One should find landscapes "wild" (Muir) and let each be "beautiful in its own way" (Morris). This is the "form" that one has to appreciate, not

some form that fits a camera frame. The experience of beauty that we seek is not a recreational finding of something one can frame in a snapshot (that might be only a projection from the eye of the beholder) but a locating of oneself in and reconciling of oneself with the forces of creation that are objectively there. One ought not to look at nature expecting pictures; one should rather thrill over projective nature, where Earthen nature is regularly splendid. One should thrill over ecosystems, at the production of which Nature seldom fails. The scene is the projective system; until we see that, we miss what is sublimely there, and those who seek to harvest sublime resources are doomed to fail.

A criticism of the preceding argument—reinterpreting localized, intrinsic ugliness as systemic, instrumental beauty—is that we save a claim—“All virgin nature . . . is essentially aesthetically good” (Carlson)—by switching categories and levels, that we win by redefining beauty as the sublime and transforming the scope of events under consideration. Any victory is success by equivocation. One stretches and twists “beauty” to fit all the available evidence, some of which would by usual criteria be interpreted as repulsive. The rotting carcass, the monstrosity, the scorched earth, the lava-ruined ecosystem—not found to be beautiful—are pronounced sublime.

Perhaps one can admit that although evolutionary ecology makes all these events intelligible, it does not make them beautiful. Anyone who argues so accentuates the beauty, ignores the ugly (though as omnipresent as beauty), shifts reference frames to accommodate anomalies, dodges particulars with statistics, and believes the trends to be “essentially sublime.” Nature romanticism becomes an aesthetic blindfold. The main claim becomes immune to refutation by evidence.

Our reply is that here there is no equivocation but rather an insistence on context. Good aesthetics knows what good science knows, that we catch beauty, as we catch facts, with a paradigm; and the struggle for truth in either field is always the struggle to gain a big enough paradigm, an Einsteinian past a Newtonian one, a holistic past a partial one. The aesthetician here is trying to experience all the facts, not limited and local ones only. This is not blind nature romanticism; it is open-eyed realism that wants to see beyond individualistic and humanistic perspectives, and it sees sublime beauty in the evolutionary and ecosystemic struggle for life.

The upshot is not that virgin nature is invariably aesthetically

positive in immediate detail but that it is *essentially* so when even the ugliness is embraced by the sublime. As always with trends, one needs not only to evaluate the particulars in space and time but also to see the system. Within the histories of species, individuals are perpetually perishing, but species are prolonged until no longer fit in their environments—whereupon they evolve into something else or go extinct and are replaced. Beauty does not require permanence. Within landscapes there is ugliness in the detail, but at the systemic level, at the scope of the dynamic scene, softened by perspective from a distance, there is sublime beauty. This can be true even where the (rare) violence of nature is so massive that ecosystems have been unable to adapt their successions to such interruptions. Even here, life will reassert itself and regain its beauty. Great beauty, like great music, is often in a minor key.

This essential motif, the conquest of constructive over destructive forces, is the key to the aesthetic capacity in this storied natural history, producing aesthetic properties to which humans, when they arrive and discover where they are, respond with positive aesthetic experience—one that often leads toward religious experience. An appreciation of this essence in projective nature is what Muir could teach Socrates from the University of the Wilderness.