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CELL PHONE TOWERS AS VISUAL POLLUTION

JOHN COPELAND NAGLE*

Granger, Indiana is a collection of residential subdivisions filled with nearly 800 cul-de-sacs. Besides those subdivisions, Granger's most prominent features are its proximity to South Bend and to the Michigan state line, its lack of any real downtown, and the precarious status of an unincorporated community of 30,000 residents who rely upon individual water wells and septic tanks.¹ Granger was also known for spotty wireless coverage when cell phones first became popular. My cell phone did not receive a signal in my Granger home, nor did most of my visitors whose phones were serviced by other providers. So I was pleased to learn that a new cell phone tower was planned for a vacant field about one mile from my home. Then I checked my mailbox one day and found a bright pink flyer that objected to the proposed tower as "visual pollution." Most of my neighbors felt the same way, as demonstrated by the 1,135 residents who signed a petition against the tower. Another resident reported that she had abandoned plans to build a deck on the back of her house because she did not want to look at a tower. "View is everything," said one neighbor, "and a tower kills the view." Heeding these complaints, the county council repeatedly voted to deny the necessary permits.²

These stories can be multiplied across the country. Indeed, they have been, as local newspaper accounts and the reports of litigated disputes attest. There are now about 200,000 cell sites (including both tow-

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1. The origin of Granger's name is contested, with one view citing the name of the grange farm movement of the late nineteenth century (when Granger was founded) and the alternative view crediting Father Alexis Granger, the priest who operated a farm in the area beginning in 1867. See Carol Draeger, *Where (and What) is Granger?: Not a City or Village, ZIP Code 46530 is Michiana's Own "Beverly Hills 90210"—A State of Being, So to Speak*, SOUTH BEND TRIB., July 22, 2001, at A1.

2. See Carol Elliott, *Can You Hear Them Now? Poses of Wireless Technicians Patrol the Roads to Improve Cell Phone Reception*, SOUTH BEND TRIB., Nov. 28, 2004, at B1; Don Porter, *Communications Towers Sprouting Up All Over: "Visual Pollution" Could Be Result in Residential Areas*, SOUTH BEND TRIB., June 30, 1997, at B1; Don Porter, *Will Granger Accept Another Tower?*, SOUTH BEND TRIB., June 11, 2003, at A1; James Wensits, *County Council Denies Cell Phone Tower Plea; Granger Foes Mount Strong Opposition*, SOUTH BEND TRIB., Feb. 11, 2004, at A1; James Wensits, *New Location But Same Question; Cell Tower Site Still Sought to Serve Granger Area*, SOUTH BEND TRIB., Jan. 30, 2004, at A1; James Wensits, *Tower Plan Wilts Under Pressure; Council Rejects Site Near Knollwood*, SOUTH BEND TRIB., June 11, 2003, at A1.

ers and antennas attached to existing structures) to accommodate the exponential increase in the use of wireless communication devices. Yet residents repeatedly object to the environmental, health, safety, and especially aesthetic harms of cell phone towers, which in turn lead to claims of reduced property values. As National Public Radio's Noah Adams reported in November 2004, "Americans everywhere from Manhattan to Hollywood take their cell phones for granted, but in many parts of the country where scenery is cherished, cell phone towers have been called visual pollution."³

Cell phone towers are just the most recent target of visual pollution complaints. The term visual pollution has been used by courts, academics, and environmental groups to explain their distaste for ugly buildings, telephone towers, billboards, flags and signs, and numerous other images that have been derided as polluting the visual landscape.⁴ As Chief Jus-

3. *Day to Day: Squaring off Over "Frankenpines" in the Adirondacks* (NPR radio broadcast Nov. 22, 2004), available at <http://www.npr.org/templates/story/story.php?storyId=4182101>. For additional descriptions of cell phone towers as visual pollution, see *AT&T Wireless PCS, Inc. v. City Council of Va. Beach*, 155 F.3d 423, 427 (4th Cir. 1998); *Avoid Cell Tower Pollution*, CHATTANOOGA TIMES FREE PRESS, May 30, 2007, at B7; Eric Peterson, *Silo to Hide Cellular Tower, Schaumburg OK's Church's Request*, DAILY HERALD, Aug. 11, 2004, at 1; Richard Quinn, *New Cell Towers, Public Protests Rising Together*, VIRGINIAN-PILOT [NORFOLK, VA.], Oct. 7, 2007, at B1; *Visual Pollution*, BURLINGTON FREE PRESS [VT.], Feb. 23, 2003, at 10A; *The Early Show: Cell Phone Towers in Disguise* (CBS television broadcast Nov. 29, 2006), available at http://www.cbsnews.com/video/watch/?id=2214391n%3fsource=search_video; ScenicNevada.org, *Taming Wireless Telecommunications Towers*, <http://www.scenicnevada.org/main/towers.html>.

4. For judicial references to visual pollution, see, e.g., *Ballen v. City of Redmond*, 466 F.3d 736, 744 (9th Cir. 2006) (billboards); *Shivwits Band of Paiute Indians v. Utah*, 428 F.3d 966, 983 (10th Cir. 2005) (billboards); *Cleveland Area Bd. of Realtors v. City of Euclid*, 88 F.3d 382, 384 (6th Cir. 1996) (residential signs); *Kramer v. Gov't of V.I.*, 479 F.2d 350, 352 (3d Cir. 1973) (drive-in theater); *Lamar Adver. Co. v. Twp. of Elmira*, 328 F. Supp. 2d 725, 729 (E.D. Mich. 2004) (billboards); *People v. Amerada Hess Corp.*, 765 N.Y.S.2d 202, 205 (N.Y. Dist. Ct. 2003) (gas stations); *Blue Legs v. EPA*, 732 F. Supp. 81, 83 (D.S.D. 1990) (waste dumps); *State v. Watson*, 6 P.3d 752, 758 (Ariz. Ct. App. 2000) (trash); *Stearn v. County of San Bernardino*, 170 Cal. App. 4th 434 (Cal. Ct. App. 2009) (billboards); *Am. Nat'l Bank & Trust Co. v. City of Chi.*, 568 N.E.2d 25, 35-36 (Ill. App. Ct. 1990) (building that blocked view); *Mayor & City Council of Balt. v. Mano Swartz, Inc.*, 299 A.2d 828, 833 (Md. 1973) (billboards); *John Donnelly & Sons, Inc. v. Outdoor Adver. Bd.*, 339 N.E.2d 709, 718 (Mass. 1975) (billboards); *Mtn. Cmty. for Responsible Energy v. Pub. Serv. Comm.*, 665 S.E.2d 315, 329 (W. Va. 2008) (affirming an administrative decision allowing the construction of 124 wind turbines because "[s]ome people consider them eyesores they do not want in their backyards. Others consider them elegant or beautiful.").

For some of the other references to visual pollution, see Final National Pollutant Discharge Elimination System (NPDES) General Permits for the Eastern Portion of Outer Continental Shelf (OCS) of the Gulf of Mexico (GMG280000) and Record of Decision, 63 Fed. Reg. 55,718, 55,722 (Oct. 16, 1998) (noting that an Alabama coastal city had complained that offshore drilling structures constituted visual pollution); Sunrise Powerlink Project: Final EIR/EIS 3-1663 (Oct. 2008) (comment from the Sierra Club

tice Burger once wrote, “[E]very large billboard adversely affects the environment, for each destroys a unique perspective on the landscape and adds to the visual pollution of the city. Pollution is not limited to the air we breathe and the water we drink; it can equally offend the eye and the ear.”⁵

Visual pollution is a fascinating example of pollution. Ordinarily, we associate pollution with air pollution, water pollution, and hazardous wastes. But we also worry about hostile work environments “polluted” by discrimination, claims of cultural pollution leveled against violent entertainment and internet pornography, and political processes polluted by excessive campaign spending. As I have argued elsewhere, a wide range of pollution claims have long appeared in the law and literature, with the idea of moral pollution preceding the contemporary understanding of pollution as a uniquely environmental phenomenon.⁶ Some of these other pollution claims persist, as evidenced by the kinds of pollution discussed in legal and political debates and by the continuing role that pollution plays in academic writing about anthropology.⁷

Offensive sights fit within this broader understanding of pollution. These offensive sights are polluting agents because their appearance is found objectionable. A polluting agent is placed into the environment by a sign, a tower, a building, or a disorganized pile of materials. The affected environment is the heretofore uncluttered outdoor landscape. The most common harm associated with visual pollution is the annoyance resulting from the perception of something that is judged unsightly. That is not the only harm, though. Signs, communications towers, and discarded cars have all been blamed for reducing property values and inhibiting the enjoyment of neighboring property. Aesthetic concerns have also been linked to human health and blamed for depriving landowners of the cultural identity of their neighborhood. Billboards have been accused of distracting drivers, degrading public taste, encouraging

Visual Pollution Task Force objecting to “visual pollution and visual impacts of the 150 miles of 160 foot-tall and 65 foot-wide transmission towers covering some of San Diego’s formerly most scenic parks and neighbourhoods”); Harvey K. Flad, *Country Clutter: Visual Pollution and the Rural Landscape*, 553 ANNALS AM. ACAD. POL. & SOC. SCI. 117 (1997); Lesley K. McAllister, *Revisiting a “Promising Institution”: Public Law Litigation in the Civil Law World*, 24 GA. ST. U. L. REV. 693, 730 (2008) (noting that Brazilian prosecutors regarded the reduction of visual pollution as one of their six priority areas); Peter J. Howe, *Storefront Tobacco Ads Said to Target Students*, BOSTON GLOBE, Sept. 11, 1998, at B2 (cigarette advertisements).

5. *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490, 560–61 (1980) (Burger, C.J., dissenting).

6. See John Copeland Nagle, *The Idea of Pollution*, 43 U.C. DAVIS L. REV. ___ (forthcoming 2009).

7. See *id.* The classic work on pollution as an anthropological concept is MARY DOUGLAS, *PURITY AND DANGER: AN ANALYSIS OF CONCEPTS OF POLLUTION AND TABOO* (1966).

needless consumption, and desecrating the landscape. Billboards also illustrate the cumulative nature of visual pollution, for the sight of a solitary billboard proves much less objectionable than a highway that is filled with them. Visual pollution rarely results from a purposeful effort to offend the aesthetic sensibilities of others, though the person or organization that introduces the sight to the landscape may expect that the sensibilities of many viewers will be offended.

Visual pollution also illustrates the three ways of responding to pollution. Toleration is the initial response. Toleration is championed by First Amendment scholars as the appropriate response to claims of cultural pollution resulting from violent entertainment and internet pornography (though not the appropriate response for hostile work environments). The idea of tolerating pollution may seem foreign to environmental law, but in fact many environmental laws prescribe the tolerable amount of air or water pollution, or they establish the permissible tolerances for pesticides. Prevention is the second response to pollution. Here the goal is to altogether eliminate pollution by preventing it from occurring. The Pollution Prevention Act states the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible.⁸ The act establishes a program for achieving that goal, but it is generally understood that zero pollution is a goal our society has so far been unwilling to pay to achieve. So the most common response to pollution is avoidance. The law variously encourages dilution, filtering, separating pollution and its victims, and the treatment and removal of pollution as methods to reduce the harms resulting from exposure to pollution.⁹

This Essay seeks to analyze the idea of visual pollution in the context of cell phone towers. Part I provides a general description of the nature of, and responses to, visual pollution. Part II examines the debate concerning the aesthetics of cell phone towers, which pits affected residents against cellular providers, with local governments exercising their traditional powers of land use regulation while being constrained by a federal law designed to promote wireless services. Part III reflects on the lessons that the idea of pollution offers for controversies regarding cell

8. 42 U.S.C. § 13101(b) (2000). Pollution prevention also appears in other federal statutes. A primary goal of the Clean Air Act (CAA) is to encourage or otherwise promote reasonable actions for pollution prevention. 42 U.S.C. § 7401(c) (2000). The Clean Water Act (CWA) supports activities and programs for the prevention, reduction, and elimination of pollution. 33 U.S.C. §§ 1253(a), 1254(a) (2000). The Resource Conservation and Recovery Act declares that wherever feasible, the generation of hazardous wastes is to be reduced or eliminated as expeditiously as possible. 42 U.S.C. § 6902(b) (2000).

9. See generally John Copeland Nagle, *The Three Responses to Pollution* (Mar. 2009) (unpublished manuscript, on file with author).

phone towers, and the lessons that the cell phone tower controversies offer for understanding pollution in other contexts.

I. VISUAL POLLUTION

The first reported case to acknowledge “visual pollution” rejected a challenge to a gas station to be located in the downtown shopping area of a Detroit suburb.¹⁰ Two years later, the same court upheld another Detroit suburb’s rejection of a proposed high-rise sign to advertise another gas station located along Interstate 75. The court enthusiastically embraced municipal aesthetic regulation:

The modern trend is to recognize that a community’s aesthetic well-being can contribute to urban man’s psychological and emotional stability. It is true that the question of what is beautiful and pleasing is for each individual to decide. We should begin to realize, however, that a visually satisfying city can stimulate an identity and pride which is the foundation for social responsibility and citizenship. These are proper concerns of the general welfare. Yellin, *Visual Pollution and Aesthetic Regulation*, 12 *The Municipal Attorney* 186 (1971). Madison Heights has determined that its citizens’ well-being will be served best by preventing the visual pollution which occurs when high-rise signs dot major thoroughfares. It has sought to do this by limiting the height of free-standing signs within its boundaries.

The use of such signs for advertising purposes is often done with little regard for their natural or man-made environment. Their garishness often intrudes on a citizen’s visual senses. Property owners do have the right to put their property to profitable use. But, we do not think that the right to advertise a business is such that a businessman may appropriate common airspace and destroy common vistas. Nor do we believe that the right to advertise a business means the right to interfere with the landscape and the views along public thoroughfares.¹¹

The concurring judge warned, however, that “[w]e will all live to rue the day that public officials are permitted to meddle in private affairs on aesthetic considerations since . . . each person has his own yardstick for the evaluation of matters aesthetic.”¹²

10. *Pure Oil Div. of Union Oil Co. of Cal. v. City of Northville*, 183 N.W.2d 303, 304 (Mich. Ct. App. 1970). The suburb’s website now boasts of the “charming and relaxed setting of downtown Northville.” *Northville Downtown!*, <http://downtownnorthville.org/>.

11. *Sun Oil Co. v. City of Madison Heights*, 199 N.W.2d 525, 529 (Mich. Ct. App. 1972).

12. *Id.* at 530 (Targonski, J., concurring in the result).

Of course, the law struggled with aesthetic concerns long before the term visual pollution was coined. Traditionally, aesthetic complaints were insufficient to establish a nuisance. As Horace Wood's treatise explained over a century ago, "[T]he law will not declare a thing a nuisance because it is unpleasant to the eye."¹³ The courts repeatedly rejected assertions that aesthetic objections to junk yards, fences, and other things as unsightly rendered those objects a nuisance.¹⁴ The basis for those decisions was the reluctance of courts to find that offenses to one's sense of aesthetics constituted an injury that could be remedied by the courts.¹⁵

"The cases rejecting aesthetic nuisances are now in tension with other areas of the law. Aesthetic concerns were once held insufficient to support zoning laws, but the modern trend is to uphold zoning conducted for aesthetic purposes."¹⁶ Other areas of the law now accept aesthetic concerns as a valid purpose, too.¹⁷ Moreover, several academic commentators have favored the acceptance of aesthetic nuisance cases. Raymond Coletta has argued that "it seems somewhat incongruous to allow individuals redress for offenses to their senses of hearing and smell, but at the same time to deny them a remedy for offenses to their sense of sight."¹⁸

13. HORACE G. WOOD, *A PRACTICAL TREATISE ON THE LAW OF NUISANCES IN THEIR VARIOUS FORMS; INCLUDING REMEDIES THEREFOR AT LAW AND IN EQUITY* 24 (3d ed. 1893); see also DAN B. DOBBS, *THE LAW OF TORTS* 1331 (2000) ("[B]ecause tastes differ and criteria for aesthetic judgment are deemed unreliable, courts have been reluctant to say that an inappropriate and ugly sight can be a nuisance."); W. PAGE KEETON ET AL., *PROSSER & KEETON ON THE LAW OF TORTS* 626 & n.3 (5th ed. 1984) (indicating that "mere unsightliness" does not constitute a nuisance, but that "aesthetic considerations . . . play an important part in determining reasonable use"); John Copeland Nagle, *Moral Nuisances*, 50 EMORY L.J. 265 (2001) (discussing the application of nuisance law to aesthetic harms).

14. See, e.g., *Bixby v. Cravens*, 156 P. 1184, 1187 (Okla. 1917) (holding that an unsightly fence did not constitute a nuisance because landowners are "not compelled to consult the 'aesthetic taste' of their neighbors" when building a fence); *Mathewson v. Primeau*, 395 P.2d 183, 189 (Wash. 1964) (holding that the unsightliness of a pig farm did not create a nuisance); *State Rd. Comm'n of W. Va. v. Oakes*, 149 S.E.2d 293, 300 (W. Va. 1966) (rejecting a nuisance claim against the storage of rubbish near a road).

15. See generally Raymond Robert Coletta, *The Case of Aesthetic Nuisance: Rethinking Traditional Judicial Attitudes*, 48 OHIO ST. L.J. 141, 145-48 (1987) (explaining that courts refused to find a nuisance based on mere unsightliness because of the belief that aesthetic harms are subjective and de minimis).

16. Nagle, *supra* note 13, at 286.

17. See, e.g., *Berman v. Parker*, 348 U.S. 26, 36 (1954) (holding that aesthetic concerns can justify a use of the government's eminent domain power). See generally Coletta, *supra* note 15, at 159 & n.111 (citing cases illustrating that "many federal and state courts have upheld a wide variety of aesthetically oriented regulations" since *Berman*).

18. Coletta, *supra* note 15, at 165-66. Coletta adds that "there is no physiological reason for treating visual perceptions any differently from noise or smell." *Id.* at 166.

These arguments have resulted in increasing judicial acceptance of aesthetic nuisance claims. The cases also contain novel assertions of the harm caused by unsightly activities on a neighbor's property. One landowner, for example, asserted that the view of wrecked cars on a neighbor's lot made him self-conscious and unwilling to invite friends over for cookouts.¹⁹ Yet the reluctance to rely upon unsightliness as an injury giving rise to a nuisance still endures in some courts.²⁰ Today most courts agree that a nuisance claim can rest on either aesthetic concerns themselves, or the decreased property value associated with unpleasant aesthetics. But aesthetic nuisance claims remain rare compared to the ubiquity of zoning provisions governing appearances.

Zoning law now provides the primary means for regulating visual pollution. Local ordinances prescribe the acceptable colors, architectural styles, sizes, location, and variety of buildings and other structures constructed within communities throughout the United States. The other source of legal regulation of visual pollution is contained in statutes specifically designed to preserve the aesthetic appeal of certain places. For example, federal and state law designate particular rivers, highways, and communities as "scenic" and thus entitled to protection against any structures or other sights that would impair the visual quality of that environment.

Many laws, and many claims of visual pollution, target billboards. "Billboards erode the quality of life," claimed one scenic advocacy organization. "They pollute our landscape, destroy our historic, cultural, and natural diversity, and undermine America's heritage and sense of place."²¹ It took a while for that view to take hold, and even longer for the law to accept it. Consider the concerns articulated by a Maryland court in 1973:

The effort to eliminate what was referred to in argument before us as "visual pollution" by controlling signs and billboards through the exercise of the zoning power has been slowly developing. The

19. *Foley v. Harris*, 286 S.E.2d 186, 188 (Va. 1982).

20. *See, e.g., Oklejas v. Williams*, 302 S.E.2d 110, 111 (Ga. Ct. App. 1983) (rejecting the claim that the unsightliness of a wall constituted a nuisance); *Carroll v. Hurst*, 431 N.E.2d 1344, 1349 (Ill. App. Ct. 1982) (rejecting the claim that a junkyard and salvage operation constituted a nuisance because "[n]o testimony was given that defendant's use of his land created an unsightly view; indeed, under Illinois law, a landowner does not have a right to a pleasing view of his neighbor's land"); *Ness v. Albert*, 665 S.W.2d 1, 2 (Mo. Ct. App. 1983) (holding that the presence of several dilapidated appliances and other refuse was not a nuisance because of the subjective nature of aesthetic considerations).

21. 132 CONG. REC. S13509 (daily ed. Sept. 24, 1986) (remarks of Sen. Stafford) (introducing materials from the Coalition on Scenic Beauty). Bill Bryson had a different impression during his travels throughout the United States. *See* BILL BRYSON, *THE LOST CONTINENT: TRAVELS IN SMALL-TOWN AMERICA* 49 (1990) ("[I]n the lonesome heartlands billboards were practically a public service.").

principal difficulty is that other forms of pollution, stench and noise and the like, can be measured by more nearly objective standards. If beauty, however, lies in the eyes of the beholder, so does the tawdry, the gaudy and the vulgar—and courts have traditionally taken a gingerly approach to legislation which circumscribes property rights by applying what amount to subjective standards, which may well be those of an idiosyncratic group.²²

Gradually, legislatures and courts became more accepting of billboard regulations. The federal Highway Beautification Act restricts the placement of billboards and other signs near interstate highways.²³ That 1965 law resulted from a campaign led by Lady Bird Johnson, and upon signing the statute, her husband Lyndon proclaimed that “[b]eauty belongs to all the people. And as long as I am President, what has been divinely given to nature will not be taken recklessly away by man.”²⁴ The Visual Pollution Control Act of 1990 would have further regulated billboards, though Congress declined to enact that law.²⁵ The regulation of billboards raises First Amendment issues because billboards contain speech, and much of the recent litigation has considered whether local regulations of billboards comply with the First Amendment’s standards.²⁶

This approach is seen in earlier efforts to address the aesthetic concerns of towers. “It is always interesting to observe the manner in which the courts deal with new inventions and apply old principles of law to new conditions.” That statement could summarize the reaction to the law governing cell phone towers, but it actually appeared in Edward Quinton Keasbey’s 1900 treatise entitled *The Law of Electric Wires in Streets and Highways*.²⁷ Telephone poles and wires, electric poles and wires, and trolley wires were all the subject of complaints—and litigation—concerning their aesthetic impacts. Or, as Keasbey put it, “a line of posts and wires often spoils the appearance of a pretty place.”²⁸

22. *Mayor & City Council of Balt. v. Mano Swartz, Inc.*, 299 A.2d 828, 833 (Md. 1973).

23. 23 U.S.C. § 131 (2000).

24. Lyndon B. Johnson, Remarks at the Signing of the Highway Beautification Act of 1965 (October 22, 1965), in *AMERICAN EARTH: ENVIRONMENTAL WRITING SINCE THOREAU* 398 (Bill McKibben ed., 2008); see also Flad, *supra* note 4, at 125 (referring to “the Highway Beautification Act, which was specifically enacted to curtail visual pollution along roadways”).

25. Visual Pollution Control Act of 1990, S. 2500, 101st Cong. (1990).

26. See, e.g., *Outdoor Media Group, Inc. v. City of Beaumont*, 506 F.3d 895 (9th Cir. 2007) (describing the First Amendment standards applicable to billboard ordinances).

27. EDWARD QUINTON KEASBEY, *THE LAW OF ELECTRIC WIRES IN STREETS AND HIGHWAYS* vii (1900).

28. *Id.* at 108. Keasbey also noted that “there are few, if any, decisions” involving telegraph lines before 1883 even though that technology had been employed since the 1840s. *Id.* at 97.

Telephone and electric systems were installed by public utilities that possessed the power of eminent domain. That allowed the utilities to decide where to locate their poles and wires. Some landowners tried to block the installation of unsightly poles and wires on their property, but the courts usually found that the placement was incident to the existing street or utility easements or otherwise authorized.²⁹ More litigation concerned the proper measure of compensation owed to those whose property was taken for the new systems. Specifically, numerous courts considered whether the aesthetic harm of the pole and wires was a compensable harm. The courts reached differing results.³⁰ Some courts held that the reduction in property value attributable to the unsightliness of the poles and wires was compensable.³¹ Other courts held the oppo-

29. See, e.g., *Palmer v. Larchmont Elec. Co.*, 52 N.E. 1092, 1095 (N.Y. 1899) (noting that “[i]t may be that some prejudice exists against wires strung on unsightly poles,” but holding that the town was authorized to build them pursuant to the earlier construction of a highway); *Dayton v. City Ry. Co.*, 12 Ohio Dec. 258, 285 (Ohio Ct. Com. Pl. 1902) (“With rare unanimity the courts have concurred in holding that an electric street railway . . . is not an additional servitude upon the fee within the streets, but a legitimate use of the streets within the original general purpose of their dedication.”); *Pelton v. E. Cleveland R.R. Co.*, 10 Dec. Reprint 545, 1889 WL 352, at *7 (Ohio Ct. Com. Pl. 1889) (admitting that electric trolley wires and poles “add nothing to the beauty of the street,” but adding that “[o]ne of these poles is no more of an obstruction than a lamp post or an electric light post”). *But see* *Donovan v. Allert*, 91 N.W. 441 (N.D. 1902) (holding that a telephone company had not acquired the right to erect unsightly telephone poles on the plaintiff’s property); *Krueger v. Wis. Tel. Co.*, 81 N.W. 1041 (Wis. 1900) (holding that the placement of a telephone pole is a new servitude). See generally KEASBEY, *supra* note 27, at 110–11 (summarizing the arguments on both sides).

30. *Kamo Elec. Coop. v. Cushard*, 416 S.W.2d 646, 651–55 (Mo. Ct. App. 1967) (discussing many of the cases on both sides and concluding that “the trend of authority is presently inclined to the view that the disfigurement of farms by unsightly power lines is a compensable element of damage”).

31. See *Bd. of Trade Tel. Co. v. Darst*, 61 N.E. 398, 399 (Ill. 1901) (holding that the damage suffered by the property owner due to the unsightliness of the telegraph poles or structure was a proper element of his damages for loss of value to his property); *Cushard*, 416 S.W.2d at 648–50 (upholding a \$5,000 compensation award where about half of the damages were attributed to the aesthetic loss); *Union Elec. Co. v. Simpson*, 371 S.W.2d 673, 681 (Mo. Ct. App. 1963) (holding that jury allowed to consider any effect that the power lines would have had on value of owner’s land, and thus allowed to consider that line would be unsightly); *Wadsworth Land Co. v. Charlotte Elec. Co.*, 88 S.E. 439, 440–41 (N.C. 1915) (holding that unsightliness of trolley wires and poles was a consideration in the depreciation in value of property); *Ohio Pub. Serv. Co. v. Dehring*, 172 N.E. 448, 449 (Ohio Ct. App. 1929) (holding that the unsightliness of towers and transmission lines may be considered in determining damages); *Anderson v. Phila. Elec. Co.*, 2 Pa. D. & C.2d 709, 713 (Pa. Ct. Com. Pl. 1953) (allowing compensation for the presence of the poles, though not merely their unsightliness); *Sw. Tel. & Tel. Co. v. Smithdeal*, 136 S.W. 1049 (Tex. 1911) (owner allowed to recover for loss of value to property for unsightly wires and poles); *Tex. Power & Light Co. v. Jones*, 293 S.W. 885, 886–87 (Tex. Civ. App. 1927) (owner could recover for damages caused to property because power lines are unsightly).

site.³² The Mississippi Supreme Court, for example, refused to compensate the residents of Bay St. Louis who complained that electric poles and wires interfered with their view of the Gulf of Mexico:

It is said the poles and wires of appellant are unsightly, and are a disfigurement to the property, and an especial injury in that it obstructs the open view of the sea. Similar erections in all cities and towns present, though perhaps in a less degree, like inconveniences to the owners of palatial residences, but disfigurements of this kind to property are not the subjects of compensation, or, if so, they are conclusively presumed to have been paid for upon the opening of the street and its dedication to public use.³³

Another court even contended that “[s]ince the advent of rural electrification, many farms have transmission lines traversing them and instead of being unsightly, many prospective buyers of farms regard them as evidence that an abundance of electric power is manifest.”³⁴

Several property owners claimed that the aesthetic harms produced by telephone or electric systems constituted a nuisance. In 1881, the New York Attorney General filed a nuisance suit against “huge telegraph poles, of a size and clumsiness such as has been rarely seen outside of the Maine woods in which they got their growth.”³⁵ One Louisiana court ordered the removal of ten-foot posts that were “unsightly, interfere with and are a menace to the full and free use of the sidewalk and prevent the planting of trees and grass” by the sidewalk.³⁶ But most courts refused to hold that the unsightliness of the poles or wires resulted in a nuisance.³⁷

Detroit residents took a different approach. When the city authorized a new electric street railway system, the neighbors “cut[] down the poles, and threatened to continue to do so.”³⁸ The railway then sought an injunction against the actions of the neighbors. The Michigan

32. See *Ill. Power & Light Corp. v. Barnett*, 170 N.E. 717, 719 (Ill. 1930) (holding that unsightliness of towers is not a proper element of damage to land); *Ill. Power Co. v. Wieland*, 155 N.E. 272, 274 (Ill. 1927) (holding unsightliness of poles for electric wires is not a proper element of damage); *Kamo Elec. Coop. v. Brooks*, 337 S.W.2d. 444, 451 (Mo. Ct. App. 1960) (denying compensation for aesthetic harms but suggesting that it might be forthcoming if the property hosted “an amusement park, cemetery, campus, institutional grounds, club grounds, school or hospital lawns, garden or a beautified estate, or the like”); *Shinzel v. Bell Tel. Co. of Phila.*, 31 Pa. Super. 221, 226 (Pa. Super. Ct. 1906) (unsightliness of poles do not constitute a special injury for which damages can be recovered).

33. *Gulf Coast Ice Mfg. Co. v. Bowers*, 32 So. 113, 114 (Miss. 1902).

34. *Salt River Rural Elec. Coop. v. Thurman*, 275 S.W.2d 780, 782 (Ky. 1955).

35. *The Unsightly Telegraph Poles. Suit by the Attorney-General to Remove the Pine-Street Obstructions*, N.Y. TIMES, Mar. 1, 1881, at 3 (referring to the telegraph poles as “these huge, ugly excrescences”).

36. *Viering v. N.K. Fairbanks Co.*, 14 Teiss. 130, 1916 WL 1706, at *2 (La. Ct. App. 1917).

37. See *City of Passaic v. Pub. Serv. Corp. of N.J.*, 73 A. 122 (N.J. Ch. 1909).

38. *Detroit City Ry. v. Mills*, 48 N.W. 1007, 1008 (Mich. 1891).

Supreme Court approved the requested remedy, albeit by a 3–2 vote. The majority was dismissive of the neighbors' aesthetic complaints about the poles: "If it be said they are unsightly, and therefore offend his taste, it can well be replied that they are no more so than the lamp-post or the electric tower."³⁹ One dissenter responded that "poles may be so thickly planted along our sidewalks as even to exclude light and air from our dwellings, and yet we shall have no remedy."⁴⁰

Over time, municipalities began to object to the aesthetics of telephone and electric poles and wires. They enacted prohibitions against such poles and wires or required them to be located in less intrusive places.⁴¹ The utilities objected to those laws, and more litigation resulted.⁴² Sometimes the courts forced the use of underground wires themselves. In 1894, for example, a local court held that "[t]he city of Cleveland should maintain its wires in conduits underground" because the "large and unsightly poles erected . . . in front of the residences of the plaintiffs, thus marring and in a measure destroying the beauty of a beautiful avenue," was not a reasonable exercise of the city's authority.⁴³ Eventually, technological developments helped the aesthetic cause. Once underground wires became available, cities and courts required them instead of the objectionable above-ground systems.⁴⁴

39. *Id.* at 1012.

40. *Id.* at 1018 (Morse, J., dissenting).

41. See generally KEASBEY, *supra* note 27, at 57–58 (summarizing the municipal power to regulate poles and wires).

42. See *Vill. of Jonesville v. S. Mich. Tele. Co.*, 118 N.W. 736 (Mich. 1908); *City of Plattsmouth v. Neb. Tel. Co.*, 114 N.W. 588, 591 (Neb. 1908) (holding that a city ordinance requiring underground wires exceeded the government's police power); *Castle v. Bell Tel. Co. of Buffalo*, 61 N.Y.S. 743, 745–46 (N.Y. Sup. Ct. 1899) (concluding that "public and private interests would be greatly promoted by" requiring underground wires instead of "unsightly telephone and telegraph poles"); *Am. Rapid Tel. Co. v. Hess*, 12 N.Y.S. 536 (N.Y. Gen. Term 1890) (upholding a New York City ordinance requiring the removal of unsightly telegraph poles and wires and their replacement underground); *Duq. Light Co. v. City of Pitt.*, 97 A. 85, 89 (Pa. 1916) (sustaining a Pittsburgh ordinance requiring underground wires to avoid "the unsightly disfigurement of the streets"); *Appeal of Bell Tel. Co.*, 10 A.2d 817, 820 (Pa. Super. Ct. 1940) (noting that "[t]he esthetic features are not to be entirely ignored" in upholding a borough ordinance requiring underground wires); see also *Mut. Union Tel. Co. v. City of Chi.*, 16 F. 309, 315 (C.C. N.D. Ill. 1883) (opining "[t]here must be a power, I think, somewhere" for city authorities to remove and "put an end to such unsightly obstructions as these [telegraph] poles and wires [that] are now in our streets"); *Greenville Gas, Elec. Light, Power & Fuel Co. v. City of Greenville*, 130 N.W. 333, 334 (Mich. 1911) (describing a city ordinance prohibiting overhead electric wires and poles because they were unsightly).

43. *Prentiss v. Cleveland Tel. Co.*, 1 Ohio Dec. 79, 1894 WL 1374, at *2–*3 (Ohio Ct. Com. Pl. 1894).

44. See *City of Monroe v. Postal Tel. Co.*, 162 N.W. 76 (Mich. 1917) (upholding a city ordinance requiring telegraph wires to be removed from poles and placed underground).

II. CELL PHONE TOWERS

Motorola's Martin Cooper is credited with inventing the first portable telephone in 1973.⁴⁵ A trial of the first cellular system linked 2,000 customers in Chicago in 1978.⁴⁶ Since then, the number of cell phones has increased dramatically to 34 million in 1995, 159 million in 2004, and now 270 million.⁴⁷

Cell phones and other personal wireless services depend on the transmission of radio signals. The easiest—and cheapest—way to transmit those signals is from antennas that are placed on towers. The antennas must be placed on high towers because wireless technology is relatively low-powered and requires a line-of-sight to the next tower. Coverage within an area is maintained by arranging antennas in a honeycomb-shaped grid, from which the term “cell” originates. A phone call is transferred from one tower's coverage area to another as a phone user travels. Providers want to increase the number of cells and decrease the geographic coverage of each cell in order to increase the quality of service and therefore attract subscribers. The coverage area of each cell determines the most desirable tower locations. Antennas may be located on existing towers, light poles, or roof tops in urban areas, but new towers must be built outside of cities in order to achieve continuous wireless service. Additionally, towers are expensive, so providers have an incentive to build as few as possible.⁴⁸

Several harms are attributed to cell phone towers, including health impacts from electromagnetic fields, safety, harm to wildlife, and loss of property value. The most common complaint is aesthetic. As one court observed, “Few people would argue that telecommunications towers are aesthetically pleasing.”⁴⁹ Many people object to the sight of a tower or to

45. See Mary Bellis, *Selling the Cell Phone: Part 1: History of Cellular Phones*, <http://inventors.about.com/library/weekly/aa070899.htm>.

46. See *id.*; Thomas A. Wikle, *Cellular Tower Proliferation in the United States*, 92 GEOGRAPHICAL REV. 45, 49 (2002).

47. See U.S. CENSUS BUREAU, THE 2009 STATISTICAL ABSTRACT: THE NATIONAL BOOK tbl.1112 (2008), <http://www.census.gov/compendia/statab/tables/09s1112.pdf>; Wikle, *supra* note 46, at 47; Associated Press, *Group: Ban All Cell-Phone Use by Drivers*, CHI. TRIB., Jan. 12, 2009, at A3 (reporting that there are 270 million cell phone users in the United States).

48. For the basics of cell phone technology, see, e.g., Wikle, *supra* note 46, at 54; see also *Voice Stream PCS I, LLC v. City of Hillsboro*, 301 F. Supp. 2d 1251 (D. Or. 2004); David W. Hughes, *When NIMBY's Attack: The Heights to Which Communities Will Climb to Prevent the Siting of Wireless Towers*, 23 J. CORP. L. 469, 478–86 (1998).

49. *Sw. Bell Mobile Sys. v. Todd*, 244 F.3d 51, 61 (1st Cir. 2001); see also *Am. Bird Conservancy v. Fed. Commc'ns Comm'n*, 545 F.3d 1190, 1195 (9th Cir. 2008) (dismissing a lawsuit alleging that cell phone towers were killing endangered Hawaiian petrel and Newall's shearwaters); *PrimeCo Pers. Commc'ns, Ltd. P'ship v. City of Mequon*, 352 F.3d 1147, 1149 (7th Cir. 2003) (“The unsightliness of the antenna and the adverse effect on property values that is caused by its unsightliness are the most common concerns,” while environmental and safety effects are sometimes cited as well.).

a tower's interference with their preexisting view. But it is hard to be too precise about the nature of the aesthetic harm. The most common complaint is that cell phone towers are so different—and taller—than other features of the landscape. The emphasis upon the contrast between a tower and the existing landscape makes the harm depend upon where a tower is located. Commercial districts and areas with tall buildings or other structures are generally regarded as places where the aesthetic impact of a cell phone tower is least, while the harm is greatest in residential communities, historic sites, parks, forests, hillsides, or wilderness areas. Some observers have also cited the metallic character of most towers as producing an industrial or even “intergalactic” appearance.⁵⁰

Cellular providers do not enjoy the power of eminent domain, unlike the utilities that built telephone and electric systems a century ago. Instead, cell phone providers must persuade—and pay—private or public landowners to allow a tower on their property. That makes the paid property owner happy, but it leaves the neighboring individuals and businesses to suffer the externality—the pollution—of the aesthetic harms. Those neighbors often turn to their local governments, who have become adept at employing zoning law and other regulations to achieve aesthetic ends. The efforts to combat the aesthetic harms mirror the efforts to combat other types of pollution, though with some unique twists.

A. *Responding to the Visual Pollution of Cell Phone Towers*

Recall the three responses to pollution claims: tolerance, prevention, and avoidance.⁵¹ Tolerance is an obvious response to the presence of cell phone towers. Aesthetic harms are real, but they are perhaps the least serious and most subjective of all of the harms associated with pollution claims. An ugly cell phone tower does not expose people or wildlife nearby to any toxic chemicals, nor does it interfere with most uses of one's property or other activities, nor has anyone lodged any moral objections to cell phone towers. Aesthetic harms are especially subjective, though distaste with the sight of cell phone towers is widespread. And when people object to the sight of cultural pollution in the form of pornographic movies displayed at drive-in theaters, the typical response has been to encourage those who are offended to avert their eyes or to simply be more tolerant.

50. See Robert Long, Note, *Allocating the Aesthetic Costs of Cellular Tower Expansion: A Workable Regulatory Regime*, 19 STAN. ENVTL. L.J. 373, 390 (2000) (describing cell phone towers as “industrial-looking, metallic structures”); see also Hughes, *supra* note 48, at 497 (noting that “[t]he metallic composition of these towers further compounds the visual contrast”); B. Blake Levitt, *Cell-Phone Towers and Communities: The Struggle for Local Control*, ORION AFIELD, Autumn 1998, at 32, 33 (referring to the “intergalactic look” of cell phone towers).

51. See *supra* text accompanying notes 8–9.

Toleration is an especially appropriate response to claims of visual pollution because the harm is generally less than other kinds of pollution and the harm is more subjective. Virginia Postrel sees the battle against the visual pollution of cell phone towers as the latest confirmation of Ronald Coase's insight "that pollution is not a simple matter of physical invasion or evildoing. It is a byproduct of valuable actions."⁵² Postrel explicitly calls for "tolerance" of cell phone towers and other forms of visual pollution because "[e]nforcing taste means blocking experimentation," and because we can simply avert our eyes from the offending structure (just like drive-in movies).⁵³ Postrel also contends that "since we tend to become used to our surroundings over time, it becomes easier and easier to ignore visual offenses. Sometimes we even come to enjoy sights we once found annoying."⁵⁴ There is ample precedent to support this call for toleration of cell phone towers. One geographer insists that "[t]he majority of Americans who use and value cell phones seem willing to overlook the visual impacts of towers," just as they have done with barbed wire, electric wires, and telephone poles.⁵⁵ The experience with these other structures suggests that it is likely that people will grow accustomed to the sight of cell phone towers if they persist in coming decades; the intolerance for cell phone towers could be a temporary phenomenon.

Pollution prevention may be another viable response to the visual pollution of cell phone towers. In this context, prevention means retaining the benefit of cell phone coverage without experiencing the externality of aesthetic harms. So far, the prevention of those harms has been difficult because we want cell phones to work as we move from one area to another. Cell phone providers satisfy these popular desires by designing a honeycomb of cells, each containing a tower that transmits the radio signals necessary for communication via cell phone. Each provider, moreover, needs its own antenna to transmit its customers' signals, and usually that means that each provider needs its own tower. Multiple towers for each provider can be avoided by "co-location"—the placement of multiple antennas on a single tower—and the resulting elimination of the need to build a new tower eliminates the additional visual pollution that a new tower would cause. Co-location is not always possible,

52. Virginia Postrel, *Economic Scene; When it Comes to Enforcing Taste, It's Best to Tread Lightly—If at All*, N.Y. TIMES, July 13, 2000, at C2.

53. *Id.*

54. *Id.*

55. Wikle, *supra* note 46, at 56. Wikle cites Pierce F. Lewis, *Aesthetic Pollution: When Cleanliness Is Not Enough*, 52 PUB. MGMT. 8 (1970), for the proposition that "the frontier philosophy of Americans has led to acceptance of landscape elements viewed as functional, such as barbed wire." Cellular providers have made the same argument. See *Sprint Spectrum Ltd. P'ship v. Parish of Plaquemines*, No. Civ.A. 01-0520, 2003 WL 193456, at *17 (E.D. La. Jan. 28, 2003) (reporting the testimony of a Sprint official who "observed that in his experience the towers tend to lose their identity and blend into the landscape over time").

though, because of leasing disputes between providers and because of the electrical interference that can occur from placing antennas too close together.⁵⁶

Prevention thus requires a technological development that provides phone coverage without towers that loom over the landscape. One township tried to justify a moratorium on new cell phone towers pending the necessary “rapidly advancing technologies in wireless telecommunications.”⁵⁷ The court overturned the moratorium, though, because while satellite technology or other developments could make cell phone towers obsolete, “the use of communications towers and antennas is still the most prevalent and realistic technology in the industry at the present time.”⁵⁸ Femtocells are the next, best hope for reducing the need for cell phone towers. A femtocell is the size of an ordinary home internet router and operates like a mini-cell phone tower that boosts the cellular provider’s existing signal for better use inside a home. Sprint began offering nationwide femtocell service in August 2008. Cellular providers would benefit from femtocells “by being able to offload traffic from their main networks, saving the substantial cost of building more cell phone towers.”⁵⁹ If that actually happens, then fewer cell phone towers are necessary and the visual pollution associated with cellular service may be prevented. The ability to prevent that pollution may also persuade courts to uphold laws requiring such prevention, just as the courts began to uphold laws restricting telephone and electric poles once underground wiring became feasible.⁶⁰

While toleration and prevention each hold promise, avoidance remains the most frequently employed response to the aesthetic complaints about cell phone towers. This strategy accepts that cell phone towers will exist and that people will object to them, so it works to prevent the objecting parties from being harmed. One way of doing that is treatment. For environmental pollutants, treatment means altering the chemical composition of the pollutant so that it is no longer harmful, as is frequently done in municipal wastewater treatment plants. For visual pollution, treatment refers to efforts to diminish the aesthetic impact of a

56. See Long, *supra* note 50, at 386–87 (describing co-location).

57. APT Minneapolis, Inc. v. Stillwater Twp., No. 00-2500 (JRT/FLN), 2001 WL 1640069, at *11 (D. Minn. June 22, 2001).

58. *Id.*

59. Ed Sutherland, *Femtocell FAQ: Is It Time for Your Own “Personal Cell-Phone Tower”? Cell-Service Miracle or Mirage? We Answer 18 Burning Questions About Femtocell Technology*, COMPUTERWORLD MOBILE & WIRELESS, Nov. 19, 2008, <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9118798>; see also Roger O. Crockett, *A Cell Phone Tower in Your Living Room? Wireless Operators Want to Sell You a Toaster-Size Box That Will Improve Service—And Cut Their Costs*, BUS. WK., Nov. 10, 2008, at 56.

60. See *supra* in text at notes 55–57 above.

cell phone tower. For example, Gwinnett County in suburban Atlanta prescribes that towers

- shall either maintain a galvanized steel or concrete finish . . . or be painted a neutral color so as to reduce visual intrusiveness
- use materials, colors, textures, screening, and landscaping that will blend the tower facilities to the natural setting and building environment
- shall not be artificially lighted unless otherwise required (say by the Federal Aviation Administration), or
- include any commercial signage.⁶¹

These provisions are intended to accomplish the goals of the county's Telecommunications Tower and Antenna Ordinance, including "the design and construction of towers and antennas to minimize adverse visual impacts."⁶²

Camouflage represents a more aggressive approach to treating the visual pollution of cell phone towers. Cellular providers have disguised towers as flag poles, church steeples, light poles, chimneys, trees, silos, lighthouses, cacti, and bird nests. Towers have also been attached to existing structures, such as church steeples, buildings, chimneys, gas station signs along interstates, electricity poles, and clock towers.⁶³ There is also one case involving "an 80-foot tower designed to look like a ship's mast or a flagpole in a boatyard in Manchester harbor."⁶⁴ The goal of these disguises is to transform cell phone towers into sights that are aesthetically innocuous, or even pleasing. The polluting vision is thus rendered harmless in much the same way that various environmental pollutants are treated to eliminate their toxic effects. But such camouflaging techniques are not always successful. In the Manchester harbor case, the local planning board objected to the tower because, as one member put it, "the proposed tower looked like an 80-foot smoke-stack."⁶⁵ Cellular providers sometimes object to camouflaging, too,

61. GWINNETT COUNTY, GA., CODE OF ORDINANCES ch. 108, art. 3, div. 4, § 108-55 (Municode through Oct. 21, 2008 ordinance).

62. *Id.* div. 1, § 108-31.

63. See Vince Vittore, *Crouching Market, Hidden Towers*, WIRELESS REV., Nov. 1, 2002, at 20, available at http://telephonyonline.com/wireless/towers/wireless_crouching_market_hidden/ (describing the development of cell tower camouflaging); Hughes, *supra* note 48, at 498-99 (describing camouflage techniques); Larson Camouflage Division, <http://www.utilitycamo.com/sites.html> (providing photos of camouflaged towers). A formal definition of "[c]amouflage design or camouflage tower" is "the design of a tower or tower structure that blends into the surrounding environment and is visually unobtrusive." HOUSTON, TX., CODE OF ORDINANCES ch. 41, art. 3, § 41.50 (Municode through Jan. 7, 2009 ordinance).

64. Nextel Commc'ns of the Mid-Atl., Inc. v. Manchester-by-the-Sea, 115 F. Supp. 2d 65, 68 (D. Mass. 2000).

65. *Id.* at 71. Another member of the planning board agreed "that the tower would not look like a mast." *Id.* On the other hand, the state historical commission

because it is much more expensive than simply building a regular metallic tower.⁶⁶ All pollution control is expensive, though, so it would be surprising if controlling visual pollution was the exception.

B. *Regulating the Location of Cell Phone Towers*

The most common way of avoiding the aesthetic harms of cell phone towers, and the most common response to those harms generally, is to place the towers where they are least objectionable. Initially, this separation strategy may be achieved by voluntary actions. Providers often seek to build towers away from any residential neighborhoods simply to avoid the controversy that is likely to ensue. For their part, residential neighborhoods can establish private covenants that forbid the location of cell phone towers on their property. Covenants forbidding a wide range of activities or structures have become a staple of new subdivisions, and they are easily employed to block the siting of a tower by current and future owners of the land. The first case to enforce a restrictive covenant to exclude a cell phone tower arose on land in Westchester County, New York, that was subject to a covenant prohibiting anything besides a single-family home. The New York Court of Appeals rejected the provider's claims that the enforcement of the covenant would violate the Federal Telecommunications Act (TCA) or generalized interests in public policy. The court reached that result even though the tower had already been built, and thus the court's decision ordered the removal of the tower within "a reasonable period of time."⁶⁷ In another case, a Florida state court ordered the demolition of a tower built on land that had been conveyed to the city "solely for passive park purposes."⁶⁸

concluded that "the stealth pole will be designed to blend in with the ships' masts in the marina," and therefore it would "have no adverse effect on the Manchester Village National Register Historic District and the Manchester Historic District." *Id.* at 69. You can decide for yourself who is right by looking at the photo at <http://www.necellularsites.net/Mass.htm>.

For similar competing views of cell phone towers that are disguised as flag poles, compare Edward C. Fennell, *POST & COURIER* [CHARLESTON, S.C.], Oct. 23, 2003, at 1C (describing the compliments for "a giant version of Old Glory visible for miles away from a 140-foot pole that almost nobody knows is also a cell-phone tower") with *Sprint Spectrum Ltd. P'ship v. Bd. of Zoning Appeals*, 244 F. Supp. 2d 108, 115 (E.D.N.Y. 2003) (opining that "it is reasonable for many residents to find camouflaging a monopole as a flagpole flying an American flag to be offensive").

66. See Hughes, *supra* note 48, at 499 (providing data on the cost of camouflaging cell phone towers circa 1998).

67. *Chambers v. Old Stone Hill Rd. Assocs.*, 806 N.E.2d 979, 984 (N.Y. Ct. App. 2004). I discuss the TCA *infra* Part II.C. See also *Burke v. Voicestream Wireless Corp.*, II, 87 P.3d 81 (Ariz. Ct. App. 2004) (enforcing a covenant that prohibited a cell phone tower built on a church).

68. *AT&T Wireless Servs. of Fla. v. WCI Cmty., Inc.*, 932 So.2d 251, 253 (Fla. Dist. Ct. App. 2005).

Nuisance law is the traditional means of separating conflicting use of the land, including pollution claims. The plaintiffs in one nuisance case blamed a cell phone tower for straining the marriage of one couple and forcing another family to move because the tower was “‘offensive,’ ‘overbearing,’ that it clearly did not fit in place with the surrounding flora, and that he ‘felt [his] dream house was shattered by this monstrosity.’”⁶⁹ But the judge visited the site and concluded that the tower “‘simply cannot be found without the assistance of a guide,” and “it would be difficult to imagine being able to see this pole even in the dead of winter.”⁷⁰ The court thus dismissed the nuisance claim because “[n]o harm occurred here, nor could it be plausibly so alleged.”⁷¹ Most other nuisance cases involving the aesthetics of cell phone towers have failed as well.⁷²

Separation is usually achieved by the existing tools of municipal zoning laws and land use regulations. The standard zoning law contains restrictions on the height of structures, requirements that structures be set back a certain distance from the property’s boundary, and designations upon which uses are permissible in each area. Zoning law further authorizes conditional uses and special exceptions that operate to allow certain structures only upon a showing of need and the absence of harm. Each of these provisions has been applied to cell phone towers. The typical tower is over one hundred feet tall, and the ideal place for a tower that best serves its purpose might be close to the property line or in a residential area or an environmentally sensitive location, so providers often struggle to gain the permission of local zoning authorities to build a new cell phone tower.⁷³

69. *Littlefield v. Zoning Bd. of Appeals*, No. 03CV1816F, 2007 WL 3258779, at *1 (Mass. Super. Ct. Sept. 25, 2007).

70. *Id.* at *1 & n.1.

71. *Id.* at *2.

72. See generally Gregory H. Birne, Annotation, *Tower or Antenna as Constituting Nuisance*, 88 A.L.R. 5th 641 (2004) (citing cases). Other nuisance cases target the noises emitted from cell phone towers. See *Cal. RSA No. 4 v. Madera County*, 2331 F. Supp. 2d 1291 (E.D. Cal. 2003) (holding that noise from a cell phone tower did not constitute a nuisance); *GTE Mobilnet of S. Tex. Ltd. P’ship v. Pascouet*, 61 S.W.3d 599 (Tex. Ct. App. 2001) (upholding a jury finding of nuisance based upon the noise and glaring lights from a 126-foot cell phone tower located on municipal land near a residential area).

73. Representative cases include *T-Mobile USA, Inc. v. County of Hawai’i Planning Comm’n*, 104 P.3d 930 (Haw. 2005) (holding that a special use permit was not needed to place an antenna in a fake chimney); *Sprint Spectrum, Ltd. P’ship v. Zoning Bd. of Adjustment*, 823 A.2d 87, 99 (N.J. Super. Ct. App. Div. 2003) (reversing the denial of a variance because, inter alia, the company had minimized the aesthetic impact of the antennas); *AT&T Wireless Servs. v. City of Streetsboro*, No. 97-P-0070, 1998 WL 813834, at *7 (Ohio Ct. App. June 26, 1998) (reversing the denial of a conditional use permit that relied “solely [on] statements made by nearby landowners expressing general concerns about aesthetic deterioration in the area,” lowered property values, and health risks); *In re Shaw*, 945 A.2d 919 (Vt. 2008) (upholding the issuance of a conditional use

A recent Kansas City case is illustrative. T-Mobile wanted to build a 120-foot cell phone tower in Kansas City, Kansas. To do so, it needed a special permit, which would be forthcoming only after considering, *inter alia*, the effect of the tower on “[t]he character of the neighborhood” and “visual quality.”⁷⁴ The city code also expressed a preference for locating cell phone towers in commercial districts rather than residential districts. The local board denied the application in part because the tower would be located in a residential district and because it “would be ‘the tallest structure in the area’ and ‘may be considered unsightly by many.’”⁷⁵

Some municipalities have expanded upon their general zoning provisions by specifying which places are acceptable and which places are unacceptable for cell phone towers. For example, San Diego County’s 2003 Wireless Telecommunications Facilities ordinance divides tower applications “into four tiers, depending primarily on the visibility and location of the proposed facility,” and then it imposes more stringent aesthetic requirements upon proposals in residential areas than in industrial areas.⁷⁶ Towers located in residential areas must be camouflaged and they are subject to height and setback restrictions. The applicant for a permit to build a cell phone tower must prepare a “visual impact analysis,” and the tower “must meet many design requirements, primarily related to aesthetics.”⁷⁷

C. *The Federal Telecommunications Act of 1996*

The cumulative effect of such local ordinances has been extremely effective in restricting the location of cell phone towers. Zoning authorities often heed the objections that their constituents have voiced to the presence of a cell phone tower in their neighborhood, just as I experienced in my suburban community. One of my Notre Dame physics department colleagues was quoted in the local newspaper describing “[v]isual pollution of the scenery” as “a much bigger worry. I certainly wouldn’t want one in my back yard.”⁷⁸ One cannot imagine a clearer

permit for a cell phone tower); *Cingular Wireless v. Thurston County*, 129 P.3d 300 (Wash. Ct. App. 2006) (affirming the denial of a special use permit).

74. *T-Mobile Central, LLC v. Unified Gov’t of Wyandotte County*, 546 F.3d 1299, 1304 (10th Cir. 2008) (quoting WYANDOTTE COUNTY-KANSAS CITY, KAN., CODE OF ORDINANCES ch. 27, art. 4, § 27-214(f)(5), art. 8, div. 6, § 27-593(a)(30)).

75. *Id.* at 1305.

76. *Sprint Telephony PCS, Ltd. P’ship v. County of San Diego*, 543 F.3d 571, 574 (9th Cir. 2008) (en banc) (describing the ordinance and rejecting a TCA challenge to it).

77. *Id.*; see also *Cellco P’ship v. Town of Grafton*, 335 F. Supp. 2d 71, 75–76 (D. Mass. 2004) (prescribing a descending order of preferences for cell phone towers built on existing structures, where screening already exists, in commercial districts, on government or educational structures, or finally in residential districts).

78. Porter, *Communications Towers*, *supra* note 2, at B1.

statement of the NIMBY—"not in my back yard"—response that characterizes many complaints about pollution. Zoning law empowers local authorities with broad discretion to regulate such visual pollution. So much discretion, in fact, that cellular providers worry that the industry will never achieve its potential "if NIMBYs and local governments are allowed to bottleneck growth."⁷⁹

So Congress intervened to recalibrate the balance between the municipal zoning control of cell towers and the broader demand for cell phone coverage. The Telecommunications Act of 1996 (TCA) sought to provide "a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition."⁸⁰ Most of the law's provisions were designed to deregulate telephone service, though the law also regulated television station ownership and encouraged the installation of the V-chip technology that was seen as a solution to the claims of violent entertainment and pornography as cultural pollution. The TCA's treatment of cell phone towers is buried in § 332(c)(7). Entitled "Preservation of Local Zoning Authority," section 332(c)(7) is a compromise provision that acknowledged the concerns that local zoning decisions were creating a patchwork of requirements that impeded the development of wireless communications while recognizing legitimate local concerns about the siting of cell phone towers. The section strives to achieve the appropriate balance by imposing several substantive and procedural requirements for local zoning regulation of cell phone towers. For example, denial of permission to build a tower must be in writing, supported by "substantial evidence contained in a written record," and must neither "unreasonably discriminate" among providers nor effectively prohibit personal wireless services.⁸¹ Moreover, cell phone towers cannot be prohibited based upon the alleged environmental

79. Hughes, *supra* note 48, at 476; *see also id.* at 471 ("[Z]oning boards ignore their limited authority . . . to reject tower siting applications based on unsubstantiated myths that wireless towers and antennas are . . . eyesores."); Long, *supra* note 50, at 409 ("[A] coalition of localities bent on preventing cell towers could burden society with a negative externality by hoarding aesthetic resources at the expense of cellular customers."); Vittore, *supra* note 63, at 21 ("[T]here are about 37,000 different zoning authorities in the U.S. that have the ability to stall the construction of wireless towers.").

80. H.R. REP. NO. 104-458, at 1 (1996) (Conf. Rep.), *reprinted in* 1996 U.S.C.C.A.N. 10, 124.

81. *See* 47 U.S.C. § 332(c)(7)(B) (2000); *City of Rancho Palos Verdes v. Abrams*, 544 U.S. 113, 115-16 (2005) (summarizing the TCA's provisions governing municipal regulation of cell phone towers).

effects of their electronic emissions, “to the extent such facilities comply with the Commission’s regulations concerning such emissions.”⁸²

These provisions have generated extensive litigation as providers have challenged the unfavorable decisions of local zoning authorities. Much of that litigation has focused upon the meaning of the “substantial evidence” requirement, especially as it applies to aesthetic concerns. While there has been some dispute about the meaning of “substantial evidence,” most courts agree that the TCA adopts the traditional understanding of substantial evidence in other contexts. That means the standard is “less evidence than a preponderance, but more than a scintilla of evidence. ‘It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.’”⁸³

The TCA thus requires substantial evidence to support a local government’s refusal to permit the construction of a cell phone tower. But substantial evidence of *what*? How does a local government show—or a cellular provider contest—that there is substantial evidence that a proposed cell phone tower will result in an aesthetic harm? Cellular providers have occasionally suggested that aesthetic harm can never yield substantial evidence, which would disqualify local governments from relying upon aesthetics to reject a proposed cell phone tower.⁸⁴ That extreme argument has failed in court,⁸⁵ but it leaves the nature of the relevant aesthetic evidence unresolved. Several types of evidence have been proffered: photos of the site, reports on nearby building and structures, and especially the complaints of neighboring individuals. Again, though, the challenge is to transform that evidence into a conclusion

82. See 47 U.S.C. § 332(c)(7)(B)(iv); see also *Sprintcom, Inc. v. P.R. Regulations & Permits Admin.*, 553 F. Supp. 2d 87 (D.P.R. 2008) (overturning a permit denial based upon the effects of electronic emissions).

83. *MetroPCS, Inc. v. City & County of S.F.*, 400 F.3d 715, 725 (9th Cir. 2004) (quoting *Cellular Tel. Co. v. Town of Oyster Bay*, 166 F.3d 490, 494 (2d Cir. 1999)); see also Stephanie E. Niehaus, Note, *Bridging the (Significant) Gap: To What Extent Does the Telecommunications Act of 1996 Contemplate Seamless Service?*, 77 NOTRE DAME L. REV. 641 (2002) (discussing the debate over the TCA’s substantial evidence standard).

84. See *Sprint Spectrum Ltd. P’ship v. Parish of Plaquemines*, No. Civ.A. 01-0520, 2003 WL 193456, at *12 (E.D. La. Jan. 28, 2003) (describing Sprint’s argument that allegations that a cell phone tower is unsightly are “information,” not “evidence”); Timothy J. Tryniecki, *Cellular Tower Siting Jurisprudence Under the Telecommunications Act of 1996—The First Five Years*, 37 REAL PROP. PROB. & TR. J. 271, 282 (2002) (“Upon a first reading of the TCA, aesthetics now should be absolutely irrelevant, in that virtually no one would argue that even the best designed cellular tower is aesthetically positive.”).

85. See, e.g., *Preferred Sites, LLC v. Troup County*, 296 F.3d 1210, 1219 (11th Cir. 2002) (“Aesthetic concerns may be a valid basis for denial of a permit if substantial evidence of the visual impact of the tower is before the board.”); *Comm. for Reasonable Regulation of Lake Tahoe v. Tahoe Reg’l Planning Agency*, 311 F. Supp. 2d 972, 989–90 (D. Nev. 2004) (“Under the Telecommunications Act, substantial evidence may take the form of aesthetic information and judgment as long as it is apparent that aesthetic judgment is not a pretext for a particular decision.”).

about aesthetics. The clearest photo, the most detailed report, and the most thoughtful comment must still rely upon some standard to judge what is aesthetically acceptable and what is not. The persuasive force of individual aesthetic objections has been particularly contested. In one case, seven residents complained that a proposed cell phone tower would (1) block the view of Mount Rainier, (2) “be an eyesore [and] cause our town to lose its reputation as a . . . beautiful community,” (3) be a “hideous huge 100-foot piece of steel being placed in my space” where it would “substantially dominate and diminish the scenic beauty of my view of the forest . . . and my skyline view,” (4) be a “monstrosit[y]” that “defaces the community,” (5) be “an eyesore” that would turn off tourists, (6) be “the start of a huge monster” that would change the character of the community, and (7) defeat the community’s efforts to remove power lines and telephone lines.⁸⁶ The town relied upon such claims to deny a permit for the tower. But the court dismissed the complaints of the residents as “no more than individualized aesthetic opinions, not based on any fixed standards adopted by the town.”⁸⁷ The court added that “[a]s ‘beauty is in the eye of the beholder,’ ‘adverse impacts’ are also in the eye of the beholder,” and the town failed to adopt any standards by which to judge those proposals that would infringe upon “the town’s desire to maintain its scenic beauty and views.”⁸⁸

Cases like that show why the TCA has probably generated more land use litigation since 1996 than any other federal statute.⁸⁹ That litigation has produced a roughly even number of cases in which providers win or local officials win. Several patterns emerge from these cases, with courts emphasizing distinct features of a location depending upon whether they find that local governments have complied with the TCA or not.⁹⁰

86. *W. PCS BTA Corp. v. Town of Steilacoom*, No. C98-5664RJB, 1999 U.S. Dist. LEXIS 9068, at *14–*17 (W.D. Wash. Apr. 20, 1999).

87. *Id.* at *17.

88. *Id.* at *12–*13.

89. I say “probably” because my claim is based upon a casual review of reported cases for purposes of describing current developments in property law and environmental law. See J.B. RUHL ET AL., *THE PRACTICE AND POLICY OF ENVIRONMENTAL LAW* 1261–68 (2008) (discussing the TCA); JAMES CHARLES SMITH ET AL., *PROPERTY: CASES & MATERIALS* 737–40 (2d ed. 2008) (same). The only close competitors are the wetlands provisions of the Clean Water Act, 33 U.S.C. § 1344 (2000 & Supp. V 2006), and RLUIPA’s restrictions on local government regulation of religious land uses, 42 U.S.C. § 2000cc(b)(1) (2000). It is also telling that the first TCA challenge to a municipal cell phone tower decision was filed five days after the law went into effect. See Susan Lorde Martin, Comment, *Communications Tower Sitings: The Telecommunications Act of 1996 and the Battle for Community Control*, 12 BERKELEY TECH. L.J. 483, 493 (1997) (citing *Sprint Spectrum Ltd. P’ship v. City of Medina*, 924 F. Supp. 1036 (W.D. Wash. 1996)).

90. These cases show three trends: compliance with a zoning ordinance favors providers, specific factual evidence of a tower’s likely effects is especially valuable, and

The courts have relied on several propositions in overturning local zoning decisions denying permission for cell phone towers when those zoning decisions have been driven by aesthetic objections. First, it is well established that “generalized concerns about aesthetics are insufficient to constitute substantial evidence.”⁹¹ As Judge Posner explained, “If blanket opposition to poles could count as sufficient evidence for denying an application to build an antenna, the substantial-evidence provision of the Telecommunications Act would be set at naught.”⁹² Conclusory allegations about the appearance of a cell phone tower are not sufficient either.⁹³ Statements that rely upon a misunderstanding of a proposed tower do not count.⁹⁴ An inaccurate model of what a tower would look

towers are more likely to be excluded from residentially zoned areas than other areas. Long, *supra* note 50, at 400.

91. Preferred Sites, LLC v. Troup County, 296 F.3d 1210, 1219 (11th Cir. 2002). For applications of that principle, see, e.g., New Par v. City of Saginaw, 301 F. 3d 390, 398 (6th Cir. 2002) (finding that the mere mention and lack of discussion of aesthetic concerns did not constitute substantial evidence); T-Mobile S., LLC v. Coweta County, No. 1:08-CV-0449-JOF, 2009 U.S. Dist. LEXIS 17067, at *26 (N.D. Ga. Mar. 5, 2009) (holding that a neighbor’s “concerns about steel structures in a neighborhood setting are classic ‘generalized concerns’”); Callahan Tower Joint Venture v. Benton County, No. 07-5214, 2008 U.S. Dist. LEXIS 56437, at *16–*17 (W.D. Ark. July 24, 2008) (no substantial evidence where the zoning board did not make any findings about aesthetics and the neighbors simply complained about the “eyesore”); Verizon Wireless LLC v. Douglas County, Kan. Bd. of Comm’rs, 544 F. Supp. 2d 1218, 1249 (D. Kan. 2008) (holding that the complaints of four neighbors about “an industrial looking site,” the “unsightly” tower, an “eyesore,” and not wanting to look at the tower did not constitute substantial evidence); Omnipoint Commc’ns, Inc. v. Vill. of Tarrytown Planning Bd., 302 F. Supp. 2d 205, 222 (S.D.N.Y. 2004) (holding that “unsubstantiated community objection to aesthetics is not sufficient evidence by itself to support” a permit denial); USOC of Greater Iowa, Inc. v. City of Bellevue, 279 F. Supp. 2d 1080, 1086 (D. Neb. 2003) (“[C]ounsel for the City acknowledged at trial that these ‘NIMBY’ concerns expressed by the eight residents did not constitute ‘substantial evidence’ for purposes of [the Telecommunications Act].”); SBA Commc’ns, Inc. v. Zoning Comm’n, 164 F. Supp. 2d 280, 291–92 (D. Conn. 2001) (“[T]hose citizens who expressed aesthetic concerns at the hearings did not articulate specifically how the proposed monopole would have an adverse aesthetic impact on the community.”).

92. PrimeCo Pers. Commc’ns, Ltd. P’ship v. City of Mequon, 352 F.3d 1147, 1150 (7th Cir. 2003).

93. See Cellular Tel. Co. v. Bd. of Adjustment, 37 F. Supp. 2d 638, 650 (D.N.J. 1999) (“There was no evidence or testimony in support of the Board’s conclusion that the negative aesthetic impact would be significant or that the facility would detract from the character or appearance of the area.”); U.S. W. Commc’ns, Inc. v. City of Vadnais Heights, No. 97-2248, 1998 U.S. Dist. LEXIS 22962, at *15 (D. Minn. May 15, 1998) (noting the lack of evidence supporting “the City’s conclusory statement that freestanding towers are an aesthetic blight”).

94. See Cellular Tel. Co. v. Town of Oyster Bay, 166 F.3d 490, 495 (2d Cir. 1999) (observing that “a few comments suggested that the residents who expressed aesthetic concerns did not understand what the proposed cell sites would actually look like,” with the residents referring to “a mass of spaghetti of wires” and “a small birthday cake with candles”).

like is not substantial evidence.⁹⁵ A municipal zoning plan that employs vague aesthetic standards does not support a decision to refuse a tower.⁹⁶ Perhaps most interestingly, there is no aesthetic harm when a tower would be located in an already ugly site.⁹⁷

The decisions sustaining local government denials of cell phone towers because of aesthetics have adopted their own maxims. A cell phone tower may be rejected if it would be located in a prominent place,⁹⁸ in a historic area,⁹⁹ or in a scenic place.¹⁰⁰ A local government

95. See *SBA Towers II, LLC v. Town of Atkinson*, No. 07-CV-209-JM, 2008 U.S. Dist. LEXIS 72401, at *41–*42 (D.N.H. Sept. 19, 2008) (rejecting a simulation that was not to scale and did not contain all features of the tower).

96. See *W. PCS BTA Corp. v. Town of Steilacoom*, No. C98-5664RJB, 1999 U.S. Dist. LEXIS 9068, at *12–*13 (W.D. Wash. Apr. 20, 1999) (finding the municipal siting standards to be too vague to provide adequate guidance to cellular providers); cf. *Lucarelli v. City of S. Portland*, No. CV-96-1095, 1998 Me. Super. LEXIS 52, at *12 (Me. Super. Ct. Mar. 5, 1998) (holding as a matter of state law that a zoning board could not rely upon aesthetics to deny a cell phone tower “without legislatively established criteria”).

97. See *Nextel W. Corp. v. Town of Edgewood*, 479 F. Supp. 2d 1219, 1232 (D.N.M. 2006) (“[T]here is not substantial evidence in the record of any significant visual or aesthetic difference between Plaintiff’s proposed antenna array and those of other, similarly situated providers already located on the [existing] tower.”); *Cal. RSA No. 4 v. Madera County*, 332 F. Supp. 2d 1291, 1308–09 (E.D. Cal. 2003) (“[T]he overarching presence of [a] concededly ugly and massive water storage tank” near the proposed tower meant that “assertions regarding several small antennae are without a factual foundation and are tantamount to speculative and generalized concerns.”).

98. See *Sw. Bell Mobile Sys. v. Todd*, 244 F.3d 51, 61–62 (1st Cir. 2001) (sustaining the rejection of a proposed cell phone tower “on the top of a fifty-foot hill in the middle of a cleared field”); *Red Sky Comm’n, LLC v. City of Lenexa*, No. 07-2069-DJW, 2008 U.S. Dist. LEXIS 15335, at *53–*54 (D. Kan. Feb. 28, 2008) (finding substantial evidence where “the Proposed Site is at a high point topographically in the surrounding area and the proposed tower is taller than the trees located on this elevated piece of property” as well as relying upon the city code’s encouragement “to unobtrusively locate new towers”).

99. See *ATC Realty, LLC v. Town of Kingston*, 303 F.3d 91, 97 (1st Cir. 2002) (noting that “the tower would be located on property that was once listed by the state as being historically significant”); *AT&T Wireless PCS, Inc. v. Winston-Salem Zoning Bd. of Adjustment*, 172 F.3d 307, 316 (4th Cir. 1999) (sustaining a tower denial based upon “the tower’s negative impact on the historical value of” a 1932 house proposed for listing on the National Register of Historic Places); *Se. Towers, LLC v. Pickens County*, No. 2:06-CV-0172-RWS, 2008 U.S. Dist. LEXIS 38767, at *25 (N.D. Ga. May 12, 2008) (considering tower near sites listed on the National Register of Historic Places); *Celco P’ship v. Town of Grafton*, 336 F. Supp. 2d 71, 79–81 (D. Mass. 2004) (relying upon the negative visual impacts that a tower would have on the Grafton Historic District); *Sprint Spectrum Ltd. P’ship v. Bd. of Zoning Appeals*, 244 F. Supp. 2d 108, 114 (E.D.N.Y. 2003) (evaluating tower’s proximity to the Old Setauket Historic District Transition Zone).

100. See *Voicestream Minneapolis, Inc. v. St. Croix County*, 342 F.3d 818, 831–32 (7th Cir. 2003) (rejecting a tower to be located near “the extraordinary scenery of the National Scenic Riverway and with the historic district in the City of Marine on St. Croix,” and where “the National Park Service voiced strong opposition to the tower” based upon its visual impacts); *Sprint Spectrum, Ltd. P’ship v. Bd. of County Comm’rs*,

may also defend its rejection of a cell phone tower by showing that it would be out of character in the proposed location,¹⁰¹ for instance by being taller than any nearby structures.¹⁰² A local government may reject a cell phone tower that conflicts with its general zoning scheme.¹⁰³

These general trends are contradicted by numerous decisions that rely upon conflicting principles. For example, the character of a community may be contested such that the mere assertion that a tower would be out-of-place will not always survive judicial scrutiny.¹⁰⁴ The trashy appearance of an area is no guarantee that a new cell phone tower will be

59 F. Supp. 2d 1101, 1106, 1109 (D. Colo. 1999) (sustaining a tower denial because “[t]he unique and diverse landscapes of Jefferson County [at the foothills of the Rocky Mountains] are among its most valuable assets”); *Site Acquisitions, Inc. v. Town of New Scotland*, 770 N.Y.S.2d 157, 161 (N.Y. App. Div. 2003) (citing “proof of potential negative impact on views from widely used areas of natural beauty” as part of the substantial evidence supporting a permit denial).

101. *See Omnipoint Commc'ns, Inc. v. City of Nashua*, No. 07-CV-46-PB, 2008 U.S. Dist. LEXIS 8611, at *16-*17 (D.N.H. Feb. 6, 2008) (finding substantial evidence where “the proposed tower would be visually, aesthetically, and functionally out of character with the surrounding neighborhood” which was a residential neighborhood next to an undeveloped wooded area); *USOC of Greater Mo., LLC v. City of Ferguson*, No. 4:07-CV-1489 (JCH), 2007 U.S. Dist. LEXIS 87760, at *5, *22-*23 (E.D. Mo. Nov. 29, 2007) (the tower “would not blend in with the one story buildings surrounding it”); *Sprint Spectrum Ltd. P'ship v. County of Platte*, No. 06-6049-CV-SJ-DW, 2007 U.S. Dist. LEXIS 75724, at *12, *14-*15 (W.D. Mo. Oct. 11, 2007) (finding that the zoning commission’s aesthetic concerns “were grounded in the specific characteristics of the proposed location, design and surrounding property,” as evidenced by photos indicating “that the tower would not be obscured by trees or other structures and would dominate the visual landscape”); *R.H. Gump Revocable Trust v. City of Wichita*, 131 P.3d 1268, 1276 (Kan. Ct. App. 2006) (finding substantial evidence in the city’s finding “that the proposed stealth flagpole was incompatible and inconsistent with the area” because “[t]here were no other flagpoles in the area, and extensive beautification efforts had been made in the area”).

102. *See Todd*, 244 F.3d at 62 (observing that the proposed “tower would soar to almost four times the height of the water towers” located nearby); *T-Mobile S. LLC v. City of Jacksonville*, 564 F. Supp. 2d 1337, 1347 (M.D. Fla. 2008) (“The Planning Department also noted that the surrounding properties lacked either tall structures or trees and vegetation that would help reduce the impact of the proposed tower on adjacent landowners.”).

103. *See Aegerter v. City of Delafield*, 174 F.3d 886, 890 (7th Cir. 1999) (upholding the rejection of a tower because “the proposed expansion of the commercial use in the area would be unsightly and inconsistent with its R-1 residential zoning”).

104. *See AT&T Wireless Servs. of Cal. LLC v. City of Carlsbad*, 308 F. Supp. 2d 1148, 1162 (S.D. Cal. 2003) (rejecting the city’s claim that a tower conflicted with the character of a neighborhood because “there simply is no evidence that the cell site would cause the area to look commercial since the site looks like a part of a large house in a neighborhood with very large houses”); *MIOP, Inc. v. City of Grand Rapids*, 175 F. Supp. 2d 952, 957-58 (W.D. Mich. 2001) (holding that the record lacked substantial evidence despite the value that the neighbors placed on their “rural setting, natural environment and peace and enjoyment”).

approved,¹⁰⁵ nor does the presence of historic or scenic sites ensure that a new tower will be denied.¹⁰⁶ Such conflicts mimic the disputes about the appropriate location of other types of pollution. Part of the Clean Air Act discourages the location of new polluting facilities in areas that already experience clean air; environmental justice concerns counsel against locating such facilities in areas that already experience high levels of pollution.¹⁰⁷ Similarly, local governments vacillate between locating sources of cultural pollution such as adult theaters and bookstores all in one area or instead spreading them throughout the community.¹⁰⁸

There is also a more fundamental disagreement among the courts about the nature of federal judicial review of TCA claims involving the aesthetics of cell phone towers. Generally, one view simply defers to local decisions, while the other view demands a reasoned explanation to support a local decision. The first view is represented in an early TCA case arising in Virginia Beach. Hundreds of residents objected to a proposed tower, the board rejected it without explanation, and the Fourth Circuit held that “the repeated and widespread opposition of a majority of the citizens of Virginia Beach who voiced their views—at the Planning Commission hearing, through petitions, through letters, and at the City Council meeting—amount[ed] to far more than a ‘mere scintilla’ of evidence to persuade a reasonable mind to oppose the application.”¹⁰⁹ Judge Luttig offered a spirited defense of the ability of local residents to simply decide not to host a cell phone tower:

[W]e should wonder at a legislator who ignored such opposition. In all cases of this sort, those seeking to build will come armed with exhibits, experts, and evaluations. Appellees, by urging us to hold that such a predictable barrage mandates that local govern-

105. See *BellSouth Mobility, Inc. v. Miami-Dade County*, 153 F. Supp. 2d 1345, 1357–58 (S.D. Fla. 2001) (upholding a county decision to exclude a tower because it “was aesthetically incompatible with the surrounding area,” which was “deteriorating” and where “numerous light and utility poles already occupy the landscape”).

106. See *Omnipoint Commc’ns, Inc. v. Vill. of Tarrytown Planning Bd.*, 302 F. Supp. 2d 205, 222 (S.D.N.Y. 2004) (concluding that the evidence in the record of aesthetic impacts was outweighed by other evidence asserting that the proposed tower would not impact the nearby historic area); *Corcoran v. Conn. Siting Council*, 934 A.2d 870, 874 (Conn. Super. Ct. 2006) (approving a cell phone tower located in an area designated as “a ‘scenic viewpoint’ for a ‘scenic vista’”), *aff’d*, 934 A.2d 825 (Conn. 2007).

107. See 42 U.S.C. § 7477 (2000) (the Clean Air Act’s prevention of significant deterioration command); Shi-Ling Hsu, *Fairness Versus Efficiency in Environmental Law*, 31 *ECOLOGY L.Q.* 303, 390–92 (2004) (describing efforts to address “hot spots” of pollution in poor communities).

108. Compare *City of Renton v. Playtime Theatres, Inc.*, 475 U.S. 41 (1986) (upholding an ordinance prohibiting the location of an adult business near schools, residences, churches, and parks) with *Young v. Am. Mini Theatres, Inc.*, 427 U.S. 50 (1976) (upholding an ordinance prohibiting the concentration of adult businesses).

109. *AT&T Wireless PCS, Inc. v. City Council of Va. Beach*, 155 F.3d 423, 431 (4th Cir. 1998).

ments approve applications, effectively demand that we interpret the Act so as to always thwart average, non-expert citizens; that is, to thwart democracy. The district court dismissed citizen opposition as “generalized concerns.” Congress, in refusing to abolish local authority over zoning of personal wireless services, categorically rejected this scornful approach.¹¹⁰

Judge Luttig’s opinion has been widely cited as reflecting the deferential approach to TCA review.¹¹¹

The alternative view is best expressed in a recent federal district court decision from Ocala, Florida. This time the court held that neighborhood opposition failed to satisfy the TCA’s substantial evidence standard for cell phone tower denials:

It is predictable—and entirely understandable—in every case the Court has encountered under the Federal Telecommunications Act that there will be a group of property owners or nearby residents who oppose the erection of communications towers in their neighborhoods for purely subjective and mostly aesthetic reasons. It seems that such towers, like prisons, are just not welcome additions to the landscape, and those who hold those sincere opinions are entitled to some sympathy. This makes for hard cases when they are presented to local political bodies who might find it difficult to explain to their constituents, in an emotionally charged public hearing, the arcane difference between personal preference and substantial evidence. But the law requires the latter—substantial evidence—and while the substantial evidence standard is a lenient one (being something less than a preponderance of the evidence), when a tower erector meets all of the objective and reasonably relevant prerequisites established in advance by local authority for the placement of communications towers, the purely subjective preferences of the towers’ putative neighbors, not augmented buy [sic] any technical or objective facts or evidence, simply do not constitute “substantial evidence” upon which local government can properly rely in denying an application. Unfortunately, this is such a case, and the Court is required to intervene to grant the Plaintiffs’ requested remedy.¹¹²

That approach characterizes the majority view toward judicial review under the TCA.

110. *Id.*; see also Long, *supra* note 50, at 394 (“[H]omeowner groups are understandably frustrated by the TCA’s robbery of their ‘voice.’”).

111. See, e.g., *Aegerter v. City of Delafield*, 174 F.3d 886, 890 (7th Cir. 1999) (citing the case but using it to distinguish between judicial review of the enactment of laws by municipal councils and judicial review of the administrative zoning decisions made by municipal councils, the latter of which are subject to review under the TCA).

112. *Vertex Dev., LLC v. Marion County*, No. 5:07-CV-380-Oc-10GRJ, 2008 U.S. Dist. LEXIS 59114, at *2–*3 (M.D. Fla. July 30, 2008).

But not everyone has been satisfied with this understanding of the TCA. The sparse legislative history of the section suggests that Congress may have expected local governments to retain more zoning authority than the courts have afforded them.¹¹³ The prevailing view has been attacked as “the biggest land-grab in one industry’s favor at the federal level since the buildout of the railroads at the turn of the last century”¹¹⁴ and as an unconstitutional violation of states’ rights under the Tenth Amendment.¹¹⁵ U.S. Senator Patrick Leahy repeatedly introduced legislation designed to shift all of the zoning power back to local officials.¹¹⁶ The premise of all of these efforts is that local governments will make the best decisions regarding the aesthetics of cell phone towers.

They are wrong. The TCA strikes the right balance between the visual pollution attributed to cell phone towers and the need for cell phone coverage. The combination of local authority constrained by federal law has encouraged municipal zoning officials to identify those places in their community where cell phone towers would produce the least aesthetic harms, rather than trying to ban such towers altogether. The abundant TCA litigation shows that local governments are capable of identifying the proper locations for cell phone towers, but they are equally capable of relying upon unsupported aesthetic complaints that fail to grapple with the hard questions of where to locate a new tower. The TCA forces local governments to think seriously about claims of visual pollution. The TCA also encourages cellular providers to research the propriety of possible sites for a new cell phone tower rather than simply choosing a site and then trying to force local officials to approve it—for a strategy that fails to seek to minimize aesthetic harms while evaluating the availability of sites that would satisfy coverage needs will cause a provider to lose a TCA claim. The delicate balance achieved by the TCA should be preserved, rather than shifting all of the power back

113. See H.R. REP. NO. 104-458, at 207–08 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 222–23 (explaining that section 704 “preserves the authority of State and local governments over zoning and land use matters except in . . . limited circumstances,” and stating that localities should have the flexibility to address aesthetic concerns); 142 CONG. REC. 2240 (statement of Rep. Sensenbrenner) (insisting that “[t]he authority of state and local governments over zoning and land use matters is absolutely essential and must be preserved”); 142 CONG. REC. 2230 (statement of Rep. Goodlatte) (praising the “agreement that protects the rights of local governments to see that their zoning regulations are carried forward in making sure that, when new cell towers are located, they have the ability to determine in each locality where they are placed while fairly making sure that these locations do not interfere with interstate commerce and with the opportunity to advance this new technology”).

114. Levitt, *supra* note 50, at 33.

115. See *Petersburg Cellular P’ship v. Bd. of Supervisors*, 205 F.3d 688, 692 (4th Cir. 2000) (“[T]he federally imposed standard authorizing a state or local legislative body to deny a permit only on substantial evidence violates the Tenth Amendment.”).

116. See, e.g., *Local Control of Broadcast Towers Act*, S. 3102, 107th Cong. (2002); 148 CONG. REC. S10361 (daily ed. Oct. 10, 2002) (statement of Sen. Leahy).

to local officials (as Senator Leahy's legislation would do) or to providers (as legislation to allow the Federal Communications Commission to preempt local zoning laws once contemplated).¹¹⁷

D. Cell Phone Towers in National Parks

One other location has generated a special amount of controversy regarding the placement of cell phone towers. National parks have experienced numerous disputes regarding the placement of cell phone towers. The TCA makes national parks and other federal lands available for cell phone towers,¹¹⁸ but, as a Park Service official once testified, "[N]o one would want to see a cellular phone tower on the rim of the Grand Canyon or in sight of Old Faithful."¹¹⁹ That is because, as the Park Service recently explained, "Scenery has always been an integral part of the fundamental resources and values of national parks. . . . Because the primary viewsheds are natural, built structures often stand out in stark contrast to the scenery and thereby degrade part of the fundamental resource."¹²⁰ Yet Old Faithful and the rest of Yellowstone National Park are in the midst of a debate about the appropriate location of cell phone towers. The first cell phone tower was built there in 2001. The park responded to complaints about that tower by ordering changes that make it less visible and by imposing a moratorium on additional cell phone towers in 2004. Then, in September 2008, the park released an environmental assessment that evaluated four alternative wireless communications services plans: retaining the current cell phone site "on a ridge above the Old Faithful development" and reviewing new proposals on a case-by-

117. See Matthew N. McClure, Comment, *Working Through the Static: Is There Anything Left to Local Control in the Siting of Cellular and PCS Towers After the Telecommunications Act of 1996?*, 44 VILL. L. REV. 781, 786 n.40 (1999) (citing proposals to empower the FCC to preempt local zoning).

118. Telecommunications Act of 1996 § 704(c), 47 U.S.C. § 157 (2000 & Supp. V 2006).

119. *The Wireless Privacy Enhancement Act of 1999 and the Wireless Communications and Public Safety Enhancement Act of 1999: Hearing Before the Subcomm. on Telecommunications, Trade & Consumer Protection of the H. Comm. on Commerce*, 106th Cong. 23 (1999) (prepared statement of Maureen Finnerty, Assoc. Dir., Park Operations & Educ., Nat'l Park Serv.). See also *Wireless Enhanced 911 Services: Hearing Before the Subcomm. on Telecommunications, Trade & Consumer Protection of the House Commerce Comm.*, 105th Cong. 74 (1998) (testimony of Denis Galvin, Deputy Dir., Nat'l Park Serv.) ("We don't want a tower on top of Independence Hall, and we don't want a tower [on the] Lincoln Memorial."); H.R. REP. NO. 104-204, 62 (1995) ("[U]se of the Washington Monument, Yellowstone National Park or a pristine wildlife sanctuary, while perhaps prime sites for antenna and other facilities, are not appropriate and use of them would be contrary to environmental, conservation, and public safety laws.").

120. U.S. DEP'T OF THE INTERIOR, NAT'L PARK SERV., YELLOWSTONE NATIONAL PARK, WIRELESS COMMUNICATIONS SERVICES PLAN: ENVIRONMENTAL ASSESSMENT 68 (2008), http://www.nps.gov/yell/parkmgmt/upload/WIRELESS%20EA%20September_9_08%20Final.pdf.

case basis, reducing wireless services, allowing a limited increase in wireless services, or allowing a substantial increase.¹²¹ The Park Service prefers the limited increase proposal, which would improve coverage in the two areas of the park while relocating the cell phone tower at Old Faithful “to the site near a water treatment plant to further reduce the impact on the viewshed.”¹²² By contrast, the substantial increase proposal would keep the tower at Old Faithful while camouflaging it “to reduce its impact on the Old Faithful Historic District when it becomes feasible to do so.”¹²³ Regardless of the chosen alternative, the park listed both appropriate sites for future cell phone towers (such as existing structures and vacant or non-historic buildings) and inappropriate sites (such as near residential buildings, on top of ridges or near creeks, and “[s]ites within plain view of sensitive natural or cultural areas, visitor centers, campgrounds, residential areas, trails, or park viewsheds”).¹²⁴ The Park Service’s approach should adequately address the visual pollution concerns about cell phone towers in national parks. Whether cell phones should be permitted at all raises harder, but different, questions about the nature of the experience that national parks are intended to provide.

III. CONCLUSION

The idea of pollution helps explain the controversy surrounding the aesthetics of cell phone towers. Claims of visual pollution assert a desire for a particular kind of environment—one free from the polluting effects of unwanted signs, towers, and other sights. Yet no environment is free from pollution, as demonstrated by the persistence of significant air pollution and water pollution nearly four decades after the enactment of the Clean Air Act and the Clean Water Act. The challenge is to decide how much pollution is acceptable. For federal environmental law, that is a question to be answered by the federal government. EPA identifies the National Ambient Air Quality Standards (NAAQS) that determine how much air pollution is acceptable. EPA also selects the technologies that each industry must employ to comply with the Clean Water Act. Yet there is no such standard for judging the visual pollution from cell phone

121. *Id.* at 21.

122. *Id.* at ii.

123. *Id.* at 33.

124. *Id.* at 46–47. Yellowstone, of course, is not the only national park to struggle with the aesthetic impacts of cell phone towers. For another example, see U.S. DEP’T OF THE INTERIOR, NAT’L PARK SERV., THEODORE ROOSEVELT NATIONAL PARK, REPLACEMENT OF A COMMUNICATIONS TOWER IN THEODORE ROOSEVELT NATIONAL PARK AND U.S. FOREST SERVICE ACCESS ROAD IMPROVEMENT: ENVIRONMENTAL ASSESSMENT 9 (2005) (approving the replacement of a tower within the park because the alternative of “building a new tower on other public or privately owned land would generally have significant impacts on the scenery and viewsheds of the region, by increasing the number of towers in the region by one”).

towers. Some local governments have tried to legislate the kinds of places where towers should or should not be located, but those efforts have met with mixed success and sporadic application. The TCA does not address the question of where cell phone towers should be located, insisting only that local governments be able to justify their decisions. As those local governments continue to be especially suspect to constituent complaints, the hope for deciding how to respond to visual pollution remains elusive.

The experience with locating cell phone towers offers lessons for thinking about other kinds of pollution, too. Avoidance has been the dominant response to the visual pollution of cell phone towers, as individual citizens, cellular providers, local governments, and federal judges have all struggled to decide how to keep towers from imposing unacceptable aesthetic harms. But avoidance is likely to be an unstable response to pollution. It is likely that people will gradually accept the presence of cell phone towers (thus adopting a toleration response to pollution) or that technological developments will render towers obsolete (thus implementing a prevention response to pollution). Avoidance will persist only so long as prevention is impossible or toleration is unacceptable. The history of visual pollution claims involving other kinds of towers suggests that either toleration or prevention will prevail. A similar dynamic may explain the social response to other kinds of pollution, too. And the next visual pollution claims are already on the horizon. Literally: wind farm proposals are now experiencing the same kind of battle over aesthetics that cell phone towers have endured for the past two decades.¹²⁵

Meanwhile, Granger finally did build its cell phone tower. It is camouflaged to look like a really tall pine tree. The neighbors complained, and there are still signs saying “no cell tower” along the road.¹²⁶ My cell phone works fine . . . but my wife still cannot get a reliable signal on her I-Phone.

125. See *Residents Opposed to Kittitas Turbines v. State Energy Facility Site Evaluation Council*, 197 P.3d 1153 (Wash. 2008) (holding that the state governor could override a county's aesthetic concerns to allow the siting of a wind farm); Avi Brisman, *The Aesthetics of Wind Energy Systems*, 13 N.Y.U. ENVTL. L.J. 1, 74 (2005) (describing the “fear that wind farms will cause ‘visual pollution’ of the landscape”).

126. See Nancy J. Sulok, *Commissioners OK Cell Phone Tower for Granger Area; Officials Respond to Need Despite Neighbors' Protests*, SOUTH BEND TRIB., Dec. 13, 2006, at B3 (reporting that one of the tower's opponents said “[t]hanks for killing us” as he left the meeting).

