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Post-Katrina Architecture by the Numbers

The postdiluvian landscape contains little cutting-edge design but rather an abundance of familiarity and replication. What does this reveal about New Orleans society?

by Richard Campanella *with Cassidy Rosen*

> *All human landscape has cultural meaning—no matter how ordinary…. All our cultural warts and blemishes are there, and our glories too.*
> — F. Pierce Lewis, "Axioms of the Landscape," 1976

Last year the world media converged noisily on New Orleans to mark the tenth anniversary of Hurricane Katrina. This year marked a quieter but still significant milestone: it's been a decade since the actual start of the structural recovery, which began tentatively in early 2006. So this is an apt moment to assess the results. How have the citizens of New Orleans been choosing to rebuild their residences? What do the reconstituted cityscapes look like? What do the choices reveal about the various homeowners, builders, developers, architects, authorities involved—and most of all, about New Orleans society? These fundamental questions have gone curiously unaddressed in the substantial and growing archive of post-Katrina literature. In general this literature, from scholarship to the trade press to ambitious long-form journalism, falls into three main categories: (1) theoretical discourses on the philosophies that ought to (or ought not) inform the rebuilding, including sustainability, resilience, localism, historicism, modernism, equity, social justice, gentrification, neoliberalism, entrepreneurism, tactical urbanism, New Urbanism, and landscape urbanism; (2) critical analyses of official plans and programs (such as the Bring New Orleans Back Commission and Louisiana Road Home), of the privatization of public housing and hospitals, flood control and insurance, coastal restoration, various recovery schemes, and urban planning in general; and (3) journalistic stories of innovative initiatives and proactive citizen engagement, usually with an eye toward the above narratives.

The literature, in other words, has been theoretical, didactic, critical, and/or prescriptive in its framing—and for good reason: there was much to critique during and after Katrina, not to mention before, and much that begged for improvement. [1] What's harder to find are expository studies aimed at characterizing and explaining how things have actually been playing out, based on broad empirical evidence. To put a finer point on it, everyone seems to have an opinion of what post-Katrina architecture and urbanism ought to look like (consider the very name *Make It Right*, for Brad Pitt's project of developing sustainable homes in the Lower Ninth Ward), but no one has conducted an architectural census and analyzed what, ten years later, it actually looks like. [2]

It's not surprising, then, that media coverage of the new New Orleans, with its penchant for the exceptional, has unduly influenced broad public perceptions. Consider the Make It Right houses, whose famous architects and experimental designs have garnered so much attention that news consumers might reasonably conclude they typify citywide redevelopment (spoiler: nothing could be further from the truth). In a recent Google search for "post-Katrina New Orleans architecture," Make It Right—with designs by Morphosis, Shigeru Ban, David Adjaye, et al.—dominated the first page of results; no matter that the project's 109 houses constitute only around 1 percent of the city's new residential construction. Likewise, more than half the results of a Google Images search showed contemporary designs on the first page, a ratio that would, to put it mildly, go unsubstantiated on the ground. [3]
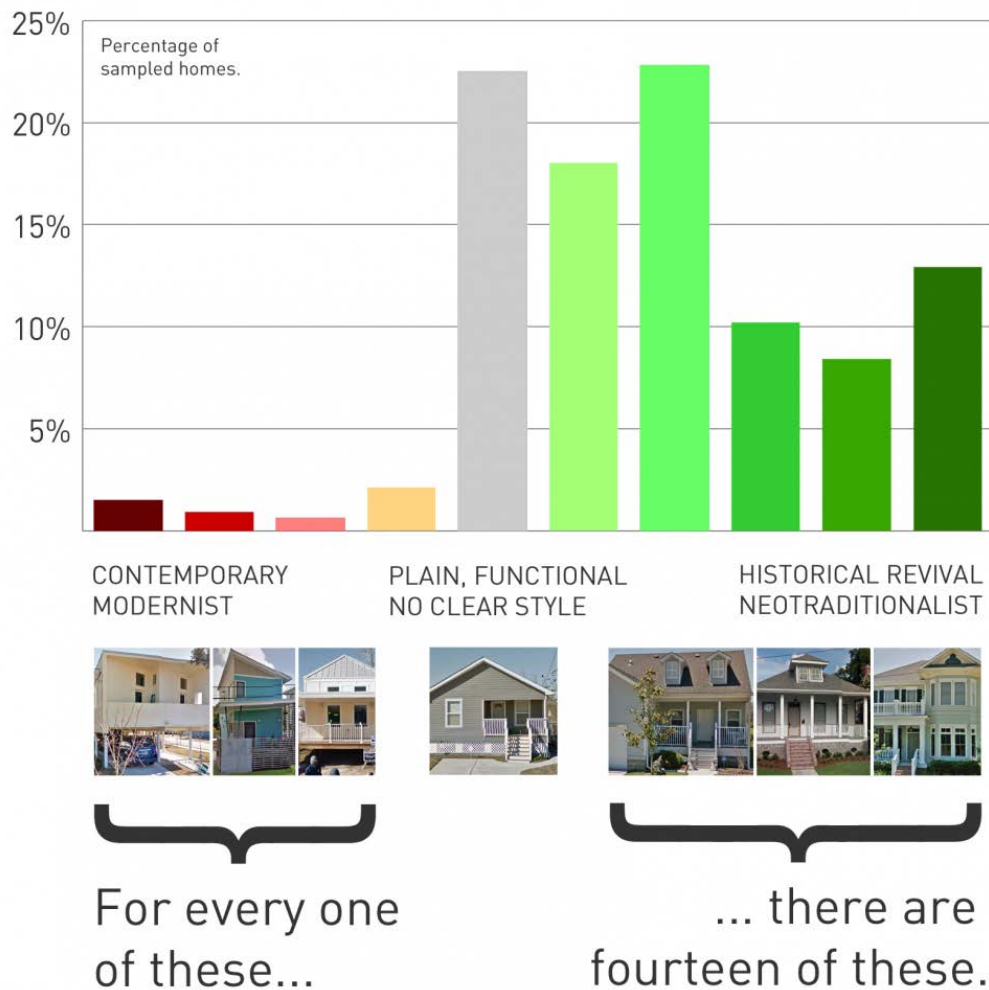
Numbers

Our goal here, then, is to reconcile perception with reality—to paint a detailed and inclusive portrait of the post-Katrina cityscape. Accordingly, our methods were not impressionistic but scientific. We extracted a random sampling of 5 percent of the 6,296 city permits for new residential construction following the August 2005 hurricane and ending in March 2012.

(Remarkably, the first permit request was filed on October 6, 2005, before the floodwaters had fully receded: an optimistic soul if ever there was one). [4] We put the resulting 333 samples—which spanned both banks of the Mississippi, and fell overwhelmingly within the Katrina flood footprint—into a database. We used Google Street View and site visits to obtain an image of every edifice and catalogued these images; we also catalogued the voluminous metadata in the permit requests. Then, on a scale of 1 to 10, we assessed the degree to which the architectural style of each house reflected contemporary or modernist/Modernist sensibilities (lower numbers), or neotraditionalist/historicist intentions (higher numbers), with plain functional designs earning a 5. (Assessments were done in random order and with calibration images handy, to guard against interpretive drift.) We made additional judgments about architectural style; typology; color, tone, and surface materials; the relative size of a porch, balcony, or gallery; an estimate of setback distance and height above grade, and overall square footage, including number of stories.

Needless to say, assessments of architectural style—that is, an aesthetic fashion draped upon a structural frame—are subjective, particularly in pastiche projects. What's broadly Neoclassical or Colonial Revival to one observer might be specifically Greek Revival or Georgian to another; likewise, what can appear Eastlake or Queen Anne might be classified more generally as Victorian when a façade is viewed in toto. In any case, given the freedom with which diverse ornamentation was mingled across many exteriors, it's apparent that the intellectual or historical rationale originally underpinning these forms was not at work in their present regurgitation, and it would be silly to handle them otherwise. Thus we abandoned attempts to label styles as Greek, Italianate, Romanesque, etc., in favor of broader categories, among them contemporary/modern; eclectic; generic or functional with no explicit style; historical; and "New Orleans Revival" for those structures clearly paying homage to the iconography of old New Orleans.[5]

Typology—that is, a building's spatial philosophy shaped by its frame and driven by its program, regardless of style—was only marginally more straightforward to classify. Drawing upon the local vernacular, we identified a variety of elongated types as "shotgun houses," with variations in width, size, and height.[6] There were also Creole or Acadian cottages (roofline parallel to the street, with multiple bays and usually an oversized roof); townhouses (three-bay, vertically massed homes of two stories plus attic) both freestanding and attached; "plantation" houses (this is, after all, Louisiana); and an abundance of mass-market types which, for lack of more specific terms, we've labeled "frame houses" or "suburban homes." Readers might take issue with these classifications, but to do this sort of census—to bring order to what could seem chaos—requires a regularized taxonomy, and no method is perfect. We take heart that an imperfect method repeated perfectly yields ever-better data.


In a random sample of 333 homes built after Hurricane Katrina, 5% were judged to be contemporary or modernist in style, 23% were plain or functional, and 72% were in a historical revival or neotraditionalist style. [Richard Campanella; images from Google Street View]

Results

And the results? Our study reveals that in selecting an exterior aesthetic for their new homes, New Orleanians reached into their historical treasure chest. Whether you call it historicism, historical revival, neotraditionalism, pastiche, retro, or New Urbanism—we use the terms more or less interchangeably—the upshot is clear. In the rebuilt streets of 21st-century New Orleans there are thousands of new houses paying homage to 19th-century New Orleans.

The number rankings were overwhelming. New homes in historical styles ("6" through "10" on our scale) were 14 times more popular than contemporary styles ("1" through "4"), and accounted for 72 percent of our entire sample, which includes all those granted a vanilla-flavored "5." In short, nearly 5,000 new houses, citywide, have been designed to look like old houses. And that's just up to 2012: the figure would grow substantially if we include later redevelopment plus suburban parishes; indeed, parts of Lakeview and Gentilly, and nearly all the New Urbanist-influenced public housing projects, constitute nothing less than a *tout ensemble* of reproduction historicity. Meanwhile 23 percent of our study sample consisted of plain houses with no distinct style ("5" on our scale), usually small and economical; and contemporary or modernist styles comprised a mere 5 percent, including Make It Right houses which happened to fall into our random sample. Extrapolating from our study, there are probably no more than 300 new contemporary houses throughout New Orleans, and only in the Lower Ninth Ward do they amass to create a distinct cityscape.

What else did we learn about style preferences? For one thing, the retro projects strongly referenced the local vernacular and history. Forty percent of the entire sample (or 54 percent of the historicist subset) struck us as "New Orleans Revival" in style, type, or detail, with various shibboleths such as gingerbread decoration, wrought-iron railings, Norman roofs, airy galleries, French doors, and shotgun plans. Pastel shades prevailed (73 percent), as they do citywide, with yellow, beige, gray, and green the most popular, probably to enhance resale value. Only 12 percent of owners committed themselves to deeper or brighter hues; an equal percent opted for suburban-style brick veneer. Fully 80 percent of all houses sported some sort of porch, gallery, verandah, or balcony—iconic French Quarter accoutrements. The rest of the retro sample were either generic or eclectic in their historical hat-tipping, with only a handful bothering to be place-referential beyond New Orleans, e.g., French chateau or Spanish Mission. All of which is to report that seven out of ten new-home householders drew inspiration from the architectural past, with four of those seven fixing their gaze upon the hometown legacy. Only one in twenty went contemporary, and all the rest were functional.

A montage proportionally depicting the styles of post-Katrina architecture; drawn from the study sample, the photos are arranged in order of stylistic rating, with the relatively rare contemporary examples in the upper left and the many versions of neotraditional in the lower right. [Montage by Richard Campanella; photos by Cassidy Rosen or Google Street View.]

Where and What

We examined architectural geography as well as style. Unsurprisingly, the new houses, though within the city limits, are largely sub-urban in their plans and settings: the worst flooded neighborhoods started out in the mid-20th century as drained swampland and grew up in the era of automobiles and lawny lifestyles. Sampled houses were usually set back from the sidewalk by about 15 to 20 feet, much like any modern subdivision; only a negligible percent had the minimal setbacks of older, more central districts. The houses averaged around 1,700 square feet (77 percent were between 1,200 and 2,000 square feet). The modal height was one story, the mean 1.5. Most were raised above grade (usually 3 to 3.5 feet), driven by FEMA flood insurance requirements.

Savvy readers of the future cityscape will be able to limn the footprint of the 2005 deluge by tracking these neotraditional houses. By extension they would also be able to discern not only topographic elevation (or lack thereof), since the floodwaters were impounded within the lowest-lying polders, but also soil subsidence, since the drainage of these former swamps caused them to sink below sea level and thus hold water. And they would be able to detect the location of older public housing projects, because despite HUD's intention of mixing income levels and weaving the new projects into their surroundings, the rebuilt projects now stand out for their hyper-concentration of historicity. Indeed, some streets in the redeveloped projects look more "New Orleans" than New Orleans.

What's more, within the flood footprint, architectural geographies reflect economic-class settlement patterns. New houses in wealthier neighborhoods were, as expected, larger (2,048 square feet on average) and higher in "job value" according to the city permits ($157,435), compared with poorer areas (1,540 square feet and $87,928, respectively).[7] Because size informs type, wealthier areas were more predisposed to build stand-alone townhouses and plantation-style houses; they tended to eschew the small and narrow shotgun. But if new house *types* correlate spatially with economic class, their overlaying *styles* transcend class: wealthier and poorer areas rank similarly on our 1-to-10 contemporary-to-historicist scale, 6.7 and 6.9 respectfully. (That said, beyond the public housing projects, the most enthusiastic historical designs were clustered disproportionately in prosperous Lakeview.) Viewed through the lens of race, even stronger spatial correlations come to light. Twenty percent of our study sample fell within areas that were majority white (according to the 2010 Census), yet these areas were home to 58 percent of the new townhouses and plantation-style houses—and a scant 5 percent of shotguns. In contrast, majority-minority areas—which were predominantly African American and contained 80 percent of our samples—were home to 95 percent of new shotguns as well as 88 percent of the new small frame houses.[8]
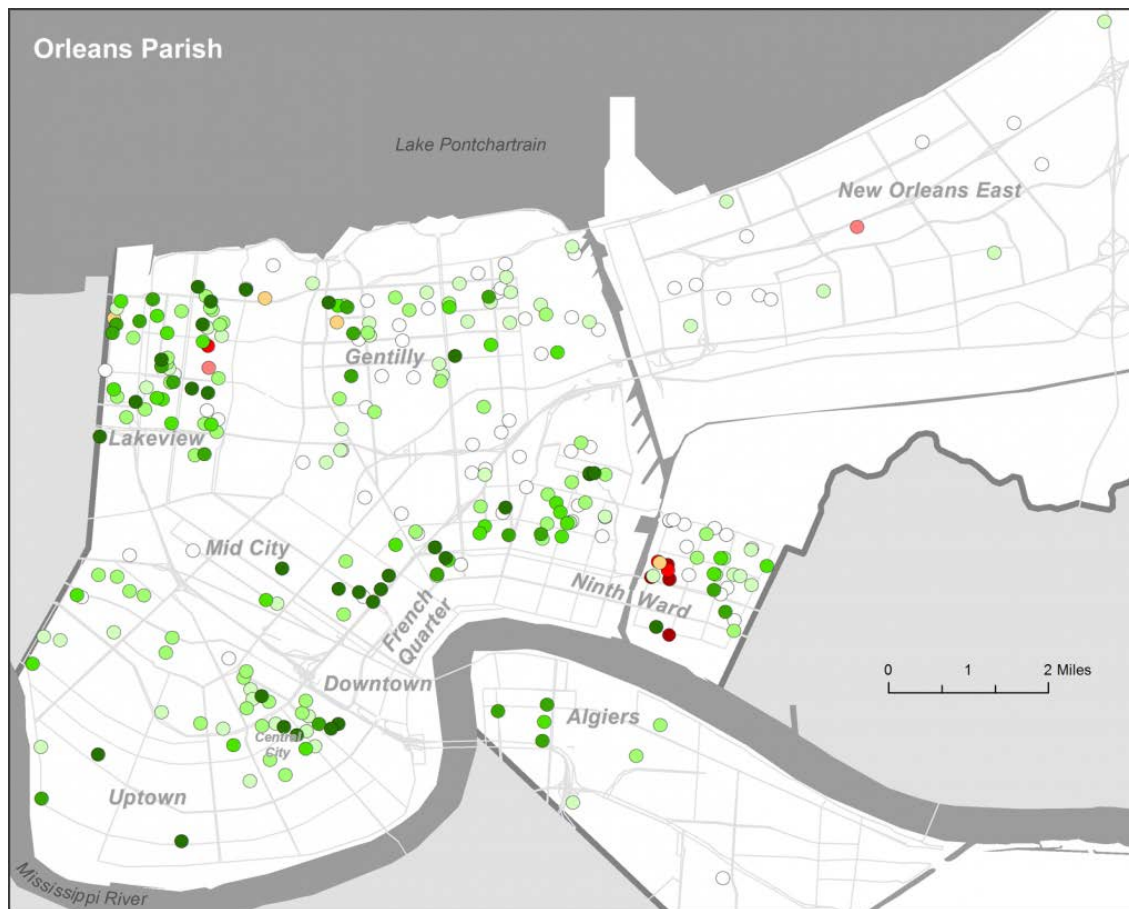
Random sample of new houses in Orleans Parish (n=333, 5% of total new construction). Houses are coded by style on a scale that ranges from contemporary/modern (dark red) to historical revival/neotraditionalist (dark green). [Richard Campanella]
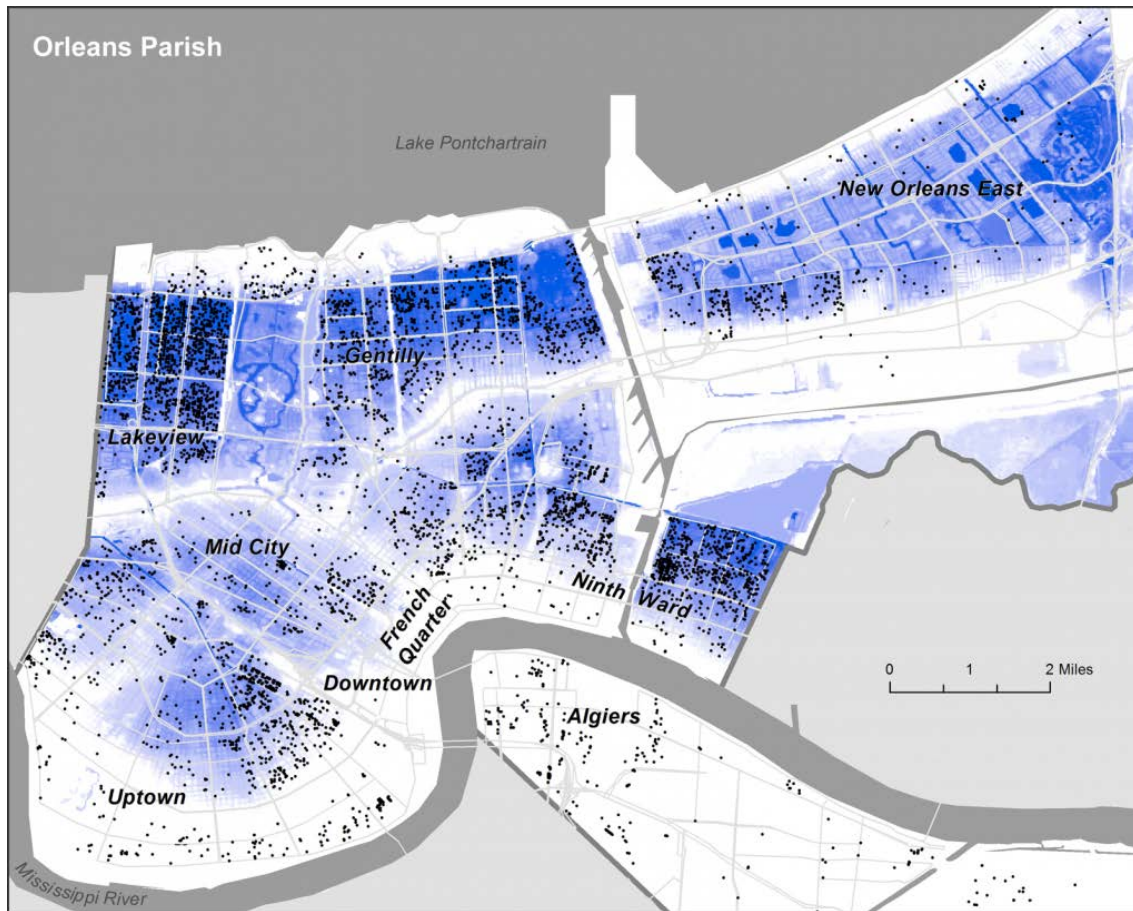
Black dots show all new construction permits issued by the City of New Orleans between October 2005 and March 2012 that were subsequently built. Blue shading indicates the depth of flooding on September 2, 2005. [Richard Campanella]

Who and Why

There's no doubt that New Orleanians have embraced their city's architectural heritage as they've rebuilt for an uncertain future. Yet the embrace has been conditional, literally if not figuratively superficial in that it is limited to façades. Materials, technology, interiors, infrastructure: all reflect 21st-century globalization as well as contemporary codes and domestic needs. True, there is renewed appreciation for working shutters and raised foundations, but most of the structural elements of the Creole City's past remain firmly in the past: you will find no new cross-timbered walls with *bousillage* or hand-hewn trusses in rebuilt New Orleans.

But exterior façades matter, because they tell stories to the streetscape. What exactly is that story, and who should be credited—or blamed—for telling it? Part of the narrative involves the extensive network of players on the supply side of new housing: developers, builders, architects, financiers, and officials. That part is not distinct to New Orleans. But supply is driven by demand, and demand in this case meant thousands of flooded homeowners making the difficult and polemical choice to *reinvest and stay* rather than to *divest and leave*. This part of the story is distinctly local and deeply meaningful.

Or at least 91 percent of it is. The other 9 percent, according to our data, entailed architectural choices made by parties other than the homeowners. Invariably these involved projects in official historic districts or projects in public housing developments. In the former, all exterior designs must be approved by the Historic District Landmarks Commission and pass muster with neighborhood associations, in which case a building's appearance reveals as much about civic will as individual predilection.[9] Likewise, new historicist buildings in public housing footprints do not necessarily reflect the tastes of their inhabitants, but rather the New Urbanist agenda that has shaped the HUD Hope VI Program as well as the production of the Housing Authority of New Orleans and assorted private developers. This agenda has produced pastel-colored streetscapes and projects with aspirational names like "Harmony Oaks," "River Garden," and "Faubourg Lafitte." They are attempting to tell a story of rich local heritage, but their provenance reflects policy decisions made by people in high places far away.[10]

Back to that 91 percent of new houses in which the homeowner/client had real architectural agency—that is, the power to select a design. In New Orleans, as elsewhere, that process commences once the homeowner secures financing and title to a residential lot and is ready to take a set of construction documents to City Hall. In our sample study, about 3 percent of these documents depict unique designs by commissioned architects.[11] The other 97 percent of clients selected and customized a "pre-architected" design from either an architect's portfolio or a builder's pattern book. One builder, for instance, offers a range of traditional styles and house types associated with Louisiana, each copyrighted to a named architect and firm aptly called Olde Orleans Designs; the houses have been given Louisiana-themed names such as Acadia,

Oleander, Nutria, and Remoulade, and some are even named for local streets and neighborhoods, e.g., Cadiz, Terpsichore, Euterpe, Algiers, Audubon, and West End. Many of these designs show up repeatedly in our sample.[12]

How will history assign credit for the residential architecture of post-Katrina New Orleans? According to Zachary Smith, Chief Building Officer for the city's Department of Safety and Permits, homeowners have in the past decade have become increasingly immersed in residential design decisions with the goal of fine-tuning the look and livability of their dwellings. This suggests that credit ought to go chiefly to the hardy clients, and then to the unnamed designers behind the stock plans as well as the collaborating professionals who certified the plans and turned them into buildings. Commissioned architects certainly deserve credit for the more innovative and sustainable new houses on the scene, but as our data show, these are numerical rarities. Gazing across the postdiluvian landscape, we see very little cutting-edge design but rather an abundance of familiarity and replication. Which brings us back to our earlier question: what does this reveal about New Orleans society?

Perhaps counter-intuitively, the new-old cityscapes do *not* reveal an inherent or longstanding cultural penchant for vintage aesthetics. Quite the opposite. Over centuries, the citizens of New Orleans eagerly embraced progressive architectural thinking—style, type, interiors, materials, technology, programming—for residential and commercial structures alike. Locals in the 1700s adapted ("creolized") West Indian-influenced wooden edifices to their French colonial city and eventually replaced them with sturdier Spanish-influenced structures in the 1790s. Anglo-Americans introduced Greek Revival styles and American center halls in the early 1800s, and these would become popular much the way that granite pillars and iron-casting technology would come to dominate downtown streetscapes. After the Civil War, the once popular Creole cottages gave way to shotgun houses—an idea imported from Haiti—which themselves became obsolete with the 20th-century rise of Craftsman bungalows and California-style ranch houses. And, remarkably, during the postwar decades, according to Tulane professor John Klingman, "New Orleans was receiving national and even international attention for its then contemporary Modernist design," with Curtis and Davis Architects, Charles Colbert, and Edward Durell Stone among the illustrious names at work locally. In other words, the citizens of late 19th-century New Orleans were not interested in building 18th-century colonial cottages, and the last thing mid-20th century home buyers wanted was a house tricked up to look quaint. We see yet more evidence of progressive, forward-thinking place-making in mid-century urban planning, when Mayor deLesseps "Chep" Morrison, with local support, constructed the first expressway and bridge across the Mississippi, erected a bold Brasilia-like Civic Center and a modernist City Hall, demolished Victorian train stations in favor of a single streamlined terminal, tore up old streetcar lines, and even proposed a Space Age high-speed monorail.[13]

The current neotraditionalism is not, then, the latest fruit of a deep-rooted cultural conservatism which germinated yet again in Katrina-soaked soils. In fact the retro revival is mostly a response to the recent past—to difficult decades of contraction and decline. Starting in 1960, after more than a century as the largest city in the South, New Orleans saw its population begin to decline as school integration triggered white flight to suburban parishes. The exodus intensified in the '70s and '80s, when the shrinking tax base exacerbated structural and social woes and motivated more middle-class families to flee regardless of race. At the same time the rise of container shipping, with its pre-packaged cargo and mechanized handling, drastically thinned the ranks of unionized dockworkers even as the oil bust of the mid-'80s decimated the ranks of well-paid petro-industry professionals. Crime soared and blight spread.

Struggling with a mediocre present and sensing a bleak future, New Orleanians wondered whether their best days were in the past. So they looked back and found a potent source of civic pride in the memory of the days when the city was "Queen of the South." And the most palpable evidence of those heady days was the inventory of splendid buildings in elaborate styles, located all throughout the Crescent City, an architectural patrimony unlike that of any other American city.[14] Reflecting the growing influence of the preservationist sensibility, the highly influential *New Orleans Architecture* series was launched in 1971 (it now includes nine volumes). Among the best such catalogues of any U.S. city, the series edified and empowered denizens of historic neighborhoods in a scholarly and authoritative tone, and encouraged a knowledgeable appreciation on the part of a wider public.

As a result, even as fiscal capital fled the shrinking city, the old buildings—the townhouses of the French Quarter, the mansions of the Garden District and Uptown, the shotguns of Bywater and Treme—started to generate their own capital. This was currency both cultural and commercial, and it turned tourism into a major industry. In short order the travel-dominated service sector replaced shipping and petroleum as the city's largest employer. The gentrification of the central city had begun in earnest, for the new tourism depended on social memory, and social memory in turn depended on the presence of historical architecture. Houses once spurned as old-fashioned found new admirers and defenders across a remarkably wide span of society; soon citizens were recalling wistfully how lovely their neighborhoods "used to be" and shaking their fists at "progress." Historical buildings with fanciful ornamentation seemed warmly evocative of the (nostalgically reimagined) comfort and prosperity of the past, while 20th-century modernist structures began to seem out of place, even intrusive. In the minds of many citizens, *New Orleans architecture* came to be virtually synonymous with *historical architecture*, and if a historical building was razed to make way for a modernist replacement, this was seen as a double loss.

In retrospect, the local zeitgeist made the city's embrace of Postmodernist historicism—exemplified most famously by Charles Moore's Piazza d'Italia—especially complicated. But that's a story for another time [15]; and in any case PoMo in New Orleans intensified trends that were already powerful. So did the collateral rise of New Urbanism, which, starting in the 1990s, expanded the retro aesthetic from individual structures to entire neighborhoods and fortified its arguments with social policy.[16] The idea of designing new buildings to look like old buildings, once largely limited to the French Quarter, had over a generation become standard policy in designated historic districts, and cultural expectation in most other neighborhoods.

A populist consensus had emerged that the new New Orleans ought to look like the old New Orleans, no matter that old New Orleans had evolved from generations of forward-thinking citizens.

Then came Katrina, and the rest is history—or rather, historicity.

Many observers of post-Katrina New Orleans have credited local culture for saving the city after the deluge; they point to the power of humanistic arguments which invoked the city's glorious past and contemporary significance, and thus triumphed over the utilitarian skepticism that focused mainly on the geological precarity of eroding coasts, sinking soils, rising seas, and a changing climate.

As our study shows, flooded homeowners in large numbers acknowledged these arguments by choosing to resuscitate the built environment of their past—or at least its façade. Surely their decisions were informed by pocketbooks, pattern books, and pragmatism; but even more surely they were shaped by the nostalgia and romanticism that came to define the city in the latter decades of the 20th century. Ten years on, the results of the rebuilding might seem ersatz to some, anathema to others, smacking of laziness and sentimentality at a time when we ought to have prized sustainability and innovation. But clearly the thousands of new old houses, or old new houses, preferred by a ratio of 14 to 1, reveal the ethos of a people in a place nearly destroyed, a society whose own past has became a refuge from a tenuous present and a cicerone to an uncertain future. In the face of civic trauma, the houses stand as monuments to civic will. They will tell stories—of the past decade, and past centuries—for many years to come.

If only they survive as long.

Notes

1. See, for example, anthologies such as *What Is A City?: Rethinking the Urban After Hurricane Katrina* (University of Georgia Press, 2009); *Architecture in Times of Need: Make It Right Rebuilding New Orleans' Lower Ninth Ward* (Prestel, 2009); *The Neoliberal Deluge: Hurricane Katrina, Late Capitalism, and the Remaking of New Orleans* (University of Minnesota Press, 2011); and *New Orleans Under Reconstruction: The Crisis of Urban Planning* (Verso, 2014). As their titles make clear, these volumes aim to problematize, expose, propose, reprimand, advocate, discourage, or laud. So too books such as *Clear as Mud: Planning for the Rebuilding of New Orleans*, by Robert B. Olshansky and Laurie Johnson, and *Crisis Cities: Disaster and Redevelopment in New York and New Orleans*, by Kevin Gotham and Miriam Greenberg, not to mention my own writings on postdiluvian geography, including "A Proposed Reconstruction Methodology for New Orleans" (*Journal of Architectural Education*, 2006); "Above-Sea-Level New Orleans: Residential Capacity of Orleans Parish's Higher Ground" (Center for Bioenvironmental Research, 2007); and "The Laissez Faire Rebuilding Strategy Was Exactly That (*New Geography Journal*, 2015). ↵
2. It's notable that the literature has favored small sample sizes—"case studies" if you like them, "cherry picking," if you don't—over large-N sampling strategies. To be sure, abundant descriptive research using comprehensive data has been conducted to explain the holistic recovery (or lack thereof). Annual reports by the Data Center and Brookings Institution, for example, have interpreted trends since the flood; but they track socio-economic and demographic aspects rather than architectural ones. Likewise, scores of field surveys have been conducted, but usually they target selected neighborhoods and focus on non-architectural themes such as return rates, business re-openings, bike-lane usage, and food deserts. See, for instance, the Dartmouth University study of the Gentilly neighborhood in 2007, which surveyed 16,039 properties. Similarly, students from Harvard University and Bard College mapped 2,400 properties throughout Broadmoor. To my knowledge, none of these surveys focus on architecture, much less citywide. See Colley Charpentier, "Survey Shows Gentilly on the Rebound," *The Times-Picayune*, April 26, 2007; Richard Campanella, "Street Survey of Business Reopenings in Post-Katrina New Orleans," CBR whitepaper, May 2006 and January 2007; James LeSage, R. K. Pace, N. Lam, Richard Campanella, and L. Xingjian, "New Orleans Business Recovery in the Aftermath of Hurricane Katrina," *Journal of the Royal Statistical Society*, 2011; and Joshua Lewis, W. Zipperer, R. Hazen, T. Elmqvist, and H. Ernston, "Socioecological Dynamics in Response to Urban Flooding and Land Abandonment in New Orleans Following Hurricane Katrina," *Delta Dilemmas: Ecologies of Infrastructure in New Orleans*, doctoral thesis by Joshua Lewis, Stockholm University, Sweden, 2015. ↵
3. We conducted the Google searches on January 17, 2016, using standard default settings and unquoted keywords. ↵
4. City permits—required to erect, renovate, or demolish any structure—served us well as a universe for our study. But permits run the risk of underreporting multifamily complexes and public housing projects, in which one permit covers numerous units. We therefore mapped the locations of these larger complexes, randomly selected a proportional number of addresses therein, and added them to our database. ↵
5. The late Malcolm Heard described such new buildings in the French Quarter as "Vieux Carré Revival" in his *French Quarter Manual: An Architectural Guide to New Orleans' Vieux Carré* (New Orleans: Tulane School of Architecture, 1997); see page 138. ↵
6. Purists will point out that "true" shotguns did not have hallways, nor did Creole cottages. In keeping with our goal to characterize the post-Katrina architectural cityscape, our assessments are entirely external, based on the façade. It is safe to say nearly all new residences have hallways. ↵
7. These were all block groups that had median household incomes of over $30,000—the wealthier half of society, by local standards—according to 2011 estimates in the U.S. Census Bureau American Community Survey. ↵
8. A couple of interrelated factors help explain the figures. The first and most important is the wide median-income gap between white and black households before and particularly after Katrina. A second and exacerbating reason is an egregious flaw in the HUD Road Home grants offered to flooded homeowners: because pre-Katrina assessed property values determined the amounts allotted for rebuilding, homeowners in wealthier, whiter areas received more on average than homeowners in poorer, blacker areas. An ensuing racial discrimination lawsuit resulted in a settlement and additional payments, but program funds ran out and fell short of restitution by an estimated $1 billion. Had grants been based on rebuilding costs rather property values, we'd see differences in the rebuilt

environment in poorer areas—namely the Lower Ninth Ward, the one neighborhood where most homeowners opted to sell their properties to the state in exchange for a lump sum rather than rebuild in place. See David Hammer, "Examining Post-Katrina Road Home Program: 'It's more than the money. It's the hoops we had to jump through to do it,'" *The New Orleans Advocate*, July 18, 2015. See also Gotham and Greenberg, *Crisis Cities: Disaster and Redevelopment in New York and New Orleans*. For more on racial settlement patterns, see "Two Centuries of Paradox: The Geography of New Orleans' African-American Population, from Antebellum to Postdiluvian Times," by Richard Campanella, in *Hurricane Katrina in Transatlantic Perspective*, eds. Romain Huret and Randy J. Sparks (LSU Press, 2014). ↩

9. Because of the relationship between higher ground and historical urbanization in this deltaic city, flooding was minimal in Historic District Landmarks Commission areas and they contain few post-Katrina new houses, only 1.5 percent of our sample. ↩

10. It's important to note that these HOPE VI transformations, which began in the late 1990s, would have happened regardless of the Katrina flood. ↩

11. This figure is slightly higher than the oft-quoted national figure of 2 percent, although both percentages swell substantially when the "unique" is dropped. We calculated the figure by extracting from our sample of 333 those permits that identified a "commissioned architect." There were 37, or 11 percent. But upon reviewing the associated blueprints, it became apparent that 27 were replications of earlier designs. The other ten were unique, thus 10/333 = 3 percent. Clearly, this figure would increase if one expands the notion of what constitutes an "architected" house. Chief Building Officer Zachary Smith, who was interviewed for our study, estimated that about 40 percent of new post-Katrina houses involved licensed local architects at some substantive level, beyond stamping plans. ↩

12. See Robert Wolfe Construction, Inc., Standard Home Plans. ↩

13. Richard Campanella, "Monorail Derailed," *Times-Picayune*, February 12, 2016. ↩

14. New Orleans' focus on architectural heritage dates to the early 20th century, when local elites began to advocate for preservation decades before their counterparts in other American cities. But their early success was largely confined to the French Quarter. It was not until the 1970s (contemporaneous with the modern preservation movement, which was sparked by the National Historic Preservation Act of 1966) that the movement gained strength across the whole city. ↩

15. The Piazza d'Italia was constructed in downtown New Orleans in 1978, and although architect Charles Moore's intentions were, according to John Klingman, more along the lines of wit and irony, the installation became a paragon of a movement that would win over many local eyes. Modernism was now on the defensive, and one of its biggest defeats was the 1995 demolition of Curtis and Davis' 1968 Rivergate Convention Center to make way for the retro-revival Harrah's Casino." See John P. Klingman, *New in New Orleans Architecture* (Gretna, Louisiana: Pelican Publishing Company, 2012), 9. ↩

16. Starting in the mid 1990s, in New Orleans as in other U.S. cities, the development of public housing projects was administered by HUD's Hope VI Program, which was strongly influenced by New Urbanist tenets. ↩