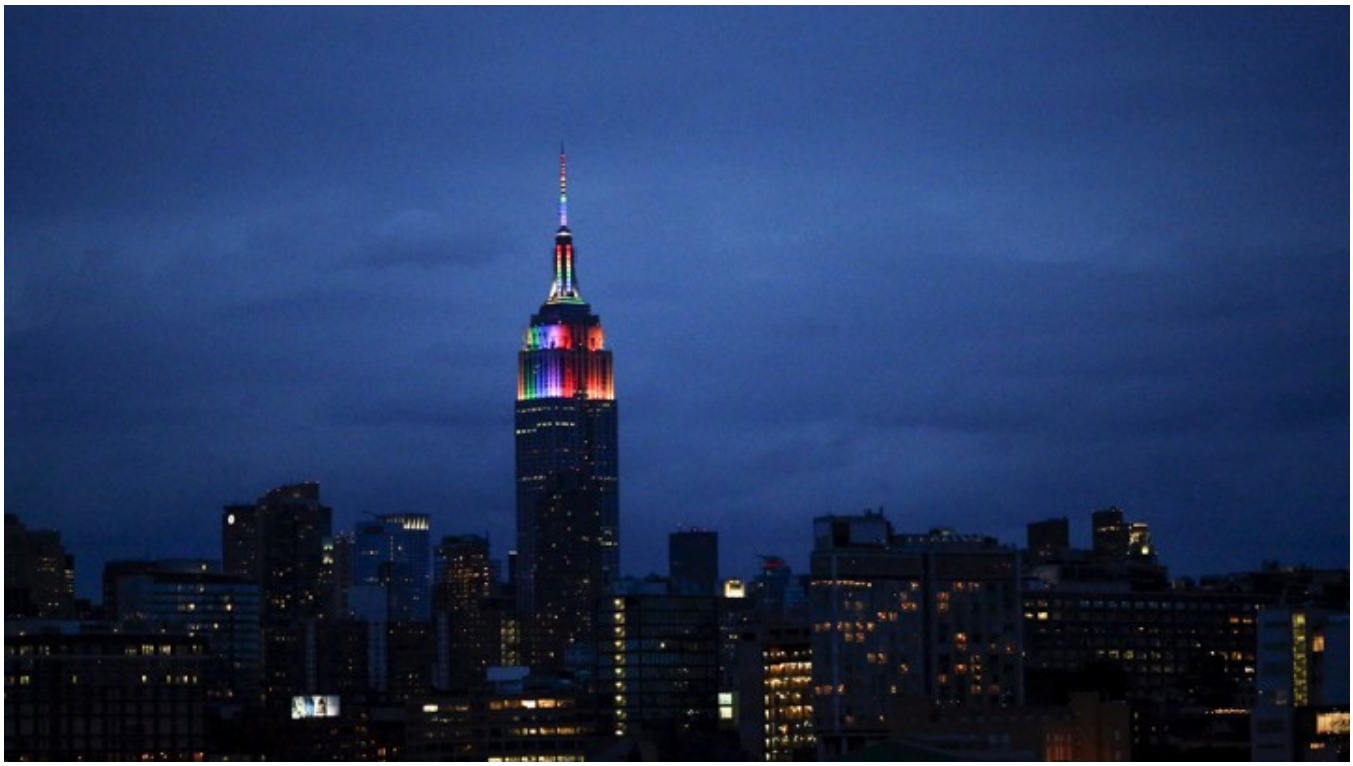
TECHNOLOGY

Colorful Lights Are Turning Skyscrapers Into Tacky Billboards

As LED technology makes it cheaper to illuminate buildings, cities are becoming experimental spaces for an ancient form of visual communication—and not always for the better.

ADRIENNE LAFRANCE JAN 25, 2016



The Empire State Building is lit in rainbow colors during the celebration of the annual Gay Pride Parade in New York, June 2015. (EDUARDO MUNOZ / REUTERS)

After the sun went down on April 29, 1942, in New York City, an unusual patchwork of light scattered over the city. Army officials had ordered the mass dimming of electricity as a security measure during wartime, and all that remained were dull street-level lights, the hazy red glow of restaurant neons, and random slices of light from skyscraper windows that hadn't been properly shaded.

"Twilight came and deepened in a Times Square that had known no true twilight since the lightless nights of 1917, which were caused by coal shortage … " *The New York Times* reported the next day. "[T]here was no New York skyline. The city of terraced panes was reduced to comparative drabness, shorn of its crown of incandescent jewels."

War history was being "written in shadow," as the *Times* put it in 1942. The blackout, the absence of light, became its own kind of surreal narrative.

Cities have always been places where people tell stories with light. "Visual activation of a cityscape at night is important for how we inhabit a city," the architect Marc Kushner said. "Where does this come from? We could probably go back to fires on top of temples set to signify a sacrifice, or when the pope gets appointed and they light the fire and smoke comes out. But the most contemporary example is probably skyscrapers from the Art Deco period."

The Empire State building, arguably New York's most famous Art Deco structure, has used colorful light as a sort of bulletin board since 1976, when, in honor of the nation's bicentennial, it was lit up in red, white, and blue. These days, the skyscraper features special lighting schemes for any number of occasions: red and green for Christmas, rainbow colors for Pride Week, purple and white for New York University's graduation day, green for Earth day.

"It becomes a message board for the city, where the colors start to mean something," said Jennifer Bonner, an architect and an assistant professor at the Harvard University Graduate School of Design. Just as a flag at half staff can signify mourning, a skyscraper lit in a certain color scheme can represent celebration, advocacy, or grief. After the terrorist attacks in Paris last year, for example, dozens of buildings and monuments were lit in blue, white, and red.

"In a way, these lights being applied to buildings are creating new flags," Bonner said. "People didn't literally go out and get [French] flags; we did that electronically, at multiple buildings throughout the U.S. and the world."

The Empire State Building was not one of them. Instead, it joined the Eiffel Tower in turning off its lights altogether in the days after the attacks. Other buildings in New York lit up instead. Both the spire atop the new World Trade Center and the arch in Washington Square Park were illuminated in the colors of the French flag—symbolic choices, since the World Trade Center is one of the sites of the 2001 terrorist attacks on the United States, and the arch was modeled on Paris's Arc de Triomphe.

As LED lights have become cheaper, more buildings are adding lighting technology that enables colorful, customizable displays. But not all of the buildings

that lit up to honor Paris were already outfitted with such technology. The arch in Greenwich Village, for example, had to rush in a lighting expert for its blue, white, and red display. After two nights, the equipment was dismantled and the arch returned to its standard white lighting.

And though the lights can be automated, such displays still require people to decide which colors to use, and in which combinations, and when. "If color is programmed without a lighting designer, then in all likelihood it will run on default programs set by the factory," said Linnaea Tillett, a lighting designer and the founder of Tillett Lighting Design & Consulting in New York. "It is simply too complex to be set by a non-professional."

Color is a complicating factor today. Long ago, communicating a message in light meant simply choosing between on and off—or maybe how many lights to use. In Boston, in 1775, it was a message written in light that set off Paul Revere's historic ride. The famous line, "one if by land, and two if by sea," refers to the number of lanterns that were to be used to signal the route of incoming British troops. Today's Bostonians are taught to recite another few lines of verse to help decode the light message broadcast from the weather beacon atop the Old John Hancock Building:

Steady blue, clear view
Flashing blue, clouds due
Steady red, storms ahead
Flashing red, snow instead

It's a charming use of technology, and an absurd one. For one thing, you have to know and remember the poem for it to be even remotely useful. And even then, the forecast is limited compared with what you'd get from a smartphone—or, potentially, from just going outside. Lights, no matter how dazzling or multicolored, can only say so much. And yet there's a long history of using them as part of political messaging.

In the 1930s, in Nuremberg, Germany, the Nazi Party used an effect known as the cathedral of light, in which their rallies would be encircled by more than 100 anti-aircraft searchlights projecting vertical bars onto the sky.

A "cathedral of light" around a Nazi Party rally in Nuremberg in the 1930s (Wikimedia)

"The danger of infusing light with political meaning is, of course—who decides what the message is?" Tillett told me. "Lighting of buildings in particular, but public lighting in general, can have a strong coercive power. We are creatures drawn to light, and if you choose to broadcast your political message or advertise on the top of or on the face of a building, we will look at it, even if we would prefer to look away."

As more buildings experiment with light displays, everything gets brighter while any single message ends up being dimmed by the brilliance of neighboring structures. "In my view, even meaningless color-changing washes on the facades of buildings is a gross imposition in neighborhoods where window blinds must be closed to keep the light and color out," Tillett said.

Many other architects and lighting designers agree. Several of the people I interviewed described feeling pessimistic about ever-brightening skylines.

"To me, in most instances, designers have usually become enamored with the novelty of these new possibilities as an easy way to make a building louder than its neighbor, rather than LED being used in a sophisticated or thoughtful fashion," said James Ramsey, a former NASA satellite engineer and the creator of a subterranean park in New York City called the Lowline. "Even though lights and

signs have long been a part of our urban fabric, these new LED technologies increase the vocabulary and volume of messaging for a building or the tenant inside. Given the ease of changing the lighting, they are increasingly used to communicate what is almost a sort of branding-affinity, almost a visual Twitter or something."

"LED has become considerably cheaper in the past 10 years," said Allen Sayegh, an architect and an associate professor at the Harvard Graduate School of Design. "It's exciting on one hand, that you can have all these buildings being lit up, but it's also very problematic because it's pollution. The Empire State Building and these iconic buildings do a good job, but when everybody else is doing it... it becomes almost this light-junk."

Even the Empire State Building features its share of what might be described that way. Though its use of light is lovely—simultaneously striking and subtle—the colored lights are often a form of advertising: Yellow and green for the opening night of "Elf the Musical," for example, and pink and white for the Victoria's Secret fashion show.

It could have been worse. Douglas Leigh, the lighting pioneer responsible for so much of the entrancing lighting on New York City skyscrapers and in Times Square, was an ad man first and foremost. Before his death in 1999, he envisioned transforming the Empire State Building into a giant glowing cigarette as an advertisement for Lucky Strike. This may sound outrageous, but it wouldn't have been unprecedented. The history of electric light is inextricable from the history of advertising. Car dealers and casinos use spotlights to attract attention. And in the 1930s, the world's tallest sign was a lit-up ad for Citroen, the car company, which blazed down the Eiffel Tower. (The first name ever done in electric lights was, appropriately, Edison, in 1881, at the site of what's now Bryant Park in New York.)

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In May 1892, New York City's first electric sign was illuminated. It was a real-estate ad for homes on Long Island. Big letters across the side of the Cumberland Hotel, where the Flatiron building now stands, lit up to say: "Manhattan beach, swept by ocean breezes." The effect was startling. Observers compared it to a meteor blazing across the sky. "[Electric signs] both embodied the promise of a utopian future transformed by the miraculous powers of electricity, as well as its dystopian counterpart of a ruptured society riddled with shallow, commercial

entertainments," Margaret Weigel wrote in a paper about *fin de siecle* electric lighting for M.I.T.

At the end of the 19th century, people thought electric signs would be a passing fad. They weren't. Today, we may be similarly on the cusp of a new era of LED lighting everywhere.

"You're going to see more and more of this happening," Sayegh told me. "Even smaller residential buildings will start doing it because it's very easy to do and it's very cheap and, more importantly, it's very cheap to run. It doesn't use a lot of power. It becomes highly accessible. My prediction is it's going to really go crazy before it gets regulated."

"Also there's something about the quality of these lights," Sayegh added. "It's not particularly nice. The pinks and the magentas, all these colors turn out the same. They have these RGB colors and it just becomes bubble-gum colors. On that level it's not very pleasant."

At the same time, architects are experimenting with light in other ways. The Lowline is using mirrors and tubes to reflect actual daylight into the underground space. And the larger trend toward glass facades makes for subtle and unpredictable light displays.

"One thing that's sort of shifting is we've started making more and more transparent buildings," Kushner said. "You don't need to apply lights. I think about the Standard [hotel]. It's a light show as people come into rooms and turn off and on their lights."

To Kushner, like many of the people I interviewed, LED lighting represents a "pretty awesome" technological step forward—"I remember there was a building in Philly where, to change the display, they literally had a guy on a ladder screwing the bulbs off and on," he said—but isn't ultimately what will characterize the next generation of architecture. Just as the Brutalism of the 1970s gave way to the Post Modernism of the 1980s and the Deconstructivism of the 1990s, we may very well be in an age of Experimentalism today, he says. And that applies to lighting, too.

"I find the light on my Apple computer to be so satisfying; the breathing light," he said, referring to a light that dims and brightens in the rhythm of human breathing

when the computer is asleep. “Maybe that’s the next frontier. Dynamic lights. There’s kind of an inevitability—I hope there is—that this will percolate up to architecture, that light will really cease to be this on-off relationship, but that buildings can respond dynamically to time and to season.”

“Light affects us as humans,” Sayegh said. “It’s psychological. It’s very important on many levels. It’s almost a primal thing, like the fire. Everybody likes light. But the absence of light is sometimes much more important.”

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