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Tornados and the Sublime: Discourse on the Human Place in Nature

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ABSTRACT

In this paper, I detail lessons that I learned about discourse on the environment from my experience of the Salt Lake City tornado of 1999. Reflecting on the episode, the Occidental idea of sublime has been useful to me in making sense of the human place in nature. Yet, generally speaking, the concept of sublimity problematically evokes an irrational optimism of the ability of human rationality to transcend capricious and corporeal nature. Any conceptual "safe distance" functioning to distance wild nature is wholly transitory and therefore a chimera. The fundamental ontology of the human condition is ecological interconnectedness with wild nature. With the fact that *Homo sapiens* is fundamentally embedded in wild nature comes the discomforting realization that evolution and extinction co-occur: the very ecological processes which brought into existence humans and human culture will also put an end to humans and human culture. Like Shiva, the Hindu god whose dance simultaneously creates and destroys, these dual effects of natural process are interrelated—they are two manifestations of the same underlying phenomenon. In short, I have learned that we need a change in worldview by recognizing that one thing humans cannot make is an inviolable safe space; at best, we may distance ourselves, temporarily, from the nonhuman. Our goal should not be to transcend wild nature, but to discover imaginative new ways of living *within* it.

KEY WORDS

antiquity, ecological discourse, Enlightenment, evolutionary process, fallacy of safe space, metaphysical dualism, ontological interconnectedness, Shiva, sublime, supernaturalism, tornado, wildness

Standing on top of Wilson Peak in the San Juan Range of Colorado, I felt overwhelming exhilaration as well as a sense of terror, of fear. At 4272 meters above sea level, it was as if I were perched on a pinnacle of rock, the earth falling precipitously away on every side.

Romantic writers of the Occidental intellectual tradition, revitalizing a Roman concept, have called this type of experience "the sublime." Yet, in the opinion of American author John Updike, the scope of the possibility of this kind experience has shrunken dramatically in contemporary times:

> If vastness and danger produced sublimity, then the Sublime was to be found where nature reigned untamed, in the thunder of Niagara Falls, the shaggy mountains of the Northeast, the deserts of peaks of the Far West, the volcanoes of Ecuador and Mexico. . . . Now, with Greenland crisscrossed by commercial air routes and the Himalayas littered with empty oxygen canisters, Antarctica is the Sublime's last stronghold, where Man can still be cowed by the inhuman.[1]

Extending Bill McKibben's notion that anthropogenic global climate change has left no place on earth untouched by the human hand,[2] we might well conclude that not even Antarctica provides the opportunity for authentic experiences of sublimity.

As meta-nature does not dwarf the human as it once did, safely off Wilson Peak, I would completely agree with Updike had I not witnessed a tornado developing directly over downtown Salt Lake City—and accidentally found myself in its vortex. The idea of sublime,

taken in the context of its accessory—and problematic—cultural baggage, goes a long way in enhancing our discourse on the human/more-than-human[3] dynamic.

1. The Physics and Phenomenology of a Tornado

August 11, 1999 started out as a normal study day. I had been doing one of my favorite things: sitting in a café, sipping coffee, writing, and looking out of the window at passing people and the sunny sky. Earlier that morning, I had listened to the National Weather Service radio broadcast. Warm moist air was moving in from the south, with colder dryer air coming in from the north-west. The forecast called for afternoon thunderstorms and possible rain and hail, typical of late summer in northern Utah.

During the hour preceding the tornado, a thunderhead formed over the valley, growing gradually taller and darker. What was unusual, I thought, was that the underside of the cloud was so black and muscular (in scientific terminology, a mammatus cloud formation, or mamma). The pouch-like texture was beautiful and ominous, yet there was no lightning or rain.

Finishing my coffee, I headed by car to the University of Utah library. Halfway there, I noticed that a swirling cloud body in the shape of an inverted cone was dropping from the black mamma above, directly over downtown Salt Lake City (see Figure 1)! From a meteorology class, I knew that the cumulus cloud had built to the point where rising warm moist air had come into contact with cool dry air above. The warm moist air rapidly cooled and condensed, creating a downdraft. Concomitantly, warm air was being sucked upward. (Figure 2. See also Whipple, *Storm*.)

Astonished, I looked closer: the cloud had a distinct shape—an inverted cone—yet was boiling with turbulence. And it was swirling noticeably in a counter-clockwise direction. I knew immediately what was happening: the warm updraft was veering or curving due to the rotation of the Earth called the Coriolis effect. In the northern hemisphere, the curve is to the right, resulting in counter-clockwise

rotating low pressure zones. In the southern hemisphere, the rotation is clockwise.

It was an incredible sight, and I decided to drive up the hillside behind Salt Lake City to get a better look, instead of going to the library. As I drove, the cone became part of a full-fledged funnel cloud extending from the thunderhead to the valley floor. An enormous plume of swirling garbage sucked into the sky. Perhaps my perception was locked into that moment, but all the foam, cardboard, newspaper, and small leafy branches seemed suspended, circling slowly over the city. And as far as I could tell, the funnel appeared to be stationary. I figured if I saw the tornado move in my direction, I could simply flee by auto.

"This is the biggest *dust-devil* I've ever seen!" I thought, knowing full well that this was a real *tornado*. In a few minutes I was at the top of a residential area northeast of downtown known as the Upper Avenues, which has commanding views of the Salt Lake Valley. Instantly it got dark. Debris rained out of the sky. I turned into a dirt parking lot which is used by joggers and walkers to access the open mountainside above the houses.

A violent blast came directly at the windshield. No longer was the flying debris foam and paper: now two-by-fours hurled through the air. A large piece of plywood flew straight at me and then spun suddenly off to the left, like a giant Frisbee. Cognizant that somehow suddenly I was *in* the tornado, I shifted the car into reverse. I had backed up only few feet when an electrical wire fell across the hood, accompanied by a loud crash. I stopped. Two feet behind the car lay a splintered timber power pole. A transformer hit the ground, spilling out a weird fluorescent green fluid. Glad that the power pole didn't crush the car or kill me, but afraid that the wire on the car was hot, I quickly pulled forward. The surge of wind waned, and hail was falling. The violent gust had lasted for only ten or fifteen seconds. After five minutes, the hail slackened, and I got out of the car and looked around.

The power pole which I almost backed under had been snapped off about ten feet above the ground. Nearby two other power poles had been downed. Wires were all over the ground. A portion of a roof lay on the bare hillside. Dozens of trees were either uprooted or snapped.

Debris was randomly scattered everywhere: lawn chairs, fragments of wood and insulation, shingles, a basket ball standard, a charcoal grill, an air conditioner. Part of a roof hung in a pine tree. Half of one house was gone. Tangled Venetian blinds dangled in the open air. A large wood beam punctured a large plate glass window, half inside the house, half outside. A black cloud of smoke rose above downtown.

People began to come out and look around. It was dead calm. Dozens of sirens began to wail. A man who was inside his house when the tornado hit said the sound was deafening. Strangely, I didn't remember sound: my brain capacity must have been taken up by the visual image of the storm surge and flying debris.

I stared at the house that lost its roof: through a front window you could see kitchen cabinets and the refrigerator. The open sky above cast a strange grey light in the room, not normal for the inside of a house. Its roof lay at least a hundred yards away, to the west. Then the realization: the direction of the blast which ripped the roof from the house was moving east to west, but the direction of the blast which came at the windshield was moving west to east. *I had been in the vortex!*

Later I learned that the genesis of this tornado was significantly different than tornadoes typical of the Midwest; while the later type are usually *descending*, this tornado was *ascending*.[4] The tornado developed along a surface convergence zone of a northwestern breeze coming off the Great Salt Lake with a southerly wind. The convergence of these two surface air masses created, by the Coriolis effect, a weakly rotating system. As the thunderhead developed above, a particularly strong updraft occurred. The combination of these events resulted in a spinning, upward movement of air reaching tornadic intensity. Based on resultant damage, the wind speed peaked about 150 miles per mile, making it a F2 category tornado. (See Table 1.)

The tornado developed to the south-west of downtown, and traveled four miles to the north-east, passing over the Delta Center, skirting Temple Square (for Salt Lakers an example of God's will or sheer coincidence, depending on religious conviction), cutting a swath through the heavily forested Memory Grove park, advancing up the hillside to my "viewing" spot, and dissipating to the northeast beyond

Ensign Peak.[5] One person was killed and eighty people injured seriously. Three hundred buildings were damaged and thirty-four homes rendered uninhabitable. Hundreds of trees—especially precious in the desert—were destroyed.

2. The Idea of the Sublime

The *sublime* is an aesthetic term referring to the experience of feeling awe and inspiration from nature. It was first used by ancient Roman rhetoricians to discuss the capacity of orators and writers to stimulate a certain emotion in the hearer or reader. The concept was revived in the eighteenth century when Longinus' *On the Sublime*[6] became vogue with European intellectuals.[7]

Typically the "sublime" is distinguished from the 'beautiful.' Beauty is the pleasant experience of nature bucolic and providential, while sublimity is the fearful experience of nature as chaotic and catastrophic. Within the broad context of the Western tradition, it is clear that the distinction between the beautiful and the sublime is to be taken as a reflection of the conflicting moral properties of good and evil inherent in the natural world. The antithetical categories of beauty and sublimity are, in the words of M. H. Abrams, part of ". . . a long tradition of finding moral and theological meanings in the aesthetic qualities of the landscape, as well as of conducting an inquiry into cosmic goodness and justice by reference to the contrary attribute of the natural world."[8]

In 1757, Edmund Burke published *A Philosophical Inquiry into the Origin of Our Ideas of the Sublime and Beautiful*. In this influential treatise, Burke associates beauty with pleasure, the sublime with astonishment, terror, obscurity, power, vastness, infinity: "whatever is fitted in any sort to excite the ideas of pain, and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the *sublime*."[9]

German philosopher Immanuel Kant made important contributions to the Enlightenment discussion of the sublime. Seven years after Burke's work, Kant published *Observations on the Feeling*

of the Beautiful and Sublime. Although in this and other early work[10] Kant treats beauty as a property inherent to objects outside the mind, he defines the terms by analyzing the response of the observer. Aesthetic experience, Kant says,

> is chiefly of two kinds: the feeling of the *sublime* and that of the *beautiful*. The stirring of each is pleasant, but in different ways. The sight of a mountain whose snow-covered peak rises above the clouds, the description of a raging storm, or Milton's portrayal of the infernal kingdom, arouse enjoyment but with horror; on the other hand, the sight of flower-strewn meadows, valleys with winding brooks and covered with grazing flocks . . . also occasion a pleasant sensation but one that is joyous and smiling. In order that the former impression could occur to us in due strength, we must have a *feeling of the sublime*, and in order to enjoy the latter well, a *feeling of the beautiful*.[11]

Here, the terror emphasized by Burke is a sufficient but not a necessary condition of sublime experience.

However, over twenty-five years later in the *Critique of Judgment* (1790), the "terrifying sublime" which in the *Observations* Kant treats as a subcategory of the sublime,[12] now becomes the distinguishing feature of the sublime.[13] No longer are the aesthetic qualities of beauty and sublimity mind-independent; consonant with the epistemology of the *Critique of Pure Reason* (1781), they are subjective categories of the mind, yet categories that are universally held by all human beings. The feeling of the sublime arises from experience, but sublimity cannot be understood solely in terms of experience.

Kant divides the sublime into two categories: the mathematical and the dynamical. The experience of the former is such that the phenomenon is so vast it cannot be grasped as one sensory whole: "*the sublime is that in comparison with which everything else is small*."[14] In the experience of the latter, nature is so powerful that the beholder feels threatened or fearful, but does not have fear. Actual fear destroys the possibility of sublime experience, because "it is impossible to find

satisfaction in a terror that is seriously felt."[15] As Eva Schaper remarks, "If we were in real fear of our lives, trying to run away or save ourselves from drowning or from being swept away, we would be involved with the objects and occurrences in their real existence and would be as little capable of the aesthetic stance as a staring man could judge aesthetically the food he craves."[16]

For Kant, it is possible to be fearful but not have fear due to reason. Kant argues that reason and moral agency gives us a feeling of superiority and confidence when facing the brute forces of natural process. The experience of the sublime, therefore, is premised on the subject's ability to transcend the danger of situation through the exercise of rationality:

> Bold, overhanging, and as it were threatening rocks; clouds piled up in the sky, moving with lightning flashes and thunder peals; volcanoes in all their violence of destruction; hurricanes with their track of devastation; the boundless ocean in a state of tumult; the lofty waterfall of a mighty river, and such like—these exhibit our facility of resistance as insignificantly small in comparison with their might. But the sight of them is the more attractive, the more fearful it is, provided only that we are in security; and we willingly call these objects sublime, because they raise the energies of the soul above their accustomed height and discover in us a faculty of resistance of a quite different kind, which gives us courage to measure ourselves against the apparent almightiness of nature.[17]

Images of foreboding rock outcroppings and uplifting evoke the words of English poet William Wordsworth:

> For I would walk alone,
> In storm and tempest, or in starlight nights
> Beneath the quiet Heavens; and, at that time,
> Have felt whate'er there is of power in sound
> To breathe an elevated mood, by form
> Or image unprofaned; and I would stand,

> Beneath some rock, listening to sounds that are
> The ghostly language of the ancient earth,
> Or make their dim abode in distant winds.
> Thence did I drink the visionary power.[18]

This idea of the sublime embodies the quintessential Enlightenment optimism about the power of human reason and its ability to transcend the vicissitudes of natural process.

Thus the two necessary conditions for sublime experience, according to Kant, are *fearfulness* but not *fear*. Henry David Thoreau's experience on Mount Ktaadn[19] in Maine is noteworthy in this respect. Hiking alone, Thoreau attempted the summit, but was turned back by ominous clouds and darkening skies.

> Perhaps I most fully realized that this was primeval, untamed, and forever untameable *Nature*, or whatever else men call it, while coming down this part of the mountain[.] Nature was here something savage and awful, though beautiful. I looked with awe at the ground I trod on, to see what the Powers had made there, the form and fashion and material of their work, This was that Earth of which we have heard, made out of Chaos, and Old Night[.] I stand in awe of my body, this matter to which I am bound has become so strange to me. I fear not spirits, ghosts, of which I am one, —that my body might, —but I fear bodies, I tremble to meet them. What is this Titan that has possession of me? Talk of mysteries! —Think of our life in nature, —daily to be shown matter, to come in contact with it, —rocks, tress, wind on our cheeks! the solid earth! the *actual* world! the *common sense! Contact! Contact! Who* are we? *Where* are we?[20]

"To this point in life, including his experiences at Walden Pond," American ecocritic Max Oelschlaeger writes, "Thoreau's intercourse with wild nature had been pleasant, if occasionally uncomfortable, but never threatening. The Ktaadn excursion tested him, physically and psychically, in a new and radical way."[21]

3. Beyond Sublimity: The Fallacy of "Safe Space"

The idea of sublimity is philosophically problematic in at least 3 ways: (1) it is based on a firm Cartesian ontological divide between the human and non-human; [22] (2) it is based on subject-centered rationality;[23] (3) it is based on a sacredness of nature, which in it's most extreme forms—e.g. in Wordsworth and Muir—Nature is God.[24] Each of these three points is complex and worthy of full exegesis, and, as such, is beyond the scope of this paper.

Generally, though, we can simply note that eighteenth-century treatments of sublimity evoke an optimism of the ability of human rationality to transcend capricious and corporeal nature. Kant's sanguineness about the ability of human reason to transcend fear, for example, seems groundless without the framework of a super-naturalistic metaphysics.

While the Enlightenment notion of sublimity is valuable insofar as it addresses the theme of the human place in nature, it also reveals a human/nature divide in the Western tradition that has been handed down to us from antiquity. It is this ontological divide which is so problematic, and which I call the "fallacy of safe space."

To see this fallacy in the full light of day, it is useful to begin with the ancient Greeks. For them, the *polis*, the political manifestation of rationality, separated the ancient Athenians from the chaos and barbarism beyond the city wall. Socrates, in fact, claimed that he had nothing to learn from the trees and open county outside the city.[25] The idea of a human/nature divide reigned twenty centuries later when the French philosopher René Descartes asserted that his identity as a human being—the possession of an immaterial, eternal soul—had absolutely nothing to do with having a body.[26]

Prior to Judeo-Christian-Muslim monotheism and Greek rationalism, our nomadic forebears probably did not see themselves as "apart from nature." They were always *in* nature. There was no *wild* or *wilderness* from which they shrank. With the advent of agriculture, linear furrows and regular inundations must have generated a sharp contrast from famine and flood. In a sense, humans became distanced

from the rough natural vicissitudes with the advent of a sedentary lifestyle. A constellation of historical factors—agricultural, political, philosophical, religious, and so forth—converged to form the conception of human separateness from nature.

The fallacy of human separateness from nature was graphically illustrated for me when I flew to Miami from Quito, Ecuador shortly after Hurricane Andrew in 1992, and was startled by the degree to which modern buildings can take a pounding: the sturdy well-built homes of the affluent along the Atlantic coast remained intact, while entire neighborhoods of flimsy homes further inland were completely demolished. I could use this illustration to point out that, technology, in the form of building innovations, has furthered the notion of a separation between human beings and the rest of nature which extends all the way back to antiquity. Concrete, steel, and glass can withstand forces far greater than the mud and timber structures of the past. Few people wanted to live on the Florida panhandle or in the desert Southwest before the invention of air conditioning. Improved building technology has successfully distanced us from the nature's capriciousness.

At a safe distance, the wild, or wildness, is abstract. From the armchair, the image of a panther dismembering a gazelle or one hundred mile-an-hour winds pounding the coast of Florida, such shows of nature's fury are awe-inspiring, but not threatening. The concept of a safe distance is, I believe, the underpinning of what Jack Turner laments as the abstraction of the wild—"wildness objectified and filtered through concepts, theories, institutions, and technology."[27]

The wild becomes concrete when the spontaneity, power, and unpredictability of nature threatens to engulf you. In Western thought, this type of experience has also been called "the feeling of the sublime." The idea of the sublime points to the ontological reality of the human/more-than-human dynamic. Yet, as formulated by Enlightenment thinkers, sublimity falls short because it retains the protection of the possibility of "safe distance" or "safe space."

Yet not all of our beliefs fit reality. Safe physical space, the tangible, technological product of rationality, is conflated into the

concept of safe space. Once this concept works its way deep into our cultural psyche, then we are poised to posit a fundamental boundary between the humanity and rest of nature. In my own case, on that late summer day, like the gentleman surveying the vista in Casper David Friedrich's *The Wanderer*[28] (see Figure 3), I pictured myself standing on the hillside overlooking the Salt Lake Valley, viewing the tornado at a safe distance. The experience, however, had one additional, potentially tragic twist: upon realizing a funnel cloud was developing, I attempted to get a better "view," which led me directly into its path—almost fatally. The "safe distance" I thought I had—several miles—suddenly became the distance between my face and the windshield. The car protected me from the blast, but the threshold between the glass shattering or not must have been precariously thin. If the car would have been perpendicular to the blast, rather than nose-first, I'm not sure the window would have held.

As I surveyed the mayhem the tornado wrecked on this carefully manicured and well-ordered upper-class subdivision, it occurred to me that our success in increasing the amount of physical space that we can manipulate has promoted a false sense of security, a hypertrophic confidence in our inventions. This actual physical space corresponds to the socially-constructed ideal of "safe distance" or "safe space." The concept of safe space is the basis of distinguishing the human from nature—a central feature of the Western worldview.

As the tornado demonstrated, there is no such boundary, ecologically speaking. The vocabulary of our discourse on the human place in nature becomes more robust, more authentic, once this cultural fallacy is seen for what it is—a fallacy.

4. Conclusion

The aesthetic ideal of sublimity hints at the possibility of rediscovering the reaffirming the human ontological interconnectedness with nonhuman nature. My wonderment and concomitant terror of the tornado fit accorded perfectly with the idea of the sublime articulated by Burke, Kant, Wordsworth, Thoreau, and

other Enlightenment thinkers.

But the analogousness of my experience of sublimity with these authors also discloses an important disanalogy: the destructive element is not a sign of evil in the physical world, but a necessary aspect to the very creativity of nature, of evolutionary process itself, reminiscent to the intertwining of Apollonian and Dionysian elements in ancient Attic tragedy as interpreted by Nietzsche.[29]

Drawing disanalogies can be as instructive as drawing analogies. The fallacy regarding mainstream discourse on the human place in nature is that any space we are able to carve out of wild nature relies on technology, rather than citizenship in the biotic community, as Aldo Leopold (1987) would say. For Hindus, the god Shiva's dance perpetually sustains the cosmos through simultaneous destruction and creation.[30] Similarly, in the language of Western science, the same ecological processes which drive evolution by natural selection also cause extinction. As in Shiva's dance, this dual effect of natural process is inextricably interconnected. They are two manifestations of the same underlying phenomenon. The beautiful and awesome plume rotating over Salt Lake City that late summer day, with newspaper, dust, and leafy branches dancing in a Dionysian frenzy, was like Shiva—or *was* Shiva.

NOTES

[1] "O Beautiful for Spacious Skies," *New York Review of Books* (August 15, 2002): 26.

[2] McKibben, *The End of Nature*.

[3] I have adopted the phrase "more-than-human" from Abram, *The Spell of the Sensuous*.

[4] William Alder, National Weather Service, personal communication, August 1999.

[5] See Baker and Adams, "Chronology of Tornado Damage."

[6] Cassius Longinus, *On the Sublime*.

[7] Monk, *The Sublime* 63.

[8] *Natural Supernaturalism* 102.

[9] Op. cit., p. 58.

[10] See e.g. Kant, *Universal Natural History and the Theory of the Heavens* 169.

[11] Op. cit., pp. 46–47.

[12] *Observations* 48.

[13] Kant, *Critique of Judgment* 96.

[14] Kant, *Critique of Judgment* 88.

[15] Kant, *Critique of Judgment* 100.

[16] "Taste, Sublimity, and Genius" 384.

[17] *Critique of Judgment* 100-01.

[18] *The Prelude*, Book II, lines 321–30.

[19] Thoreau uses the Indian word for the Anglicized "Katahdin."

[20] See "Ktaadn," in *The Main Woods* 69–71.

[21] See *The Idea of Wilderness* 145.

[22] See Keller, "Toward a Post-Modern Environmental Philosophy" 19–30.

[23] See Foucualt, *The Order of Things* 303–43.

[24] See Cronon, "The Trouble with Wilderness," in *Uncommon Ground* 72–76.

[25] Plato, *Phaedrus* 230dff, in *Plato: The Collected Dialogues* 479.

[26] *Meditations on First Philosophy. In Descartes: Selected Philosophical Writings* 115.

[27] See *The Abstract Wild* 121.

[28] Plate 21, in Helmut Börsch-Supan, ed., *Casper David Friedrich* (New York: George Braziller, 1974) 111.

[29] In *The Birth of Tragedy*, Nietzsche writes: "The intricate relation of the Apollonian and the Dionysian in tragedy may really be symbolized by a fraternal union of the two deities: Dionysus speaks the language of Apollo; and Apollo, finally the language of Dionysus; and so the highest goal of tragedy and of all art is attained." *The Basic Writings of Nietzsche* 130.

[30] See the *Shvetashvatara Upanishad*.

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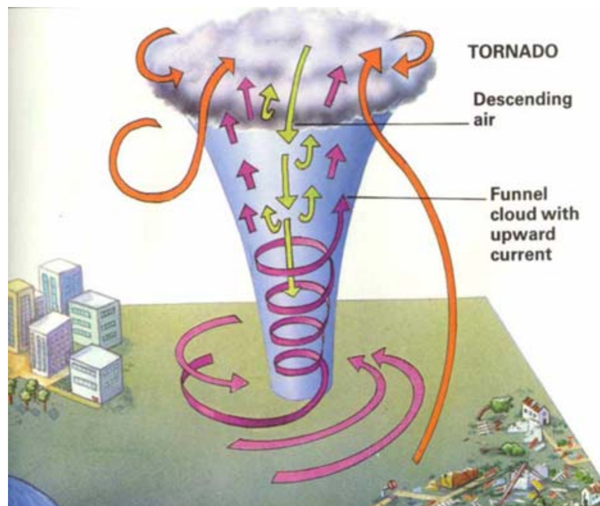
Wright, Daniel. Photograph of Salt Lake Tornado, August 11, 1999.

Figure 1

(From Wright, Photograph of Salt Lake Tornado)

Figure 2

The Physics of a Tornado



(From Muriel Martin Online)

Figure 3

Friedrich, *The Wanderer*

(From Börsch-Supan, *Casper David Friedrich*)

Table 1 The Fujita Tornado Intensity Scale

Category	Wind Speed (mph)	Damage
F0	40–72	Light
F1	73–112	Moderate
F2	113–157	Considerable
F3	158–206	Severe
F4	207–260	Devastating
F5	261–318	Incredible

(From Fujita, "Proposed Characterization of Tornadoes and Hurricanes by Area and Intensity")