Emerging from the Machinic City

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The broad objective of this piece is to situate the postindustrial city as grounds for the proliferation of alternative design methodologies and social constructions as they relate to ecology, economics, and design in the early 21st century. By first examining the post-war industrial city as a series of historically contested projects, a framework for critique and design investigation emerges. Current design approaches are studied against the backdrop of contemporary political economy and broader design movements. Relying heavily on projects from Cleveland and Detroit this piece suggests that the complex half-vacant spaces are grounds for re-engaged public spaces (capsules); that design methodologies rooted in new ways of seeing the city result in the production of new local knowledges in space (corridors); and that new hybrid forms of program and space might be useful in teasing out innovative social ecosystems (new constructions).

THE MACHINIC CITY

As formal landscape and epistemological milieu, the postindustrial cityscape poses distinct problems for an ethical politics of development. In US cities like Cleveland, Detroit, and Buffalo, the postindustrial landscape is distinctly local, both as physical and cultural terrain. Through deindustrialization and decades of population loss, the postindustrial city stands as a patchwork of material presence and latent social forms. Large swaths of vacant housing and brownfield industrial sites mark the material presence of a bygone economic era.

Largely removed from regional and global narratives about a post-Fordist mode of production, these sites offer the possibility for alternative forms of local knowledge production and spatial legibility. Typical neoliberal frameworks are largely unrealistic in redeveloping these contexts, creating the necessity for a separate and alternative paradigm. The lack of a broad, viable economic agenda paired with large ecological need suggests that vacancy, contamination, and other landscapes might provide the grounds for new forms of speculation.

As postindustrial economies emerged in the American urban context of the 1960's, two paridgmatic issues came to the forefront—ecological and economic degradation. Cities like Cleveland stood as emblematic examples of an industrial society gone sour as industrial pollutants caused multiple river fires. The 1969 river fire brought to the forefront conflicts that had been looming in the city's landscape for decades, captured in national press.[1] This spurred influential publications like Rachel Carson's *Silent Spring.* At the same time, suburban sprawl and a shrinking industrial base left these cities desperate for an urban agenda that would save the city. Racial tensions and a shrinking middle class further heightened urban uncertainty. Relying on anchor institutions and the business community, megastructural projects turned what was perceived as a failing city towards an inward and interior focus.

As exterior conditions of the city failed, there was a paradoxical turn towards creating interior environments to reconstruct the image of the city. Museum expansions and the creation of large interior shopping malls in the urban core suggested that the city might be saved from unfavorable and unpredictable conditions related to ecological catastrophe and economic failure. Nature, in this sense, is conceived as both something to be avoided, and recast as an agent that cleanses the world of social and ecological failures.

Looking through the lens of contemporary urban design and architectural frameworks, it is suggested that the uniqueness of postindustrial sites lies in their non-use and inherent resistance to urban agendas focused on the engineering of social and economic certainty and predictability. Since the introduction of Ulrich Beck's "risk society" into design, contemporary projects of resilience and growth often suggest urban life as a permanent state of emergency, to be mitigated through the production of predictable economic developments. Postindustrial cities actively resist this classification, while core cities do not. Gentrification and class divisions in these core dominant cities become standard practice. Infrastructural, architectural and ecological projects often serve as the progenitor for the expansion of these divisions. Data driven projects and the proliferation of technologically driven geodemographic projects in market analysis accelerate this process.

Urban systems and landscapes in the postindustrial site, however, coupled with architectural relics suggest "entanglements of buildings and infrastructures" that are resistant to categorization, and therefore contemporary economic speculation, in ways that differ from core dominant cities like New York.[2] Using Cleveland, Ohio and Detroit as examples of postindustrial urban agendas from the post-war era to the present, projective roles for design include a re-engagement with postindustrial
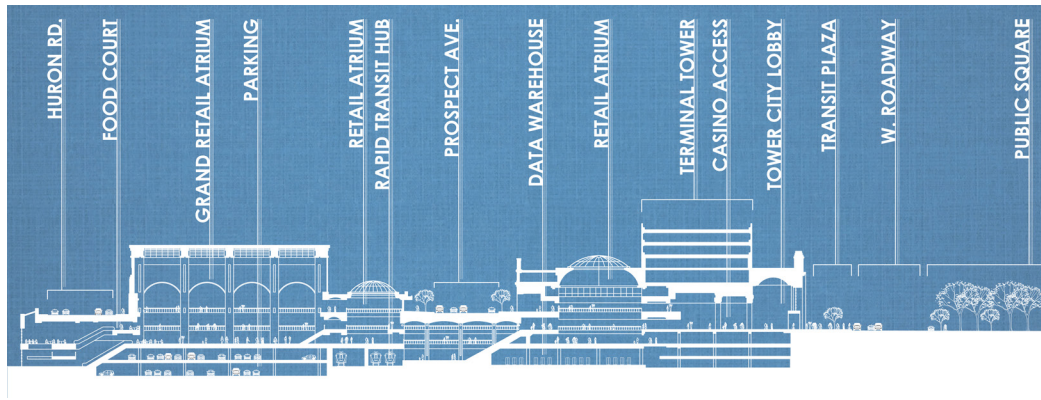
Figure 1: Section through Cleveland's Tower City Complex showing multiple ownerships. Drawing by author & Samuel Friesema

landscapes beyond the economic gaze of speculation and risk management. The capsular site, urban corridor and an engaged reconstruction of materiality are offered as potential sites and methods for framing new forms of political economy.

CONTEMPORARY FRAMEWORKS

Even when geographically central, these postindustrial spaces often remain peripheral to the productive city. Antoine Picon has called these "anxious landscapes," while Alan Berger refers to these large scale sites as logistical "Drosscapes." A newfound interest in architecture at the scale of geography, intertwined with logistical and ecological urbanism suggests an engagement with the city that is largely Deleuzian. In this way, the technical aspects of the city are conceived as united with the social and natural. Thinkers like Keller Easterling suggest methodologies of exposure and subversion of existing urban economic and governmental flows of capital, of space, and of people. Described as intensities, flows, and potentialities, these projects suggest the proliferation of new and alternative flows emerging from within the system as they relate to political economy.

Intertwined in this framework is the project of "Ecological Urbanism" and the project of mapping. Mapping complex site and natural forces with other data-driven projects suggests a nimble counter strategy to top-down and traditionally linear planning methods. These projects suggest the complexity of urban systems, necessitating more sophisticated models for intervention. Seen through a social lens, these projects bring about what Jennifer Wolch describes as "ecological urban citizenship."[3] In this way, Ecological Urbanism can be seen as a less explicit political agenda, suggesting that the resulting social and political organizations are nimble and evolving process of territorialization and deterritorialization.[4]

At the same time, tactical urbanism and aspects of everyday urbanism suggest roles for social experimentation outside of the realm of existing post-Fordist and neoliberal political economies. Popular in many postindustrial contexts, these projects posit the work of thinkers like Michel de Certeau and Henri Lefebvre to be a method for experimenting with new forms of the social through everyday practice, often devoid

of the logistical agenda of geographic urbanism. Daniel Campo explores these social spaces in works like *The Accidental Playground*, suggesting an alternative framework for non-development in the midst of gentrification and development geared towards the creative class. Similarly, Rosalyn Deutsche understood the role of curating demographics to produce predictable and risk averse urban structuring through the use of art and public culture agendas.

What is unique, however, about these peripheral spaces and the anxious landscapes prevalent in postindustrial cities is their ability to resist economic and totalizing agendas. In this way, we may be able to see these spaces in the way that Bruno Latour sees the oligopticon—a series of partial orders whose gaze and power can look in certain directions and not others.

Each of these frameworks provide a necessary grounding for understanding postindustrial cityscapes and the late-modern projects that reproduce neoliberal spatio-logics. And in cities like Cleveland, reproducible neoliberal agendas suggest a heightened sense of risk aversion, favoring predictability and pragmatic accomplishments over experimentation. Urban agendas and civic boosterism attempt to stabilize the low-hanging fruit of urban development. Hipster markets, rehabilitation in core dominant neighborhoods, and the anonymous and predictable aesthetics of a postindustrial chic lack a critical or projective grounding. These strategies in the rustbelt function as a kind of shadow project, compared to their more peripheral role in core cities.

However, it is in these rust belt sites that a counternvironment might emerge that is intrinsically local and devoid of broader interurban competition. The postindustrial cityscape resists both technical attempts to control nature and economies as well as the modeling of socioecological systems which are more predictable and contrived in traditional urban settings. Lack of market demand, minimal public resources to maintain these spaces, and an uncertain representation of these spaces allows for the production of alternative urban epistemologies and paradigms.

CAPSULES

Urban theorist Lieven De Cauter describes a tendency to encapsulate and enclose as the expansion of informational and material networks hastens the movement of bodies through multiple spaces. He argues in *Capsular Civilization* that enclosed capsular spaces, under the banner of

Figure 2: Cero9's "Magic Mountain" project. Copyright Cero 9.

security, claim to protect us from perceived threats of otherness and that capsularity increases as network phenomena proliferate.[5] This can be seen as both natural forces, and as cultural difference.

In response to pollution, a dying urban economy, and a decaying urban image, boosterists in 1970's Cleveland advocated for the expansion of Tower City Center, the city's iconic transit complex and high rise based on the design of McKim Mead and White's Municipal building in New York City. Originally built in the 1929, the complex negotiates the urban promenade from its industrial flats to its public square. Today it stands as an underperforming shopping mall, data center warehouse, casino and office space. The complex, through its data management and its public transportation activities, facilitates large amounts of human, information, natural, and financial flows into and out of the city. Its verticality assures its functional capsularity—helping to hide the city's outside sub-nature and 'protect' interior spaces. Its horizontality serves as a site of human and capital flow.

 The Tower City Complex also stands as a mark of contemporary capital's ability to both concentrate and decentralize at the same time. The Tower City complex contains eighteen separate ownership agreements. Business magnate Dan Gilbert, whose powerful influence over the city comes through the form of ownership of the Cleveland Cavaliers, Horseshoe Casino located within the Tower City complex, Quicken Loans, and Quicken Loans Arena creating a Medici-like connectivity throughout the downtown core. Gilbert's recent purchase of the horizontal retail shopping center in Tower City Center furthers his influence in downtown development and politics. At the same time, office space in the Terminal

Tower portion of the complex was recently divested from its owners, the nationally known large scale developer, Forest City Enterprises, through a Real Estate Investment Trust (REIT). The REIT creates stock-like owner-ships in the building that can be easily traded or sold.

The confluence of concentrated ownership by Gilbert, the diffuse and liquid ownership created by the REIT allow the economically underper-forming, yet monumental and capsular spaces like the Terminal Tower complex offer experimental sites for repositioning more traditional forms of urban performance and culture. These sites, which were imagined and expanded in the 1970's and beyond for various boosterist agendas might instead be sites ripe for both material and epistemological intervention. By rendering visible the invisible forces that shape the networks, econ-omies, and spaces of Tower City, we can ascribe new meaning to the void, the half-empty, and a late 20th century idea about the protection of nature.

The point is to break open these capsular environments—puncturing them to create new meanings, living systems, and human interactions. The interior corporate atria and downtown indoor shopping malls are publicly accessible yet hermetically sealed and securitized from our contemporary understanding of urban nature and cultures of isolation. A highly complex network of spaces, programs, and flows in spaces like Tower City suggest a leaky and already punctured urban function-ing, despite efforts to maintain a presence of security and risk aversion. Tower City is both an underground flow of people and data, while also serving as the city's most monumental and recognizable structure. A highly curated image of urban nature and performance suggests a natu-ral integration with the city, yet its actual performance stands in contrast to this image, affording new possibilities.

We might instead, reposition spaces like Tower City and other half-used corporate atria and downtown shopping malls as tied closely to the postindustrial narrative. Or, it is as equally tied into the narrative of the postindustrial construction of the city as other more obvious forms like rail-to-trail construction and other industrial heritage projects.

A projective example of the use of nature upon an otherwise capsular site is the Cero9 project "Magic Mountain." Here, the capsule is turned inside out. Conceived as an ecosystem mask for a power station in Ames, Iowa, it provides a membrane of roses, lights and honeysuckle. It pro-vides a habitat for migratory urban wildlife in the wake of the removal of local forests and wetlands. This project does two things. First, it recasts the industrial image of an otherwise sealed and capsular space of urban flows into one of an alternative material legibility. Second, the project functions to disrupt existing site functions and conceptions of nature. This "weed like" construction also scatters petals and pollen into the building's surrounding area, and turns it into something invasive.[6] This offers a new type of production for the space, tied to narratives of collec-tive landscape, networked flows, and the urban image. In this way, the "Magic Mountain" project reverses Gilles Clement's implementation of Parc Henri Matisse, which intentionally removes nature from the urban user's view, revealing tensions between aesthetic and scientific signifi-cance in Clement's "third landscape."[7]
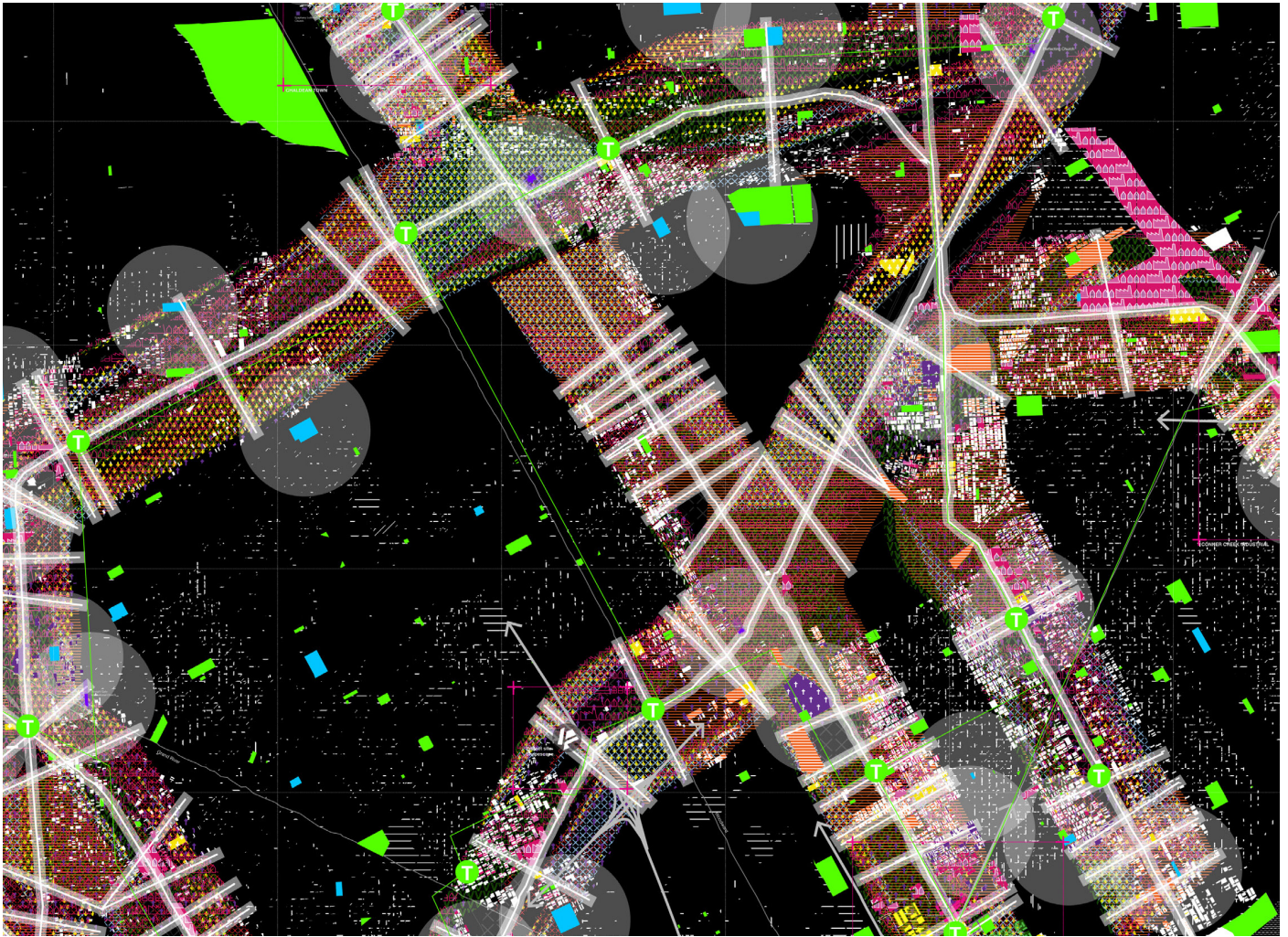
Figure 3: Proposed zoning map for "Radical Railbanking." Copyright McLain Clutter.

CORRIDORS

In discussing Benton MacKaye's ideation and organization of the Appalachain Trail in the early 20th century, Keller Easterling suggests the power of material and cultural re-organization through corridors. Governed by additional organizational protocols, the Appalacian Trail re-arranged priorities in an industrial economy. It was a subtraction in the landscape, rather than an addition, that allowed for the re-organizing of territory, economic protocols, and social relationships across multiple regions—re-centering development and regional urban patterns. As networks of electricity and roadways expanded, MacKaye embraced the technologies as an inclusive organizational ecology.[8] Urban and rural now interacted in new ways through an ecological infrastructure, far ahead of its time in an era pulsing with industrial activities. Beyond a master plan, MacKaye allowed a flexible way of seeing the landscape and its relations through what was essentially a 1,000 mile minimally intrusive corridor.

As Easterling suggests a new way of seeing the landscape was necessary for the Appalachian trail to emerge, McLain Clutter's "Radical Railbanking" project suggest new ways of seeing the half vacant neighborhoods and industrial corridors prevalent in postindustrial cities like

Detroit. Clutter confronts the proliferation of the use of geodemographic data as it is applied to urban landscapes. This data used by market consultants and planners often results in the anonymous yet familiar patterns of highway roadside development including gas stations, big box stores, Olive Gardens and Cheesecake Factories. This reifies already existing social and economic dynamics as they relate to geography. Areas that do well are further served by risk-averse development, and areas in need of economic development are often deemed to have too little purchasing power.

Clutter suggests through a more subversive and sophisticated deployment of GIS analytics, latent social potentials might be realized. Given that the geodemographic data sets used by planners and economic development specialists are at their core, ideological, and currently reify social habits and stereotypes, Clutter suggests the use of new corridors to connect disparate populations. By re-cutting these social and economic datasets, he relates them to socially viable institutions and populations like churches, schools, and blue collar workers.[9]

Clutter then maps socially viable institutions like churches and schools to intersect with these data sets and aligns them along infrastructural corridors that previously divided neighborhoods. Suggesting an acquisition and easement process similar to railbanking, Clutter attempts to create
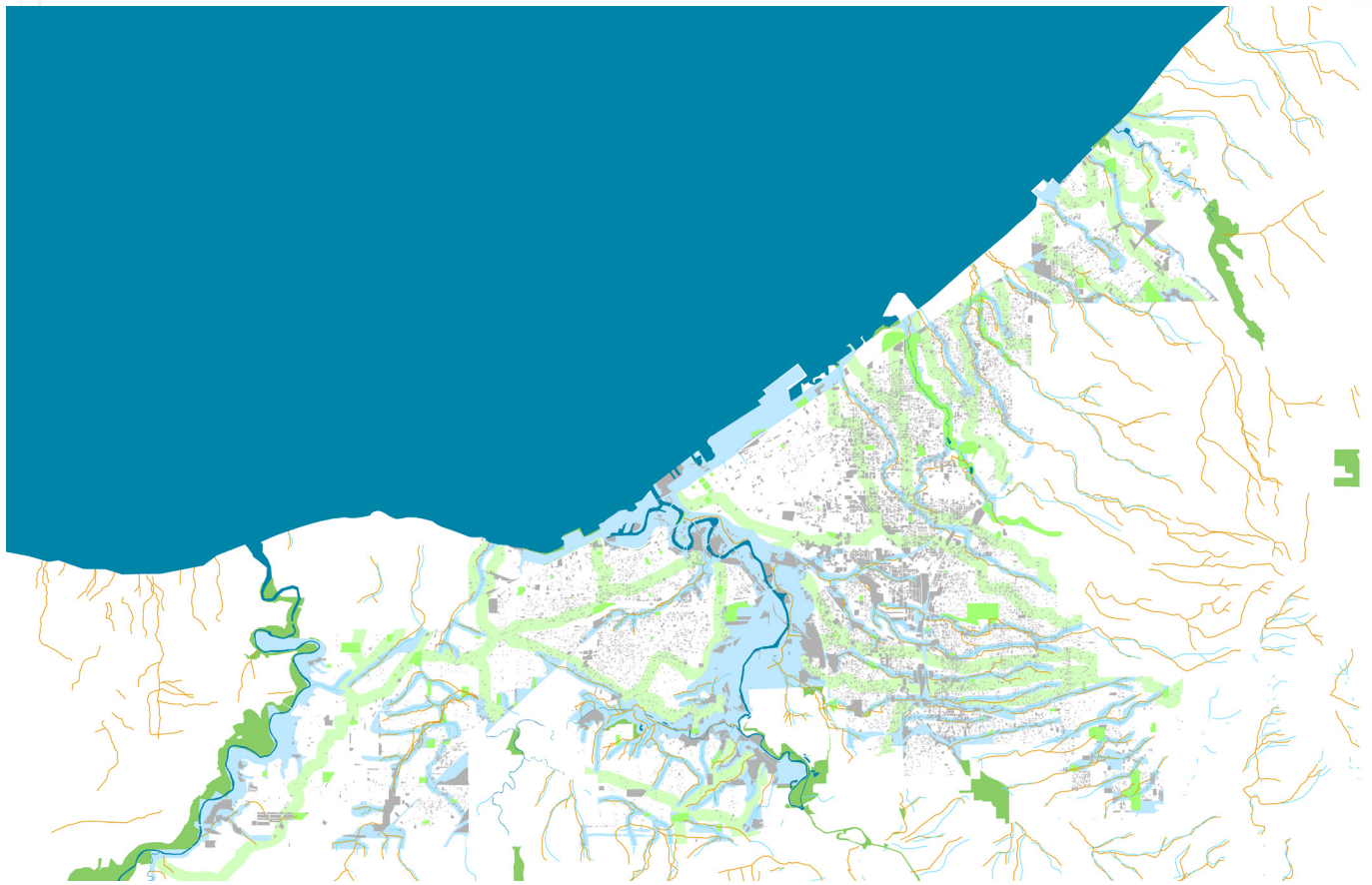
Figure 4: Suggested new corridors driven by riparian corridors, culverted streams, vacancy and the desire for social agency. Drawings by CUDC.

new zoning maps that would allow for the proliferation of social condensers and new communities to emerge in the city.

Additional urban systems abundant in postindustrial cities may also serve for the purposes of making present latent communities--both human and ecological. Postindustrial ecologies present issues of maintenance, stormwater runoff, and ground contamination from industrial processes.

In the wake of the foreclosure crisis, cities like Cleveland and Detroit are undertaking large scale demolition projects. At an average cost of $10,000 per demolition, this is the most investment some neighborhoods will see for some time. Entropy of these vacant houses suggests a short life span after occupants move out. Large red "X's" mark them for subtraction from the landscape.

In response to large scale vacancy and ecological systems design, the Cleveland Urban Design Collaborative (CUDC) created a project called "Reimagining a More Sustainable Cleveland." Part community outreach project, part speculative design, the project imagines various use values and performance values for the postindustrial sites. A guidebook for citizens suggests a form of stewardship and maintenance that might not otherwise be realized in the city.

Its broad agenda is to reclaim the multiple and fragmented vacant sites in urban neighborhoods as a new site for the urban imaginary. The project acts as both social infrastructure as well envisioning larger connected frameworks through the assembly of vacant land. It posits infrastructure as a locally controlled communal resource and ecological back yard.

Among multiple strategies to be deployed as part of the project, an "indicator landscape" is suggested as a way to mark urban processes of contamination. Vacant sites are reconstructed to diversify ecological life, as well as reconstruct a new urban image. Plant life both removes toxins from the soil, while also making apparent the conflicted urban environment that might otherwise go unnoticed.

The project is also hydrologically driven. Stream beds in the industrial era were culverted, buried, and developed as the industrial city grew. Many of these sites now sit abandoned, due to flooding issues associated with the underwater waterway, as well as general lack of demand for these types of properties. The Reimagining work locates the buried streams and overlays patterns of vacant housing, and buildings in poor condition, suggesting alternative forms of development, as a series of riparian corridors throughout the city. This alternative grid preserves ecology, as well as creating a new form of navigability in the city.

This project reconstructs the notion of spatial legibility and conception of a traditional corridor. While transportation and retail corridors are less likely to develop in a rustbelt context, ecological corridors restoring hydrological function and opportunities for riparian development and pathways prove to be both a more nimble and more realistic approach to urban development. Artful and strategic subtraction in the landscape creates new design and performance possibilities.

NEW CONSTRUCTIONS
It is useful to return to the experimentation associated with postwar reconstruction in England through Alison and Robert Smithson's Patio

and Pavilion project of the 1956 exhibit "This is Tomorrow." Seeking a reconstruction of everyday life, the Smithsons produced an image of a collective landscape out of the collaged remnants of the past. Rusted bicycle wheels, discarded lumber, and other recognizable elements of everyday domestic life are promoted as grounds for new forms of social life. It is a proposition that is both a metaphorical reconstruction of past uses, as well as literally true. Materially, the Smithsons provide a central role for the debris of past uses to construct a future.[10] Debris in this sense was a re-conception of the relationship to nature social constructions. An intimate and residential scale places the viewer in the space, while the use of debris acts in contrast to other postwar architects focus on urban park spaces.

In a similar way, in Detroit, A(n) Office's "House Opera" appropriates a vacant house as a neighborhood community space. In this instance, use value is prioritized over economic value—restructuring the typology of the typical urban house from its use as a financial instrument. The project also disrupts the notion of architectural typology. Part performance space, part installation, and part house creates a new neighborhood focus and center—relying on an evolving social structure and events. Materially subtractive, the project suggests an intimate engagement and knowledge of an otherwise obsolete housing type—worker housing, while also projecting new uses for the space. Widened openings suggest new semi-public and public thresholds. Behavior is shifted and localized to engage with an otherwise familiar site of vacant housing.

The material production and subsequent engagement with material decline in these projects can be viewed as an integration of material space and environment.[11] Rather than seeing them as outside of the realm of nature, these material landscapes can be seen as a fundamental part of urban life. The human subject, technics, materiality, and environment are all integrated into the reconception of nature, economic, and social life.

Both these projects suggest that material from past uses is also part of a natural construction. Rather than remove it from the site, the material becomes an integral component of its next social construction. It is a central component in the next phase of urbanization.

PROJECTIONS & CONCLUSIONS
Urban processes in the contemporary city, in general, are often conceived as a measurable system in need of management, rather than as a historically contested outcome of social and ecological change. Risk aversion and the social curation of demographics and social and capsular spaces reify already existing concepts of the city.

The postindustrial rustbelt, in contrast, provides an opportunity for the construction of an alternative cognitive mapping and re-imagination of the city and its environs. Spatial legibility for the 21st century must be created out of the residue of past industrial eras. Half-used spaces, ecological corridors, and the new social and material construction of spaces implies a type of speculation on what the city and process of urbanization might be.

In the absence of large economic pressures to develop, a future project rooted in the production of local knowledge might develop. Through the

complex interactions between existing networks of ecological flows, past eras of construction, and half-used spaces, a new form of cognitive mapping in the city can emerge. Of course, this map like all cognitive maps, remains only partial. It, however, insists that the traces of social, ecological, and economic relationships that constitute urban life are, with some work, visible in the postindustrial cityscape.

ENDNOTES

1. "America's Sewage System and the Price of Optimism." Time Magazine, August 1, 1969.

2. Picon, Antoine. "Anxious Landscapes: From the Ruin to Rust." Grey Room 1 (2000): 64-83. doi:10.1162/152638100750173065.

3. Wolch, Jennifer. "Green Urban Worlds." Annals of the Association of American Geographers 97, no. 2 (2007): 373-84. doi:10.1111/j.1467-8306.2007.00543.x.

4. Block, G. De. "Ecological Infrastructure in a Critical-historical Perspective: From Engineering 'social Territory to Encoding 'natural Topography." Environment and Planning A 48, no. 2 (2015): 367-90. doi:10.1177/0308518x15600719

5. Cauter, Lieven De. The Capsular Civilization: On the City in the Age of Fear. Rotterdam: NAi Publishers, 2004.

6. Gissen, David. Subnature: Architecture's Other Environments. New York: Princeton Architectural Press, 2009.

7. Gandy, Matthew. "Entropy by Design: Gilles Clément, Parc Henri Matisse and the Limits to Avant-garde Urbanism." International Journal of Urban and Regional Research 37, no. 1 (2012): 259-78. doi:10.1111/j.1468-2427.2012.01164.x.

8. Easterling, Keller. Organization Space: Landscapes, Highways, and Houses in America. Cambridge, MA: MIT Press, 2001.

9 Clutter, McLain.Radical Railbanking and Scenarios for Detroit, Journal of Architectural Education, 68:1, 104-114 (2014). DOI: 10.1080/10464883.2014.865971

10. Gissen, David. "Debris." AA Files 58:8-11.

11. Amin, Ash, and Nigel Thrift. Cities: Reimagining the Urban. Cambridge: Polity, 2002.