

Measuring What Matters

LINDA C. SAMUELS

Washington University in St. Louis

BOMIN KIM

Washington University in St. Louis

In April 2019, the National Geospatial Agency (NGA) revealed its latest plans for their NGA West campus in north St. Louis which includes one 712,000 square foot office building, a “visitor control center” and two parking garages. On 92 acres of land in the heart of a historic neighborhood, claiming to be a “project that will transform a swath of [the city] hollowed out by decades of disinvestment,”¹ this announcement fails to report the entire eradication of the neighborhood, whose last homes were razed to make way for the NGA, or the urban renewal, shady real estate transactions, and malignant neglect that instigated and perpetuated the neighborhood’s demise. To add insult to injury, the new NGA will sit adjacent to the old Pruitt Igoe site, the infamous failed housing project that hoped to rejuvenate the neighborhood but ultimately contributed to the gutting loss of over 80% of the area’s population.² Dr. Mindy Fullilove calls this unwelcome displacement, and its larger version perpetuated by the pandemic of urban renewal, *root shock*.³ But the NGA West project and hundreds of projects like it in the country perpetuate discriminatory practices of urban renewal under the name of economic development and prolong the neoliberal paradigm that prioritizes development dollars over all other goals. Under this encompassing agenda, consideration of social and environmental costs – both visible and invisible – are not typically part of the equation.

As educators of architects, landscape architects, and urban designers, we introduce constructed measurement frameworks like LEED ND, STAR Communities, SITES and others that mask the true costs of the pro-growth model. This paper examines the expanded cost of the NGA West development to the St. Louis Place neighborhood and the city at large, including elusive hard and soft social factors. The call to action, as developed in response to the ACSA Less Talk / More Action conference mission, asks professors and practitioners alike to grapple with the value of the immeasurable in design work – rootedness, hope, happiness, opportunity, justice, democracy – and to work towards teaching and implementing strategies of measuring what matters rather than only measuring what is economically profitable.

GETTING TO MEASURING WHAT MATTERS

Today, the City of St. Louis celebrates the new National Geospatial Agency (NGA) West Campus as a catalyst for significant investment and redevelopment in a vulnerable and struggling community in North St. Louis. Government agencies and private developers claim the NGA will generate \$2.4 million a year in tax earnings, lifting the previously disinvested St. Louis Place neighborhood out of poverty. As the city prepares for the new campus to bring in a younger and socio-economically different demographic that will both increase diversity and stabilize the neighborhood, this neoliberal paradigm of urban renewal venerates the logic of the market while stripping the neighborhood of the environment and the people who previously occupied it. Looking more deeply into this single site, this research critiques the entrenched, neoliberal growth model by assessing the much larger costs brought by such displacement to both the community and the city. In addition, in the context of the ACSA and the Less Talk / More Action conference, we question the responsibility of studio design professors and practitioners to evaluate the success of design work through a more cumulative lens of social costs and benefits.

What we measure reflects and reproduces our priorities. For the city of St. Louis, like many post-industrial cities still struggling to stabilize, population and tax base growth is often used as a measure of success. Local governments use development incentives as vehicles to attract industry, jobs, and therefore new people to increase tax base, conflating localized economic growth with city progress. Such “fetishizing” of barometers of progress that measure economic output alone fail to capture the social and environmental costs that development can bring.⁴ Urban renewal grounded in neoliberalism perpetuates a form of indiscriminate growth, potentially leading to instability, and most consequentially, inequality.⁵ Dr. Eric Zencey, ecological economist formerly from the University of Vermont and Washington University in St. Louis, developed the Growth Progress Indicator, or GPI, as an alternative to the entrenched GDP model of measurement which claims all spent dollars as beneficial regardless of their rationale (i.e. the cost of disaster recovery is just as beneficial as the cost of building new infrastructure). In addition to differentiating good dollars from bad, Zencey states that measuring what matters also entails considering the costs of



Figure 1. New site of the National Geospatial Agency (NGA) West Campus located in the St. Louis Place neighborhood in (from left to right) 2016, 2017, and 2018. (Image credits, left to right: David Carson, St. Louis Post Dispatch; Chris Lee, St. Louis Post Dispatch; provided by NGA West).

loss. The purported benefits of the NGA failed to take into account the degradation of natural, human, and social capital during the systematic erasure of the existing neighborhood. In this case, we wanted to know – how do we measure urban renewal and the loss of community in order to accurately assess the benefits of the NGA?

NGA WEST AND THE ST. LOUIS PLACE NEIGHBORHOOD: A DEVELOPMENT CASE STUDY

In order to challenge these types of pro-catalytic development and reinvestment strategies, we needed to both examine the existing frameworks for measuring urban renewal and identify the missing costs in models used by the city. Given the complex history of urban renewal in St. Louis, the removal of community members from the St. Louis Place Neighborhood must be considered in context as the most recent chapter of multigenerational community destruction and dislocation, a form of “root shock” explored in the work of Dr. Mindy Fullilove. In her book *Root Shock: How Tearing Up City Neighborhoods Hurts America and What We Can Do About It*, Fullilove defines root shock as “the traumatic stress reaction to the destruction of all or part of one’s emotional ecosystem.”⁶ Her theory is based on observations of the psychological effects of urban renewal and “tearing up city neighborhoods.”⁷ By the city’s measurement standards, St. Louis Place was an impoverished neighborhood full of vacant lots, high crime and disintegrating infrastructure. Yet documented interviews of displaced residents identified the neighborhood as a vibrant social space home to a tight-knit community.⁸ Mapping further shows a history of successful businesses and high-density neighborhoods, later undermined by urban renewal and spurious property investors. At the time of the NGA proposal, several formal and informal businesses along with the last of the die-hard multi-generational residents, contributed to the neighborhood’s value (See Figure 1). The myopia of the city’s measurements led to an incomplete methodology when evaluating the cost of the NGA that failed to include a range of human costs. Had the government measured St. Louis Place neighborhood’s spatial and social community value instead of a tax-oriented, growth-based measurement, the NGA’s cost would include the lasting consequences of neighborhood erasure beyond an overly simplistic framework of housing compensation.

METHODOLOGY: MEASURING SOCIAL SUSTAINABILITY

DECLINE & DISINVESTMENT

One of the largest barriers in measuring social spaces is finding appropriate indicators that capture the various characteristics of our environment’s social dimensions.⁹ Social sustainability researchers note that indicators must reflect the needs of the neighborhood and measure both “spatiality” – quantifiable indicators such as employment and poverty rates, and “sociality” – qualitative indicators such as identity and sense of place.¹⁰ To measure the neighborhood’s loss of spatiality, our study used the factors incorporated in the Institute on Metropolitan Opportunity’s (IMO) Neighborhood Change model to analyze patterns of change and development at a census-tract level in the St. Louis Place Neighborhood.¹¹ The tool’s model of neighborhood change captures not only economic expansion and decline, but also the social and economic changes of growth, low-income displacement, low-income concentration, and abandonment.¹² Here, economic expansion is defined as areas experiencing growth and economic strengthening, while economic decline is defined as areas experiencing impoverishment, disinvestment, and poverty intensification.¹³

The IMO Neighborhood Change tool falls short in two ways as applied to the St. Louis Place Neighborhood. To date, most studies of neighborhood change have traditionally focused on singular urban dimensions such as economic decline or housing values, reiterating the notion that urban change is linear. Yet scholars have repeatedly demonstrated that urban relationships are instead determined by interconnected variables that feed back to influence one another, creating a kind of cyclical exacerbation of disinvestment and decline.¹⁴ In addition to the inability to consider systemic impacts, the methodology used in the IMO tool measures neighborhood economic expansion and decline within an arbitrary time frame (2000 to 2016), resulting in a reading that misses the bulk of displacement and decay that started decades earlier in St. Louis Place. The Neighborhood Change model therefore shows such low levels of population change since 2000 that the neighborhood appears stable. Though useful in originally



Figure 2: Figure Ground drawings based on Sanborn maps and aerial images of Census Tract 1271 beginning in 1950 and including 2000, 2010, 2015 and projected 2025 maps (spatial data between 1950 and 2000 is missing). The last two maps show the NGA West site overlaid in gray and the final map shows the latest footprint (2019) with a primary center building and a parking garage on either side. (Image credit: Kim and Samuels).

framing the question, the IMO tool proves an inadequate measure to identify decline or expansion at the NGA site and likely would be just as limited at other sites where decades of displacement occurred prior to the year 2000, meaning most sites where significant African American root shock occurred during the peak of urban renewal.

Regardless of the small remaining population, the St. Louis Place Neighborhood still showed continued population loss and a rising share of low-income residents in the last two decades (See Figure 2). In particular, census tract results show a 20% decrease in total population, of which 40% of the population loss came from those earning middle to high income, increasing the proportion of low-income population and poverty concentration in the neighborhood. Over 75% of the population that left were under the age of thirty-five, leaving the neighborhood's demographic significantly older. Because Fullilove's root shock focuses on multigenerational neighborhood destruction, this study required additional indicators to the Neighborhood Change framework to more comprehensively evaluate the loss of intergenerational social spaces.

COMPENSATION INEQUITY

The City of St. Louis provided a \$1.6 million NGA displacement fund to help relocate homeowners from the St. Louis Place Neighborhood. Little data, however, is available on how much of that funding went specifically to the residents themselves. Between the numerous lots bought by local developer Paul McKee under a range of various aliases, and the inflated property prices he charged the city when selling them the land back for this development, it's unclear from the available city data who received funding allocations and how much.¹⁵ To determine this information, we developed a block scale framework and appropriate indicators to specifically address this added inequity.

First, a combination of GIS data that illustrated building density loss and land ownership was used to isolate the number of occupied buildings that were lost both before and after the NGA site clearing. This map was then overlaid with information from court proceedings that detailed the specific occupied houses and how long they were occupied to isolate owner-occupied homes from homes and lots owned by McKee, his aliases, and other absentee developers. Of the 16 compensated properties detailed in the NGA site-related court eviction notices, the map shows that only a fraction were owned by St. Louis Place Neighborhood residents. Those owners received 38% of the total eminent domain relocation cost.¹⁶ The other 62% was paid to developers and non-residents, such as McKee, whose land banking and intentional neglect had been driving the market housing value of the neighborhood down for years.¹⁷

Results show that the City of St. Louis calculated the economic loss of housing based on what the government deemed "generous" fair market price, averaging \$157,000 per family.¹⁸ Though the city may argue that this and the allocated \$1.6 million displacement fund adequately covered the loss of the cost of homes in the neighborhood, this fails to consider not only the ability to accrue home equity for following generations but also the additional burden of finding similar housing in different neighborhoods. As suspected, it also entirely disregards the intangible costs of displacement as outlined by Fullilove and others.

MEASURING SOCIAL CAPITAL

To operationalize the qualitative indicators of social sustainability, including the different types of social relationships in the NGA site within the St. Louis Place Neighborhood, the study used a social capital framework to identify important social networks and interactions. Although social capital does not have an established definition across disciplines, scholars agree that social capital "centers on social networks and embedded resources which can be mobilized through

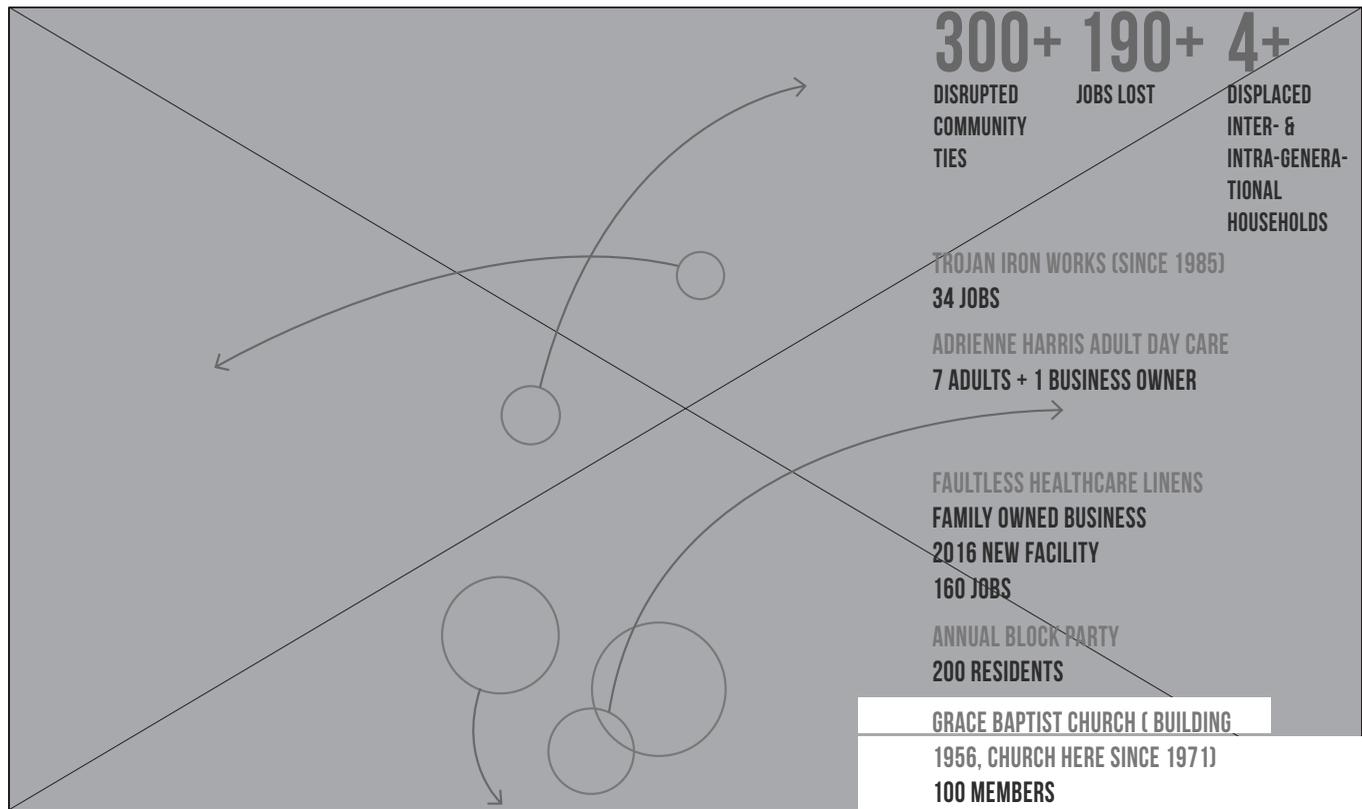


Figure 3: Locations of properties impacted through eminent domain in the St. Louis Place Neighborhood for the relocation of the NGA and the social costs of their displacement. (Image credit: Yaoyao Chen, Bomin Kim, Shaoxuan Liu, Zimeng Wang, Bixiao Yuan and Linda Samuels).

social interactions, leading to potential benefits for individual and collective actors.”¹⁹ Social capital often includes the invisible safety nets that fill in the gaps of employment, child care, neighborhood security and crisis management that might otherwise require extensive resource investment or go unfilled.

In perhaps less equity-forward ways, social capital theory has often been used to justify new economic development and gentrification in previously disinvested neighborhoods. Earlier research supported the premise that as neighborhood change shifted the social environment, intentional social mixing generated social capital between new and existing residents for their collective benefit.²⁰ One of the main goals of such socio-spatial mixing has been to reduce concentrated pockets of urban poverty and residential segregation by encouraging mixed-income neighborhood communities.²¹ St. Louis politicians subscribe to this theory and have repeatedly stated that bringing in a younger and socioeconomically contrasting demographic will encourage diversity and stabilize the area. However, more recent research refutes earlier findings that social mixing efforts lead to greater social capital and show instead that new residents tend to create separate and distinct groups, socially segregating within the same neighborhood. Significant neighborhood change actually disrupts social networks in minority-race neighborhoods where shifting racial

dynamics tied to housing insecurities negatively impact social norms, trust and reciprocity between neighbors.^{22 23 24}

To measure the social capital loss caused by the NGA, the study mapped five spaces that encouraged meaningful social connections and were served eviction notices as part of the relocation: Adrienne Harris’s Adult Daycare Center, Iron Trojan Works, Grace Church, Faultless Healthcare Linen and the green space on 2134 Mullanphy often used for community gatherings. Mapping these five spaces and their subsequent “sociality” through the lens of social capital theory showed that over 500 people’s social ties were disrupted, including the displacement of 100 parishioners and their 50-year-old church, 190 jobs lost and the last 4 historically inter- and intra-generational households uprooted (See Figure 3). Although the government and developers have described St. Louis Place neighborhood as “not a real neighborhood” and not a desirable community to live in because the housing market values the homes below the city’s average price,²⁵ the severed bonds documented above indicate otherwise. The insufficient payouts following hearings shrouded by legalese captured neither the “spatiality” nor the “sociality” of the neighborhood displaced for the NGA development.

Through the lens of Fullilove’s root shock, the research above details the process used to measure the loss of community



Figure 4: Tight-knit residents of the St. Louis Place Neighborhood gathered regularly in this side yard at Mulanphy St. and North 23rd for food and conversation. When they were first notified that their homes could be taken through eminent domain to accommodate the new NGA West site in winter of 2015, several neighbors, including Gustavo Rendon (top right) began an on-site vigil and protest. Gustavo and his wife Sheila, who had lived in St. Louis Place for 20 years, and their two children were forced from their home in April 2016. (Image credit: stills from *Exodus*, a documentary by Jun Bae, 2016. <https://www.junbae.com/exodus>)

experienced by the St. Louis Place neighborhood residents who previously lived in the NGA site block. Because existing displacement frameworks leverage quantitative census data that analyzed an aggregate of the St. Louis Place Neighborhood and not specifically the NGA block, this study utilized a combination of GIS mapping and legal documents to isolate the NGA block and more comprehensively measure the cost of losing the “spatiality” of place. The “sociality” of place and subsequent non-physical costs of NGA root shock were measured by using social capital theory to analyze qualitative narratives of community members and the loss of community environments. Adopting this alternative framework of measuring social sustainability demonstrates that despite the narrative of fair compensation, the people and their community in the St. Louis Place neighborhood were greatly disadvantaged in the City’s process of relocating the NGA campus to the north-side. If cities are interested in sustainable development, more care and attention must be given to social sustainability and the implications of so-called catalytic development. Rather than economic frameworks rooted in shortsighted and faulty

methods, large-scale urban changes require a multidisciplinary lens to more comprehensively capture the complexities of sustainable urban development and social sustainability.

THE TAX MYTH

In addition to the social costs that went unaccounted, the claims of a \$2.4 million annual tax benefit fail to tell even the full financial story. Part of those city taxes are not gained, but retained from the relocation of the NGA within the city limits from their former site. A portion of those tax benefits are projected city earnings tax based on additional employment the NGA is claiming, taxes that would be collected regardless of their chosen site as long as the facility stays within city limits. A full range of state, federal, and local incentives must all be taken into account, as funding allocated for the NGA means other needs move down the list of priorities. In addition to a \$1.75 billion federal pledge, \$131 million in state money has been set aside to fund the project’s construction, including a \$36 million state Brownfield Tax Credit to build on the now

conveniently vacant lot.²⁶ The City of St. Louis and the State of Missouri have allocated an additional \$1.5 million per year city tax earnings and \$5.85 million per year state tax earnings over the next 30 years for the project.²⁷ By 2045, the total state and city tax spending alone will cost the city more than 7 times the estimated additional tax earnings from the NGA West Campus.

Lastly, the land assembly and acquisition is an ongoing narrative of disenfranchisement. Though precise dollar amounts have not been verified, the properties owned by McKee and his related shell companies, for which he received initial tax incentives estimated at \$95 million, then had to be repurchased by the city before they could be offered at no cost to the NGA.²⁸ Additionally, the city took out a \$20 million loan to pay for those assembled lots, far more than the \$600,000 price originally paid by McKee.²⁹ Clearly, the advantages fall disproportionately towards the already wealthy and away from those simply struggling to hold on to their hard-fought assets.

THE RESPONSIBILITY OF MEASURING WHAT MATTERS

This research began in an Advanced Urban Sustainability course in the Doctor of Sustainable Urbanism and Master of Urban Design program at Washington University in St. Louis originally tasked with exploring the practices and measures by which sustainable urbanism is produced, substantiated and evaluated.³⁰ In recent years, efforts have been made to quantify the “success” of individual buildings, neighborhoods and systems, but holistic frameworks for deep evaluation that include a full range of real social costs and benefits have proven elusive. This is due to many factors, including but not limited to unreliable or unavailable data, necessary time commitment, opaque or erroneous reporting, and the extreme complexity of understanding the workings of systemic, inter-reliant systems – not to mention sheer greed and ignorance. With the costs at stake, though, the challenge is a valiant one. With St. Louis as a fertile test ground and a place in dire need of sustainability advocates, we set out to critique existing measurement systems being touted by the city and question the ways in which they failed to “measure what matters”. Though we have attempted to measure the lost “sociality” of place and the slanted accounting of value, we do not even begin to assess the true environmental costs of the NGA West project or, more dire, the cost of the anti-urban design strategy of

generic parking garages and militarized office space fenced and floating inside a giant, grassy green moat in the middle of what once was a dense urban neighborhood.

This paper and the conference presentation summarize the work of the Wash U student team and expanded efforts by the two authors to solidify the findings. One aim is that the work informs real action on the ground in St. Louis and exposes the ways in which a narrow scope of assessment over-privileges particular measures and, in the process, particular groups of people. Not only is this discriminatory, it fails entirely to consider factors that help produce and perpetuate the high-quality neighborhoods and cities that promote and sustain real vitality – and that are in demand nationwide. More importantly in the context of the conference, though, the aim was to expose the narrow ways that real design practice and studio projects in particular also perpetuate a narrow view of “success” by ignoring the complexity of social costs all development instigates. There are no empty sites; “vacancy” is never vacant. If we fail to teach the social consequences of design work, those values fail to emerge in the practice of our students’ future work.

In 1969, Sherry Arnstein published a now seminal text on citizen participation that exposed the shallow reality of most community engagement processes.³¹ Though improvements have been made and more academics and practitioners are aware of the short-comings of their often budget and time-limited processes, the truth is that architects, landscape architects, and urban designers are still learning best practices to create design work that facilitates the most equitable possible practices and supports and protects the most vulnerable populations who already occupy the neighborhoods in which we work. Though all projects are not intended to be activist urban instigations, nor should they pretend to be when time, budget, and commitment do not fully allow, measuring what matters means, at the very least, that we hold ourselves and our students accountable for blindly buying into the default growth-at-all-costs neoliberal system. We must also hold our disciplines accountable for demanding and facilitating a more comprehensive list of “what matters” and a more aggressive commitment to ensuring that the measurement of what matters continues to grow.

ENDNOTES

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