Brooklyn's Deadly Darling: Environmental Remediation, Gentrification, and Resistance to Change the Gowanus Canal

Abstract: Green gentrification and ongoing displacement collide in this study of the changing Gowanus Canal and the neighborhood surrounding it. The Gowanus Canal has been the site of anthropogenic manufacturing, development, and pollution for centuries, and is widely known as a carcinogenic cesspool of Brooklyn. However, as clean-up efforts continue, housing costs in the area have skyrocketed, leading locals to resist projects that would make the Canal and its surroundings safer in the name of preserving the working-class spirit and culture of the neighborhood. The Gowanus neighborhood represents a unique case study to examine how the human right to housing conflicts with the human right to a healthy environment, as the green growth cycle wreaks havoc on locals' financial ability to remain in the area. The issue of canal cleanup will only increase in relevance as climate change pushes more superstorms into New York City. The Gowanus Canal serves as a runoff site for raw sewage that floods during times of extreme precipitation, and with an increase in such weather events, its extremely contaminated and poisonous water will more often breach its banks. Neglected by the city, exploited by developers, and in dire need of environmental intervention, the Gowanus Canal is a growing local challenge, as is navigating its remediation in a socially responsible way.

Body:

Mention the Gowanus Canal to any New Yorker, and you'll invariably receive the same reaction–disgust. The notorious Brooklyn Superfund site, located between the affluent neighborhoods of Carroll Gardens and Park Slope, has become the stuff of urban legend due to its almost unbelievably foul smells and appearance, the result of a myriad of chemicals and pollutants within it. Since the start of the twenty-first century, the Gowanus Canal has become the site of repeated, but ultimately, ineffective cleanup efforts. Attempts to defuse the biohazards of the area have led to increased investment and construction near the Canal, especially by high-income young people and the establishments that serve them. The skyrocketing rent and neighborhood changes associated with this influx of wealth have led to local pushback against environmental remediation of the Canal, as it has become inextricably associated with gentrification and forced demographic shifts. The Gowanus Canal is an excellent case study of the green gentrification phenomenon, as well as the mixed responses cleanup efforts incite in locals who have lived with extreme pollution for years. Due to flaws and oversights in the execution of the Gowanus Canal remediation project, specifically a lack of community engagement, local activism is often opposed to the increased greening of the neighborhood.

The Gowanus Canal started as Gowanus Creek, a saltwater estuary surrounded by salt marshes.[1] Artificial ponds alongside Gowanus Creek powered Dutch gristmills, and the proximity and easy boat access to Manhattan facilitated trade.[2] Brooklyn's population explosion during the early nineteenth century strained already unstable city infrastructure, and in 1848, it was proposed

[1] Joseph Alexiou, *Gowanus: Brooklyn's Curious Canal* (New York and London: New York University Press, 2015), 8.
[2] Alexiou, *Gowanus*, 8.

to turn the salt marshes of Gowanus Creek into a conduit for sewage and storm runoff.[3] The Gowanus Canal came into existence between 1853 and 1874 and aided further in the development of the area by creating a new commercial waterfront that hosted industrial sundries, which facilitated a comfortable standard of living for new Brooklynites.[4] While the Canal had groundbreaking impacts on life and industry in Brooklyn, there was no escaping the fact that it was still an open sewer. New York City's sewage system is a combined one, where sewage and stormwater are mixed in the sewage system before being transported to a treatment plant for processing.[5] This becomes problematic during and after rain: faced with a deluge of water, treatment plants cannot process wastewater rapidly enough, and the combined system overflows both relatively innocuous stormwater runoff and extremely harmful raw sewage directly into metropolitan waterways.[6]

By 1858, the Gowanus Canal stank, and by the 1870s, "sandbars" of both human and industrial waste had formed within the Canal, making the moving of vessels extremely difficult.[7] One city official noted in 1877 that, due to the texture of the muck, it "slides from the shovel… as soon as it is displaced".[8] Economic dysfunction in the region begun by the stock market crash in 1929 was amplified by the installation of Robert Moses's Brooklyn-Queens Expressway in 1950, a highway that eliminated the need for the Gowanus Canal as a mode of transportation.[9] The latter half of the twentieth century saw the Gowanus stagnant and rotting, as overlooked and under-resourced as the working-class communities surrounding it. Only with an influx of young, middle-

[3] Alexiou, *Gowanus*, 9.
[4] Alexiou, *Gowanus*, 9-10.
[5] Alexiou, *Gowanus*, 152.
[6] Alexiou, *Gowanus*, 152-153.
[7] Alexiou, *Gowanus*, 11.
[8] Alexiou, *Gowanus*, 11-12.
[9] Alexiou, *Gowanus*, 13.

class creatives in the mid-2000s did this begin to change. Fleeing skyrocketing Manhattan rent, New York's young professionals, many of them in art-adjacent fields like graphic design, beelined for the post-industrial landscapes of Brooklyn.[10] Developers, sensing a developing market, swiftly followed, and the Gowanus Canal attained Superfund status in 2010 as the federal government committed to cleaning it up for good.[11]

Before discussing gentrification in the Gowanus neighborhood, it is important to establish the Canal's existing environmental problems, why they have ballooned to their current state, and what is being done to address them. According to the New York State Department of Environmental Conservation, most concerns having to do with the Gowanus Canal involve the spreading of waterborne contaminants beyond the Canal's banks.[12] Some especially distressing possibilities are soil and groundwater contamination, with the potential for these contaminated materials to "migrate" offsite and emit vapor into buildings constructed in the area.[13] The contaminants in the Canal extend beyond sewage, and some of the key candidates for pollutant migration are NAPLs, or non-aqueous phase liquids.[14] These are organic liquid contaminants that cannot mix with water, preventing their natural decomposition.[15] Some examples in the Gowanus Canal include coal tar, pesticides, and petroleum products.[16] To mitigate the migration of pollutants, and in a long-term effort to return the Gowanus site to some semblance of a welcoming

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[10] Alexiou, *Gowanus*, 17.
[11] Alexiou, *Gowanus*, 14-15.
[12] Susan Edwards. *Letter Regarding USEPA/NYSDEC Joint Remedy Evaluation to Pat Evangelista.* Letter. December 8, 2021. From Brooklyn Paper, https://www.brooklynpaper.com/wp-content/uploads/2022/02/DECLetterDec21.pdf (accessed 10/13/2024).
[13] Edwards, Letter Regarding Evaluation. 2021.
[14] Edwards, Letter Regarding Evaluation. 2021. (United States Environmental Protection Agency 2020)
[15] Scott G. Huling, and James W. Weaver. "Dense Nonaqueous Phase Liquids." *Groundwater Issue: United States Environmental Protection Agency* (March 1991). Retrieved December 16, 2024, from https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L09G.PDF?Dockey=2000L09G.PDF.
[16] Huling and Weaver. "Nonaqueous". 1991.

habitat, the federal government is attempting to first dredge the Canal of its notorious muck, then install multilayer sediment caps on top of contaminated soil after sludge removal to block it from further damaging the environment.[17] The sediment caps are composed of layers of treated soil, gravel, and sand to allow filtration but not contamination.[18]

To fund this cleanup project, the Gowanus Canal has been assigned Superfund status. The "Superfund" is the informal name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which was passed in 1980 to give the federal Environmental Protection Agency (EPA) the power to reclaim and rehabilitate sites of extremely intense and dangerous pollution.[19] When a site attains Superfund status, it becomes eligible to receive federal protection and funding for cleanup, expediting the process of environmental remediation.[20] The timing of the Gowanus Canal's Superfund status in 2010 aligns better with the influx of wealth into the area than with the necessity to clean up the Canal. Sewage and other contaminants had been in the Canal and the surrounding area for centuries by 2010 and had had negative impacts on the surrounding area throughout that time, from neighborhood nuisance to outright health hazard.[21] The main reason the Gowanus Canal was not addressed seriously was because of its location in an under-resourced, working-class community. Once wealthier people began to take up residence in the neighborhood, it became profitable for housing and commercial developers to appeal to more high-income potential consumers by beginning a cleanup project on the Canal.

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[17] United States Environmental Protection Agency. November 16, 2020. "EPA's Cleanup of the Gowanus: Brooklyn, NY." Superfund Site: Gowanus Canal. Brooklyn, NY. https://semspub.epa.gov/work/02/594494.pdf.
[18] USEPA. "Gowanus". 2020.
[19] United States Environmental Protection Agency. "What is Superfund? | US EPA." Environmental Protection Agency (EPA). October 8, 2024. https://www.epa.gov/superfund/what-superfund
[20] USEPA. "Superfund". 2024.
[21] Alexiou, *Gowanus*, 11.

Gentrification can be defined as the combined process of renewing or rebuilding a deteriorating neighborhood concurrent with an influx of middle-class or affluent people, leading to the displacement of those already living in an area.[22] The definition of the "green gentrification cycle" adds another facet to this by speaking directly to the connection between urban greening initiatives, in particular, such as new parks, and increased gentrification in areas near these initiatives.[23] As neighborhoods become more appealing to live in, lower-income residents are displaced as more profitable, more affluent populations seek to move in and take advantage of new environmental amenities. Gould and Lewis identify the "sustainability class", or those attracted to the increased environmental amenities provided by green gentrification, as generally socially conscious and driven by liberal social values that encourage the environmental improvement of the spaces around them.[24] This leads to increased implementation of sustainability initiatives as a gentrifying area gains more fiscal resources supplied by its new occupants.[25] The promulgation of this "green growth machine," which uses the same logic as trickle-down economics to assure investors that sustainability measures in choice areas will ultimately spread benefits to all, ultimately causes demographic shifts as lower-income residents can no longer afford to keep up with the pace of change in greening communities and are forced to move. The Gowanus Canal is an excellent case study of this phenomenon.

It is impossible to discuss the inevitability of the green gentrification cycle in the Gowanus neighborhood without mention of Hurricane Sandy. On October 29, 2012, Hurricane Sandy hit

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[22] Kenneth A. Gould, and Tammy L. Lewis. "Green Gentrification and Hurricane Sandy: The Resilience of the Green Growth Machine around Brooklyn's Gowanus Canal" in *Taking chances: the coast after Hurricane Sandy*. Edited by Karen M. O'Neill and Daniel J. Van Abs. (New Brunswick, New Jersey: Rutgers University Press, 2016), 145-163. 147.

[23] Kenneth A. Gould, and Tammy L. Lewis. *Green gentrification: urban sustainability and the struggle for environmental justice.* (London and New York, NY: Routledge, Taylor & Francis Group, 2017), 2.

[24] Gould and Lewis. *Green gentrification.* 107.

[25] Gould and Lewis. *Green gentrification.* 107.

New York Harbor at high tide, sending a thirteen-foot storm surge of sewage-laden, noxious floodwater directly from the Gowanus Canal into the surrounding area.[26] The flood was so severe that the second floors of houses were breached with contaminated stormwater, and though warnings to avoid water contact with skin were emailed to residents, many had lost power and did not receive the messages.[27] It was later found that the flooded area retained high levels of harmful enterococcus bacteria after the water retreated, as well as semivolatile organic compounds known to be a core component of Gowanus Canal sludge.[28] Though Sandy had completely flooded areas zoned for construction of luxury housing, these projects continued after the stormwater dissipated, and a sustainability-themed Whole Foods was opened a year later, followed soon by a new 700-unit luxury apartment complex.[29]

The insistence to continue developing land that is doomed to flood, especially when the development panders to the typical member of the sustainability class, is driven both by myopic pursuit of profit and by a deliberate refusal to concede to the reality of impending sea level rise caused by anthropogenic climate change. Developing waterfronts like the Gowanus Canal through construction currently means making them less resilient to floods that will continue to increase in frequency and intensity, with materials like concrete amplifying the effects of climate change. This risk is compounded by the fact that such waterfront development increases the number of people living in flood-prone areas, literally encouraging them to move in. While newer, wealthier residents can afford to flee coastal natural disasters and rebuild after them, longer-term working-class residents are forced to permanently relocate after such events due to irreparable property

[26] Gould and Lewis. "Hurricane Sandy." 145.
[27] Gould and Lewis. "Hurricane Sandy." 154-155.
[28] Gould and Lewis. "Hurricane Sandy." 155.
[29] Gould and Lewis. *Green gentrification.* 101.

damage. This leads to the continued displacement of working-class community members and the continued development and redevelopment, and thus profitability, of increasingly damaged waterfront property. Judging by current patterns, the green gentrification cycle has created a situation that is both unsustainable and inequitable in the Gowanus neighborhood.

Despite the ongoing climate risks, one of the large drivers of green gentrification in the Gowanus area is the reeking Canal itself, conceived of by investors not as a blight on the landscape but as a site with the potential to facilitate a "Venice in Brooklyn".[30] In this way, green gentrification in the Gowanus neighborhood has ambitions beyond merely decontaminating the Canal: investors seek to make it an environmental attraction. This luxurious vision stands in stark contrast to New York City's previous strategy regarding the undesirable land around the Canal, which was to erect multiple public housing projects, including Wyckoff Gardens and Gowanus Housing.[31] Siting public housing projects near environmentally dangerous locations is not an unusual phenomenon, especially in New York City. NYCHA's Queensbridge Houses are directly adjacent to the Ravenswood Generating Station, a gas power plant which emits harmful fumes that have earned the area the nickname "Asthma Alley" due to their effects on locals.[32] In the East Village, the Jacob Riis Houses are built on top of a nineteenth-century gas plant that left carcinogenic tar and arsenic in the soil, affecting drinking water quality there to this day.[33]

This pattern takes on an especially sinister overtone when the people forced to move into an area that is actively dangerous to inhabit are subsequently forced to leave as soon as the area

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[30] Gould and Lewis. *Green gentrification.* 92.
[31] Gould and Lewis. *Green gentrification.* 104.
[32] The Solutions Project, "A Climate Justice Victory in Queens Will Help Power New York City", The Solutions Project, December 2, 2024. https://thesolutionsproject.org/a-climate-justice-victory-in-queens-will-help-power-new-york-city/.
[33] Greg B. Smith, "Cancer-Causing Chemicals Still Lurk Under NYCHA's Jacob Riis Houses, 19 Years After Detection", The City, August 5, 2024. https://www.thecity.nyc/2024/08/05/cancer-chemicals-nycha-jacob-riis/.

shows signs of improvement. A key aspect of the Gowanus Canal green gentrification cycle is the environmental racism pervasive in the timing of environmental cleanup efforts. Two core tenets of the environmental justice movement are that hazardous facilities are concentrated in minority and low-income communities in the United States and that, as a result, these communities are exposed to increased environmental hazards.[34] Most of the occupants of the public housing projects surrounding the highly toxic Gowanus Canal are people of color, while most of the new arrivals to the neighborhood are not.[35] White newcomers bring money to fuel the green growth machine, and the combination of their economic and racial privilege finally spurs action on a problem that has been impacting a low-income neighborhood for centuries. This is because their presence has more potential for profit than current residents and is therefore valued more by business and housing developers with the means and motives to appeal to this more lucrative market. The green growth machine in Gowanus will continue to cause greater housing segregation and inequality, as the "creative class" pushes out not only working-class residents but also the businesses employing them. Light industrial employers such as iron, marble, and scrap metal works in the Gowanus area are affected by the increasing demand for housing in the area. This demand not only threatens their ability to economically stay open by increasing property value, but also leads to pressure to shut down such employers, deemed aesthetic or, ironically, environmental "nuisances" by neighborhood newcomers.[36] Reducing working-class employment opportunities is a very effective way of forcing them to leave an area.

[34] Dorceta E. Taylor. *Toxic Communities: Environmental Racism, Industrial Pollution, and Residential Mobility.* (New York: New York University Press. 2014), 1.
[35] Gould and Lewis. *Green gentrification.* 107-109.
[36] Gould and Lewis. *Green gentrification.* 107.

With shifting demographics, the question of who represents the Gowanus neighborhood and its best interests increasingly arises. Jessica Ty Miller's doctoral dissertation attempts to directly address that question by interviewing inhabitants of the Gowanus neighborhood. While many newcomers to the neighborhood praised how "hip and interesting" it had become over the past few years, many longer-term residents stressed that though they understood their home was changing, they still wanted to have a say in how it was shaped.[37] Some middle-aged interviewees named the working-class, industrial history of Gowanus as one of its strengths, indicating that it was both a home and livelihood for many.[38] This dual function seems to cause longer-term inhabitants of the area to respect it and desire the preservation of Gowanus's "quirky beauty." [39] While community members acknowledge a reduction in crime in the area, along with less noise pollution from industrial trucks and manufacturing, they "reluctantly" refer to it as positive, revealing that they miss the "texture" of the neighborhood.[40] Some interviewees also noted that crime reduction could remove barriers to future development in the area, as the "disgusting" and "foreboding" canal provided a space for illegal activity such as prostitution and drug dealing, which occurred less often as canal cleanup led to increased use of the land around it.[41] The reluctance displayed toward signs of economic development in the neighborhood is epitomized by one community advocate who revealed he preferred "rather the Canal not be cleaned up and that there be jobs around it, than if it is cleaned up and people start living around it," explaining that he considered manufacturing jobs that could be conducted on such polluted soil a greater benefit to

[37] Jessica Ty Miller. "Super fun Superfund: Polluted protection along the Gowanus Canal." Ph.D. Thesis, City University of New York, 2015. *CUNY Academic Commons.* https://academicworks.cuny.edu/gc_etds/1055/.
[38] Miller. "Super fun Superfund." 2015.
[39] Miller. "Super fun Superfund." 2015.
[40] Miller. "Super fun Superfund." 2015.
[41] Miller. "Super fun Superfund." 2015.

the neighborhood than the residential construction that would occur if the area were rehabilitated and rezoned accordingly.[42]

As someone who does not reside in this neighborhood, it is difficult to place myself and my thoughts into the mix when even locals cannot agree on the ideal solution. In fact, as a white, educated New York City transplant with a middle-class background, I would be better classified with the green gentrifiers of the area than with the working-class locals. Nonetheless, the environmental scientist in me has to heartily disagree with maintaining the Gowanus Canal's pollution. At this point in my research, it has become abundantly clear to me that cleanup of some kind is needed. The chemicals and sludge within the Canal have reached such a point in terms of public health that they can no longer be ignored, and their pervasive nature means that the problems they cause are not going away soon. These problems will likely get worse if leaching and seepage continue unchecked, and as I mentioned previously, the contents of the Canal will certainly breach its banks more often as a result of increased climate change-induced flooding. I understand the local impetus to resist change, especially in this context; change has had nothing but negative effects, including displacement and social erasure, on long-term residents. Therefore, despite my misgivings about preserving Gowanus's pollution, it is important to acknowledge that this point of view is held by community members, and to move forward equitably, planners like myself need to unpack why that is the case.

The extremely unusual attitude to advocate for the Gowanus Canal pollution is referred to again in further research from Miller. Following up on her dissertation research, Miller explores the diversity of opinions regarding the Canal by Gowanus neighborhood members. When asked

[42] Miller. "Super fun Superfund." 2015.

what should be done with the Canal, community members' opinions range from "fill it in" (with concrete) to "make it clean enough to swim in," with a substantial faction opposing any remediation to the Canal.[43] This opposition seems to focus on preserving and increasing manufacturing work in the area, and some activists see the polluted Canal as a protective measure to discourage further residential zoning, further influx of newcomers, and therefore further displacement.[44] The divide on the issue of whether cleanup should proceed at all seems to be split between long-term residents of the area and those who are either newcomers or live beyond the immediate Gowanus neighborhood. Longer-term residents, often in middle age or older, remember the Canal as a dumping site for industry, and many cannot conceive of it as anything but a receptacle for sewage.[45]

When it comes to planning the Canal's future, many would prefer to focus on bringing jobs back into the neighborhood and connect this with the Canal issue by having the waterway remain just that, a waterway for industrial use.[46] In their eyes, the Canal is already primed to serve its ideal purpose, and no change needs to be made. Most advocates for environmental remediation, and those who are most closely involved in planning meetings for the actual process of canal cleanup, are not actually from the Gowanus neighborhood, but from the wealthier adjacent neighborhoods of Park Slope and Carroll Gardens.[47] Some community members have noted that planning meetings, organized by the Environmental Protection Agency as a means of securing community input, are inconveniently timed for working people and often poorly advertised, leading to low

[43] Jessica Ty Miller. "Is urban greening for everyone? Social inclusion and exclusion along the Gowanus Canal." *Urban Forestry & Urban Greening* 19 (September 2016): 285-294. Science Direct. https://doi.org/10.1016/j.ufug.2016.03.004
[44] Miller. "Urban greening". 293.
[45] Miller. "Urban greening". 292.
[46] Miller. "Urban greening". 292-3.
[47] Miller. "Urban greening". 290-291.

turnout overall but consistent attendance from wealthier individuals who have less of a direct stake in the matter than lower-income people living closer to the Canal.[48] The lack of facilitated community involvement in the greening of the Gowanus has reportedly led to the perception in locals that their voices are not being considered in the EPA's Superfund plans, and this in turn further dissuades lower-income community members, like those in Red Hook or public housing, from attempting to participate in Canal decision-making.[49]

Miller is not the only academic who has noted how the Gowanus community has been failed by government agencies like the EPA. In her Master's thesis, Shuyang Huang examines the issues involved in plans to reduce stormwater overflow around and into the Gowanus Canal since 2010. In her evaluation, she finds that infrastructure plans are too locally focused and not coordinated over neighborhoods, which is necessary for comprehensively addressing issues like stormwater disposal.[50] She also finds that the city failed to adequately address the financial burden of upgrading infrastructure to citizens, both overestimating residents' ability to pay for infrastructure overhauls and excluding certain types of private stormwater mitigation methods from tax exemptions.[51] This points to a double-edged sword of community neglect in both the social and economic spheres. Not only are residents spoken over by their wealthier neighbors in planning meetings, but they are overcharged for infrastructure overhauls by a city that created the problems in the Gowanus Canal in the first place, which can cause financial stress and lead to further displacement.

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[48] Miller. "Urban greening". 291.
[49] Miller. "Urban greening". 290.
[50] Shuyang Huang. "A policy evaluation of green infrastructure plans in the context of reducing stormwater overflow: A case study of Gowanus, Brooklyn." M.S. Thesis, Columbia University, 2019. *Columbia Academic Commons.* https://doi.org/10.7916/d8-0qxy-9h34
[51] Huang. "Gowanus, Brooklyn". 2019.

It is no wonder that community members, especially long-term residents, reject expensive cleanup plans and harken back to an industrial heyday of working-class solidarity in the neighborhood. To them, the toxic Canal represents the possibility of a working-class industrial resurgence in the area, while giving in to cleanup efforts indicates a final surrender to the middle- and upper-class forces installing a Whole Foods market down the block. The Gowanus Canal may be actively toxic and dangerous, but it contains poison that came from past union jobs, steady incomes, and stable rent. Clinging to this brownfield site instills long-term residents with a sense of cultural heritage and allows them an evidence-based platform on which to resist the class demographic changes forcing them out of their homes. Working-class communities *were* here first: the industrial sludge they produced, which lines the bottom of the Canal, is proof of this. Removing that sludge and replacing it with an urban waterway that serves kayaks rather than barges effectively erases that past from ever occurring again, taking the last nostalgic hopes for a local Gowanus working-class lifestyle with it. I am not convinced that Canal remediation and the assurance of working-class employment have to stand in opposition to each other in this neighborhood, and the main issue when it comes to envisioning a future for the Gowanus Canal is abandoning the black-and-white thinking associated with such an overwhelming problem. While there is a range of opinions on addressing the Gowanus, many ultimately end with either abandoning Canal remediation completely or transforming the waterfront into an unrecognizable version of itself. There is another way forward. In my mind, the ideal future for the Gowanus Canal would be as a hub of green energy generation and commerce.

Beyond the ecopoetics of making a Superfund site into a generator of green energy, I know the Gowanus Canal already has the industrial infrastructure necessary to make such a transition possible. As a site of gas and coal-based energy generation for decades, the reclamation and reuse

of the Gowanus site would be more sustainable than building new sites of green energy generation. The shift of manufacturing on the Gowanus waterfront from producer of industrial sludge to vital contributor to a green future would satisfy many of the demands of both working-class locals and sustainably minded transplants. Taking advantage of federal government funding (at least for the next month) to train laborers in methods of clean energy generation would assure them steady jobs in rehabilitated energy plants along the banks of the Gowanus, addressing working-class concerns about the dissolution of industrial culture. Sustainability advocates would also rest easy knowing that their trickle-down "eco"-nomics were positively impacting the community they seek to improve. More green jobs would lead to more security, economic stability, and morale in the neighborhood.

I also believe this industrial transformation would solve the issue of zoning. One of the huge problems I have with development in the Gowanus neighborhood is the erection of residential buildings: frankly, I do not think it is safe for anyone to live there, and the consistent encouragement of a new influx of residents is infuriating. If a green purpose is assigned to the existing industrial buildings in the neighborhood, there will not be any room or reason for residential rezoning, and developers will be prevented from putting tenants in danger. Though I abhor the continued development of residential buildings in the area, bringing green energy jobs to the Gowanus Canal would admittedly also have the effect of increasing the number of people near its toxins. This is why Canal cleanup is still necessary.

Sludge must be removed, and sediment caps must be placed with haste, but even in that case, I doubt the ability of remediation to assuredly put to rest all the Canal's seepage when scientists still do not fully understand the biology or long-term ramifications of the Canal's contents. Returning this site to one of commerce rather than residence would still allow the land

to be used, but would prevent round-the-clock exposure to toxins by those using it. This balance exemplifies the compromise required when dealing with such a site but provides a benefit to both parties: working-class locals gain jobs, and sustainability advocates gain a step in the direction of a fully renewable energy grid. While I am biased toward green solutions inherently as a result of my degree, it was vitally important to me to prioritize the needs of working-class members of this neighborhood. In pursuing an equitable future, it is important to elevate the needs of the marginalized, but sometimes marginalization even extends beyond traditional class boundaries.

One example is that of informal business conducted on the banks of the Gowanus Canal, which took place beyond traditional economic bounds and was therefore stigmatized even by working-class locals. Some long-term residents of the Gowanus area referenced the disappearance of "prostitutes and drug dealers" from the banks of the Canal, indicating that these locals are not seen as community members in the same way those with regulated jobs are. When loss of work is addressed in these interviews, it refers to the removal of legally recognized and regulated jobs in industrial settings in the area. However, the displacement of those beyond those confines is still relevant to the changing landscape of the Gowanus Canal and reveals the same issues of power that the displacement of more traditional working-class people creates. Caleb O'Connor's analysis of the work of Julian Brolaski (it/its), an indigiqueer poet, shines some light on this phenomenon. O'Connor notes that in Brolaski's understanding of the urban environment, bodies of water remain as vestiges of the indigenously stewarded land before it was colonized into an urban jungle, detached wholly removed from the wilderness it once was.[52] It makes perfect sense, then, that those on the outskirts of society, such as queer people, sex workers, and addicts, would make the

[52] Caleb O'Connor, "Urban Indigiqueer Ecopoetics: Toxified Relationalities along the Gowanus Canal in the Poetry of Julian T. Brolaski." *ISLE: Interdisciplinary Studies in Literature and Environment*, isae047 (August 2024). https://doi.org/10.1093/isle/isae047. isae047.pdf. 5-6.

waterfronts their home, bringing themselves closer to uncolonized nature in a rejection of the heteronormative colonial society stigmatizing them.[53] In Brolaski's poetry, the Gowanus Canal is referenced as the pinnacle of colonization. "Gowanus," which once referenced a huge swath of pristine, resource-laden nature, now refers to a tiny, incredibly polluted canal amid a neighborhood that is actively becoming whiter and wealthier, evicting even those rebels who sought home on Gowanus's banks.[54] By positing the Gowanus Canal as a queer haven, Brolaski rounds out a picture usually dominated by the environmental horror of the canal.

In referencing the environmental degradation of the Canal, Brolaski critiques the white settlement and lack of care for the region, usurping the local narrative about who deserves proximity to the Canal and why. Existing tension between sustainability-class newcomers and working-class locals over maintaining industry in the area is given a new facet in its poetry. By mourning the displacement of those who moved in the background of even the marginalized working-class, Brolaski criticizes everyone involved in foreground debates on land use. While it agrees with the characterization of the sustainability class as displacers, it also acknowledges and condemns the role of the working class as stewards and advocates for an environmentally destructive industrial lifestyle. Brolaski's outsider perspective chooses to imagine beyond the confines of the generally understood class struggle for the Gowanus Canal and seeks to widen the lens on what is considered to be legitimate work, occupation, and use of a site. Interactions with the Gowanus Canal are not limited to the confines of traditional lifestyles, and to fully understand the past and future of the Canal, all experiences must be taken into consideration when planning cleanup efforts and development in the area, if any.

[53] O'Connor, "Indigiqueer Ecopoetics", 6-7.
[54] O'Connor, "Indigiqueer Ecopoetics", 15-16, 19.

Green infrastructure should not be off-limits to anyone, and environmental remediation of a toxic site should not displace anyone. Working-class people of all kinds deserve access to green space, and this includes those who defy traditional economic binds to conduct business on the banks of the Gowanus Canal. If regulated working-class people are underrepresented at community meetings regarding EPA action, unregulated working-class people are entirely absent from community consideration. Through the installation of green industry on the banks of the Gowanus, traditional business hours would likely be maintained for both regulated and unregulated workers, minimizing disruption and displacement. While the focus of this particular thought exercise is minimizing displacement following Brolaski's concerns, if I were to outline a plan for the future of this area in reality, I would incorporate shelters with resources to aid people who are not willingly performing unregulated work, or who are seeking a way out of lifestyles they no longer want to be a part of.

A good friend of mine is currently pursuing an internship at a publishing firm housed in a building on the banks of the Gowanus Canal. She doesn't know what the unknown environmental pollution rising from the floor is, but it is so dangerous that her boss has instructed her to work next to an open window, even with a filtration system circulating the air in the building. While environmental pollution plagues the Gowanus neighborhood, history has proved that profit has always been prioritized over neighborhoods and that no matter the environmental history of an area, if there is cheap real estate, someone will move in. When it comes to the remediation of the Gowanus Canal, there are no easy answers, but making sure that citizens feel their input is heard will likely lead to more reasonable requests from community members and perhaps unanimous acceptance of cleanup plans for the Canal. Incorporating working-class concerns about employment into these cleanup plans will likely also garner wider acceptance and understanding

in the neighborhood. Walking the fine line between greening and gentrification requires a good sense of project direction and knowledge of local issues, but my proposed plan to reuse existing industrial infrastructure as a means of green energy generation is a good compromise between the needs of locals and the desires of newcomers. When planning a future for such a wrought site as the Gowanus Canal, it is equally important to preserve working-class neighborhoods and communities of color and ensure that green infrastructure does not come at the cost of displacement, but with increased community participation and education on cleanup efforts, the Gowanus Canal may become a celebrated local asset instead of a hazard.

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