Disciplinary Thievery

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Lateral Office

> *My desire is absolutely not for the dogmatic or deductive effect. That kind of theorization is too mechanistic, too hermetic, and can only ever produce epigones or intradisciplinists. I like disobedience and transdisciplinarity.*
>
> Homi K. Bhabha, 1995

Introduction

Architectural history since the late 1960s seems best characterized by swings from the project of disciplinary autonomy to various forms of disciplinary transgression. This binary is perpetuated in the proposition, albeit simplistic and debatable, that autonomy is preoccupied with criticality, or the limits of the discipline's interiority, while the project of transgression remains preoccupied with "the real," or the discipline's exteriority.

Each act of architecture is simultaneously a declaration and realignment of its disciplinarity. The last decade has witnessed considerable momentum toward architecture's (discursive) exteriority that *may* have completely realigned the balance in favor of transgression, and with that, *may* have shifted the entire discipline. The impacts of this are significant to all facets of architecture—its theory, its practice—and is ultimately embedded within its very contemporary pathology. This realignment has arrived through the ubiquity of architecture's variously prefixed disciplinary status: multidisciplinary, interdisciplinary, intradisciplinary, postdisciplinary, and, possibly its most robust form to date, transdisciplinary.

With this shift, additional strain is put into architecture's status as disciplined, expert, and unattached. It now seems useful to understand this predicament and what has contributed to it.

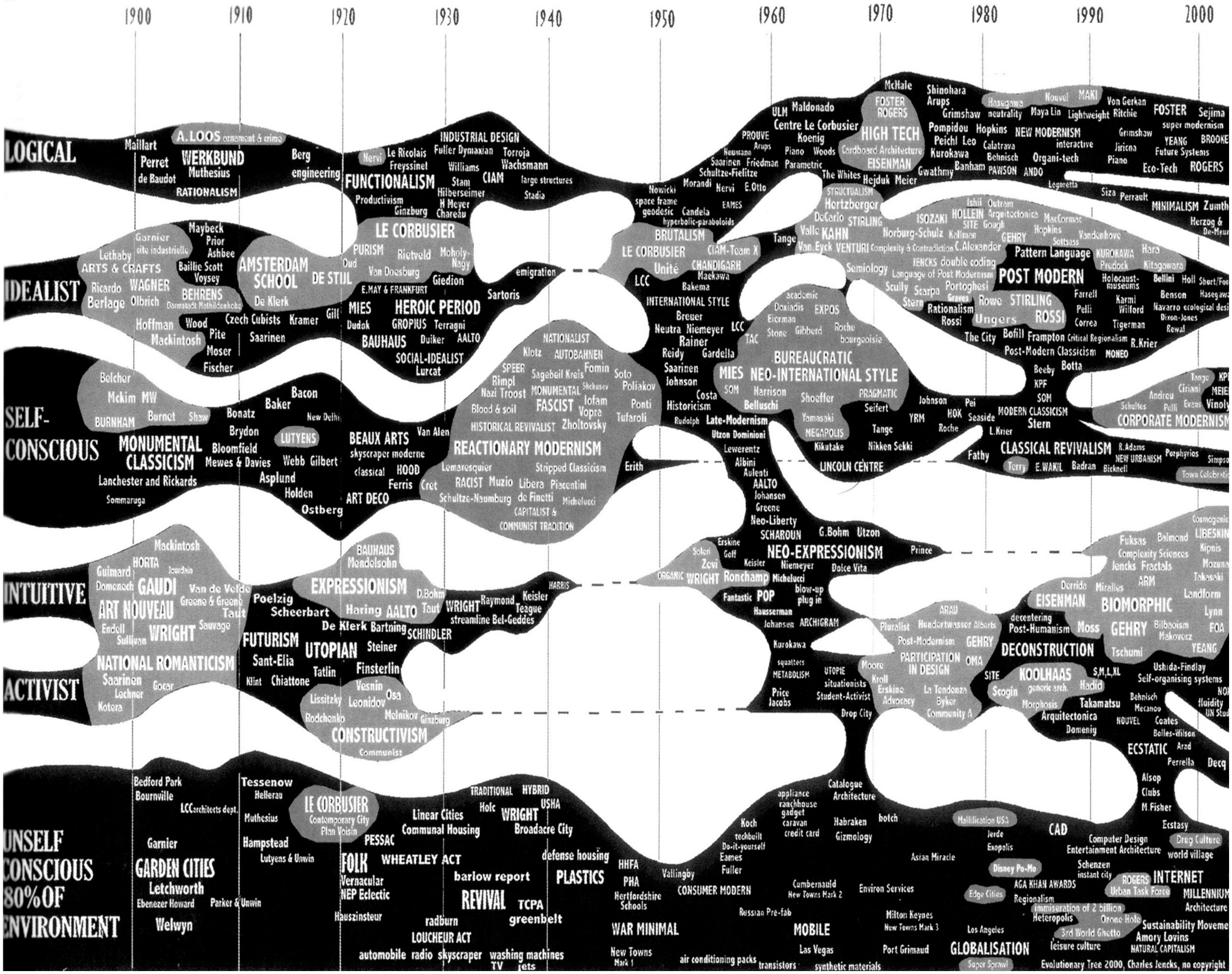
The surge of disciplinary transgressive theories and practices can be found in *two* opposing conditions. On the one hand, there is an internal poaching and inter-breeding amongst the spatial disciplines. For example, any combination of architectural, landscape, infrastructural, ecological, engineering, or urbanism have offered fodder in the last decade for disciplinary branding, and in some cases, the launching of "new" academic programs. From these, it often seems as though landscape architecture seeks to be more urban, urban design seeks to be more architectural, and architecture seeks to be more "landscapey." On the other hand, architecture has also increased its external poaching within the wider arena of the sciences, namely biology, and the arts, particularly film. This external poaching has often tended toward the analogic and the purely representational. This could be called transdisciplinary. But, architecture's pathological desire to both re-define itself from within and to free itself from disciplinary boundary, have, not surprisingly, left the field open to thievery. The covert poaching of architecture's discursiveness from fields tangential to it and even within a wider public medium, is forty years in the making, and has made considerable impact on both the agency of architecture and, subsequently, the role of the architect.

Disciplinary Trangressions

It is important to distinguish between interdisciplinary activities, which could be argued to be a more sanctioned form of thievery, and the transdisciplinary practice of co-opting strands of a discipline's operative or, possibly more severe, a discipline's nomenclature, language, and identity. From here, two cases should be made to better qualify our current state. One, an overview of the internal splintering of the last decade, or the disciplinary thievery found *within* the spatial disciplines, primarily through interdisciplinary and transdisciplinary acts. Two, a historical narrative of architecture's status as a victim, or the ongoing thievery initiated *outside* the spatial disciplines. And, finally, the position of recuperation from these acts, and architecture's status post-pillage.

To begin, I will set out the internal wrangling of boundaries amongst the spatial disciplines, and here it is important to introduce "infrastructure" as a central term contributing to recent disciplinary confusion, overlap, and internal poachings. Seemingly possessing properties of architecture, landscape, urban design, engineering, and planning, infrastructure has wedged itself into an ambiguous, yet powerful, position relative to the spatial disciplines, and, with that, relative to design, functionality, and expression. Simultaneously, the term's renewed relevance in the wake of economic, social, and ecological crises, has significantly proliferated its usage within broader public outlets. Infrastructure's contemporary status is central to understanding the internal status of architecture relative to its spatial sister disciplines.

Conveniently, this moment in architecture parallels a moment in the field of sculpture, some thirty years earlier, when in 1979 Rosalind Krauss famously sought to establish a broader field for sculptural practices in a postmodern condition. Krauss's text, "Sculpture in the Expanded Field," offers that "over the last ten years rather surprising things have come to be called sculpture." She goes on to qualify that sculpture's status, at that time, was qualified through "the combination of exclusions," or more from what it *was not* than what it *was*. Krauss argued that sculpture was simply being defined in opposition to landscape and architecture. Later, through the exercise of a Klein group diagram, Krauss identified three additional practices,



Evolutionary Tree 2000, Charles Jencks

which she labeled as "axiomatic structures, marked sites, and site-construction," that had previously been lumped within sculpture, but could now be liberated as independent disciplinary strands of (post-disciplinary) sculptural practice.

I propose to borrow Krauss's model of "problematizing the set of oppositions," but introduce some modifications. First, remove "architecture" from the original set and replace it with "urbanism," which was absent from Krauss's original grouping. Second, place "infrastructure" in the position where "sculpture" was. This creates the opposition that infrastructure is that which is not-landscape and not-urbanism.

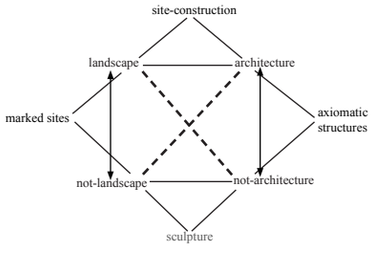
From this, we can return to Krauss's characterization, but this time we can replace her problematic of sculpture with our problematic of infrastructure, when she writes: "[Infrastructure] is no longer the privileged middle term between two things that it isn't. [Infrastructure] is rather only one term on the periphery of a field in which there are other, differently structured possibilities." The complete Klein group array reveals a more situated and disciplined status for the previously problematic term infrastructure. Within this new field, an undisciplined spatial practice is revealed at the periphery that consists of new architecture-like sub-practices. These practices' purview consist of the following spatial formats: surfaces, conduits, and containers. Architecture is atomized to the periphery, offering new possibilities, but what are these formats? Surfaces are planes of mediation, thickened and intelligent. Containers are shells of enclosure, processing and performing as nodes within a network. Conduits are carriers of matter and energy, exchanging and transferring within a larger network. Formats suggest an emergent productive public realm, one in which performative processes are integral to occupation. Architecture could now operate as a managed dynamic system, or as contingent ecologies.

Performing in a manner similar to infrastructures, these new spatial formats support energies, flows, resources, and matter, yielding an emergent, multivalent, public realm. Each format mediates between architecture and its environment, between the biological and the infrastructural, the entrepreneurial and the logical—simultaneously performing the roles of both. These formats enjoy an ignorance of the prejudices that distinguish architecture from infrastructure, landscape, and urbanism—instead relishing the dynamic ambiguity of a spatial format, or "spatial product," to use Keller Easterling's term. While these spatial formats sound like architecture, they are not called out as such, and are therefore liberated from disciplinarity, without becoming undisciplined by default. This would not replace the discipline of architecture, but simply offer a more situated and stable structure for the already-ambiguous, post-interdisciplinary condition of architecture.

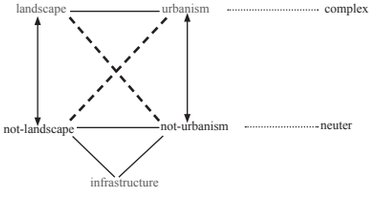
Trans-Expanded Field

Departing from issues of the interdisciplinary, it is important to qualify the term transdiciplinarity. With so many prefixes adhered to disciplinarity, the agency of *trans-*, its historical role, and its subsequent impact are revealing. In the 2004 publication "Nothing Less than Literal," Mark Linder probes "architecture's appearance outside—or seemingly outside, or at the very limits—of its own discipline by tracing a transdisciplinary 'history of formalism'" in 1960s art and architecture. Linder further writes that this act distinguishes itself from interdisciplinary practices because "transdisciplinary practices and research view the exchange of concepts and techniques between established disciplines in terms of translation and transference." Linder also cites a provocative 1995 exchange between art historian W.T.J. Mitchell and critical theorist Homi Bhabha, published in *Artforum*. Bhabha responds to Mitchell's question of the emergence of cultural studies within humanities by arguing that "in the humanities nowadays we often find ourselves in a space of unclarified interdisciplinarity. The humanities live in an intertextual, transdisciplinary space." Bhabha goes on to clarify two modes of interdisciplinarity. What he calls "interdisciplinary 1," that of joint degrees and joint teaching, which is familiar and is often used toward the "garlanding a particular discipline with another discipline's insights or expertise." He then counters that "interdisciplinarity 2," which occurs through an "invocation of another discipline happening at the edge or limit of our own discipline. It is not an attempt to strengthen one foundation by drawing from another; it is a reaction to the fact that we are living at the real border of our own disciplines, where some of the fundamental ideas of our discipline are being profoundly shaken." This is what Linder and others have called transdisciplinary. Extending Linder's observation, Sarah Whiting has qualified that "transdisciplinarity demands disciplinary depth, but shuns disciplinary limits." The separation of depth from limits could be repositioned as seeking (transdisciplinary) expertise within disciplinary generalism.

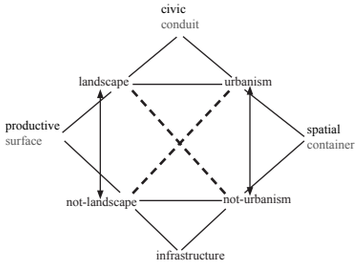
Returning to the previously expanded field, if the current status of transdisciplinarity is now



Rosalind Krauss, 1979
Sculpture in the Expanded Field



Lateral Office, 2009
Infrastructure in the Expanded Field



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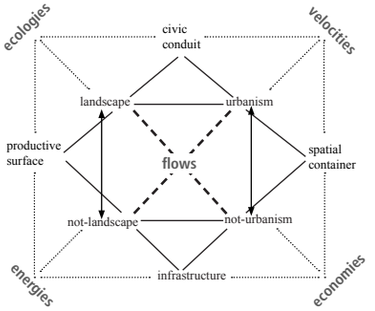


Lateral Office, 2009
Infrastructure in the Expanded Field

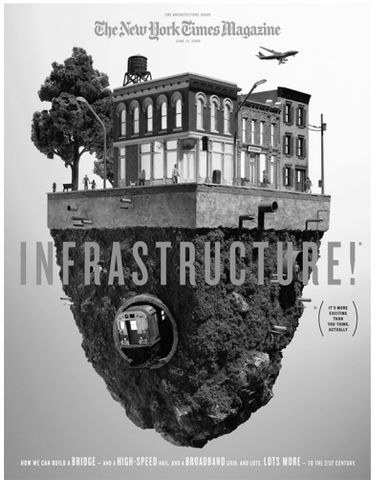
transposed onto the previous Klein grouping, a second-tier periphery, or outer ring, is revealed. This outer ring offers a set of factors, or possibly programs, that are providing new fodder for design, research, thinking—shall we call this architecture?—that is post-transdisciplinary. Energies, ecologies, economies, and velocities occupy this outer ring. These programs run throughout architecture, as well as the entire spatial disciplines, but their agency is typically seen more as deterministic or as a fixed prerequisite for an architectural act. A practice that is entrepreneurial in terms of the role of these programs is characteristic of a post-transdisciplinary practice.

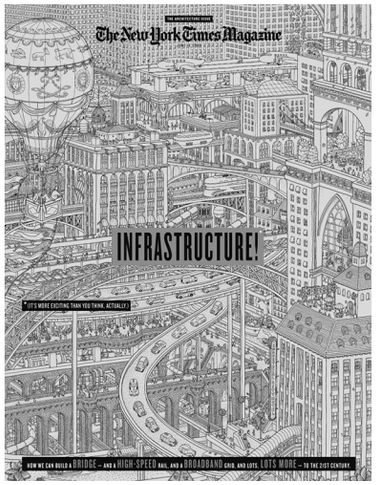
Why would architecture turn to this kind of practice, seemingly outside the purview of building arts? Significant contemporary conditions creating this include (peak) globalization, increased social inequality, climate change, and environment degradation. A post-transdiciplinary practice positions architecture as an open system, adaptive and responsive to environments and occupation. This architecture might also operate extrinsically, sometimes even at a territorial scale. Seeking opportunistic associations between economy, ecology, politics, and information, this practice is not a disobedient disciplinary exercise so much as it is a typological investigation into new spatial formats for the twenty-first century.

Co-optings, Now

Returning to accusations of disciplinary thievery originating from outside the spatial disciplines, it is important to set out from the beginning the role that the ambiguity of the term "design," as well as the attendant role of the "designer," plays. Certainly there are many professions that hold legitimate claim to the act of design as their primary agency—fashion, graphics, information, experience, theatre, sound, and, of course, architecture. It is therefore essential to highlight the contemporary, ambiguous position of "design" relative to the total act of architecture as a starting point for disciplinary transgressions. This ambiguity has left the door open to co-optings of design across the external disciplines. Economists, politicians, and business strategists have, for example, been described as "designing" their agendas or strategies. It seems that design and architecture, through disciplinary thievery, are departing in divergent directions.

An October 2006 cover story of *Fast Company*'s annual Design Issue featured the migration of design into business. The University of Toronto's Rotman School of Management, led by Dean Roger Martin, has emerged as a leading venue for "Business Design" and "design thinking." In an article entitled "Tough Love," Martin cites the inherent tensions between business-as-usual and "business-by-design." He offers



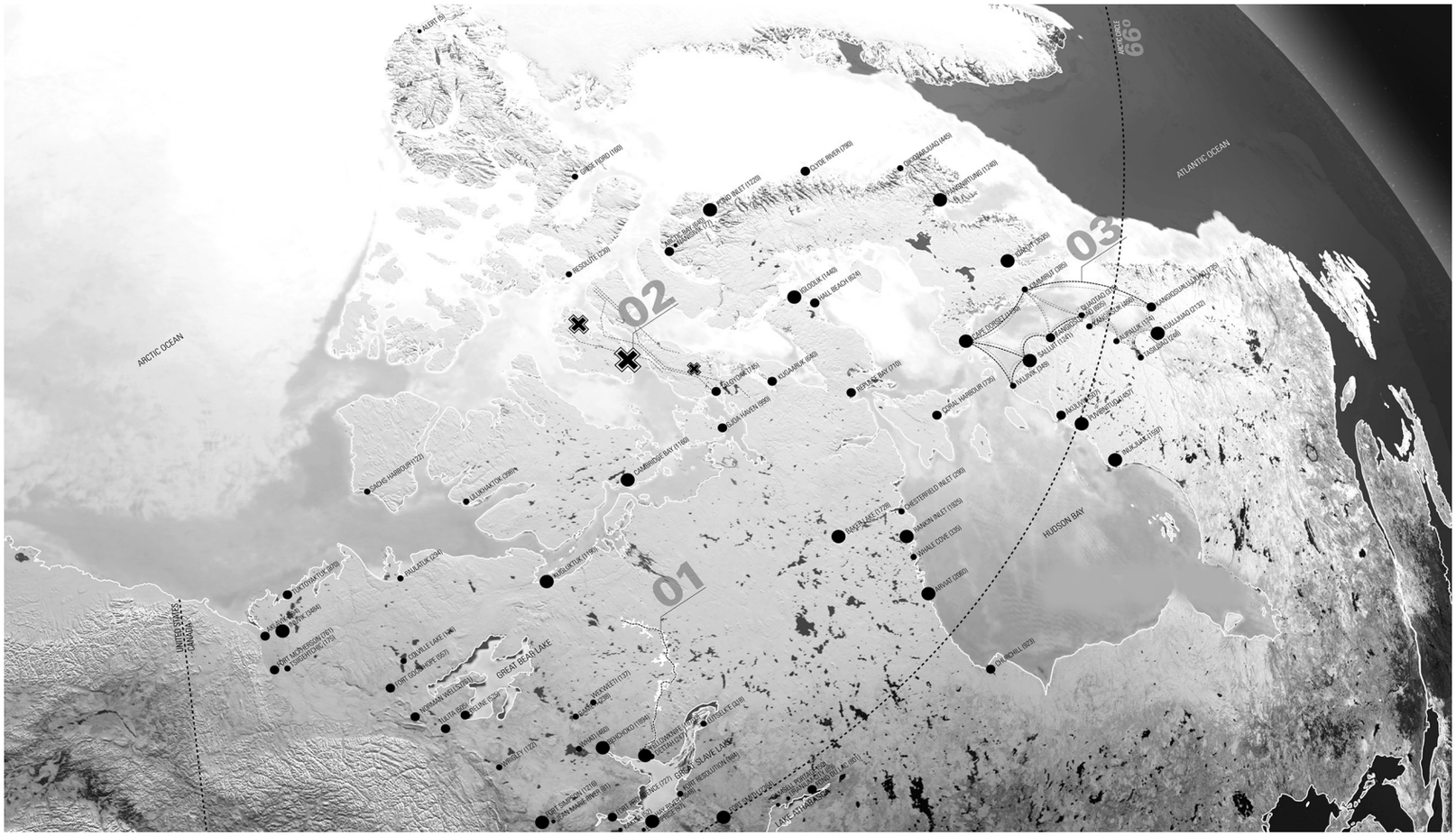


New York Times Magazine *covers, June 2009, "The Architecture Issue"*

that business-by-design introduces "abductive reasoning" to the typical inductive and deductive reasoning commonly found in business organizations. This form of reasoning is anticipatory rather than purely algorithmic, and it would be difficult to find an architect that does not disagree with the idea that design is equivalent to anticipation, or some form of abduction. The Rotman School website states: "At the Rotman School we see great value in the designer's approach to solving problems—the integrative way of thinking and problem-solving that can be applied to all components of business. Great design is characterized by Integrative Thinking™. The application of these principles to business practices is what we call Business Design™."

If the trademarkings are not clear, Rotman's Business Design Initiative puts it most succinctly in its mantra: "forget business administration, teach design thinking." Countering the "Six Sigma" method of business management developed in 1986 by Motorola, "design thinking" steps away from analytics and into an approach where business responds directly to context, climate, and culture.

"Designer," unlike architect, is a freely-usable term without professional benchmarks or legality issues. However, design and designer have increasingly been replaced with architecture and architect. Possibly the most significant indication of the compromising nature by which design, and now architecture, has made itself open to other disciplines is the frequency by which the very title of architect has been evoked in contemporary media. A December



Next North: Infrastructures for a Shifting Landscape, Lateral Office 2010

10, 2010 *New York Times* business headline reads "Pfizers Chief, Architect of its Mega-Merger, Retires." A January 11, 2011 *New York Times* financial headline reads "Euro's Architect Warns about Currency's Failure." A January 19, 2010 *New York Times* political headline reads "Boehner Hires 'Contract' Architect to Promote G.O.P. Platform." In attributing the role of architect to a business person, a financial advisor, and a political advisor, each has inadvertently attained a title that a trained architect can only acquire after completing a degree, an internship, and passing a battery of professional exams. It would be difficult to identify another professional descriptor that could be so widely used in this manner, across such disparate professions—not doctor, not lawyer. So maybe architecture is all over. The *New York Times* usage suggests the widespread use of the architect to represent a figure able to negotiate, manage, and strategize complex systems, such as a monetary system or a business merger. This could also mean the same vacuous nature by which one can ascribe being a designer has already started to become conflated with describing oneself as an architect.

This is the current condition with which the discipline's identity has been appropriated. Though the foundations from which this thievery occurred are more profound than simply the term architecture and relate more to its agency.

Co-optings, Then

Computation and business theory both co-opted a strand of meaning from the term "architecture" in the 1960s and 70s in order to seed a radical repositioning within their respective fields. "Architecture" was used as a suffix, signifying at once organizational complexity and networked wholeness. It could be argued that from this moment the term "architecture" and the discipline of architecture began evolving along separate routes. "Business architecture" and "information architecture," for example, adopted an architectural idiom to signify their complex economic conditions and expanded data fields, today understood to be spurred by globalizing forces. As the word "architecture" took on varied meanings, it further came to signify—outside of its discipline proper—a dynamic superorganism capable of processing disparate extrinsic matter. Systems thinking had also migrated into architecture through the megastructure movement towards buildings as city systems, which reached a fever pitch in the late 1960s. This early systems architecture typically focused on the internal systems of the architectural object, however, and failed to acknowledge the systems of environment that envelop the architecture. The year 1967 was witness to two notable co-optings of the term architecture as a system: Nicholas Negroponte's initiation of the Architecture Machine Group, the precursor of the MIT Media Lab, and the publishing of economists Paul R. Lawrence and Jay W. Lorsch's

landmark book, *Organization and Environment: Managing Differentiation and Integration*.

Lawrence and Lorsch were both professors of organizational behavior at Harvard Business School. The authors criticized the then-common organization theory for ignoring "relationships between the structural characteristics of complex organizations and the environmental conditions these organizations face." In contrast, they sought an organization architecture that was more responsive to factors from extrinsic forces, or the wider environment. Extracting the unpredictability of the extrinsic from the more predictable intrinsic factors, Lawrence and Lorsch proposed a contingency theory of organization. At its root, contingency theory suggests that managers should no longer privilege "one best way" to organize. Given this, it follows that organization architecture should anticipate inevitable change.

The year 1967 also saw the establishment of the Architecture Machine Group at MIT. Negroponte considered any design act to also be an act of procuring information, and thereby declared that the group would be dedicated to "the construction of a machine that can work with missing information." Managing contingencies that arose from problems of missing information presented a rather different set of challenges in architecture. While Negroponte's group primarily focused on establishing a hybrid process that embraced a machine as an equal associate in the design process, the group's ambition of establishing a machine process that could work with unavailable or missing information echoes the contingencies associated with open-system thinking. This suggested that data was neither an absolute nor a static framework from which to respond; information was as much a living system as any other. An array of architecture-termed pursuits subsequently flourished: enterprise architecture, data architecture, application architecture, and information architecture, among others.

The usage of the term "architecture" independent from the architecture discipline catalyzed a shift from what might be called command-and-control organization to an approach approximating real-time responsive organization—the transition from architecture as a static, hierarchical enterprise to it operating as a dynamic element, interacting within, and at times structuring, networks. It appears that the term "architecture" introduced contingency into disciplines whose very foundations were predominantly procedural.

The intentions in recognizing this pivotal moment, and calling it thievery, are to reintegrate architecture as a systems-based organization, as an activity operating consciously within the broader globalized exchanges of economics, data, ecologies, politics, and land use—or again, architecture post-transdisciplinarity. The recuperation of the term "architecture" as it has evolved within business, management, computation, and information practices back into the discipline is potent with possibility.

Recuperation, contingency

Contingency, like design, is an anticipatory act, and is often devised as a response to an eventuality. Contingency triggers the recuperation of an extrinsic architecture. Contingency in architecture permits opportunism at the moment when architecture interacts with the complexity of its wider environment—an environment often possessing characteristics of a superorganism. As with living organisms, the performance of any organization depends on the alignment and adaptability between the system and its environment. The filtering and selection of data from inevitably inadequate information sets, as Negroponte suggested, combined with Lawrence and Lorsch's observation of "contingencies as opportunities," are central to recuperation. After the term "architecture" is absorbed back into the profession of architecture, what kind of architecture results?

Designing for contingency has no prescribed methodology in architecture, though certainly all architecture is already charged with anticipating possible eventualities—higher loading, inclement weather, potential of fire, or even change of use. Anticipated contingencies typically focus on mitigation rather than opportunism.

Conclusion

In Reinhold Martin's 2010 publication "Utopia's Ghost," he charts the complex meaning of "environment" in the early 1970s by arguing that one must "discard any absolute distinction between what lies 'inside' a discipline and what lies 'outside' it, without discarding the notion of disciplinarity as such." He later qualifies the argument that "a move inward toward the grammars and syntax of the aesthetic object qua object or text, also constitutes a movement outward, toward 'environment' and all that it implies: autonomy as a condition for immanence then, rather than an alternative to it." Here I would invite the inverse; that is, the radiating search outward toward environment that facilitates an understanding of the grammars and syntax of architecture.

Some would celebrate architecture's disciplinary demise as the chance to turn more broadly to "design as a way of thinking," which I would echo. However, alongside this I would offer the renewed potential for architecture to again recuperate a systemic thinking—one whose systems extend extrinsically, outward—and for architecture to position a contingent open-endedness that invites new typological species for architecture, new roles for architects, and ultimately, an entrepreneurial spirit about the location of its very discipline.

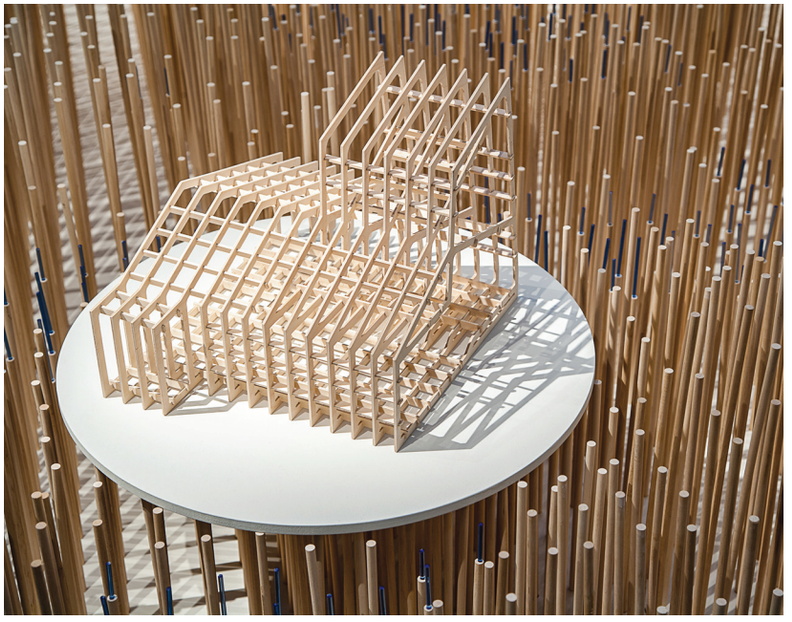
Arctic Food Network
Baffin Island, Nunavut, Canada

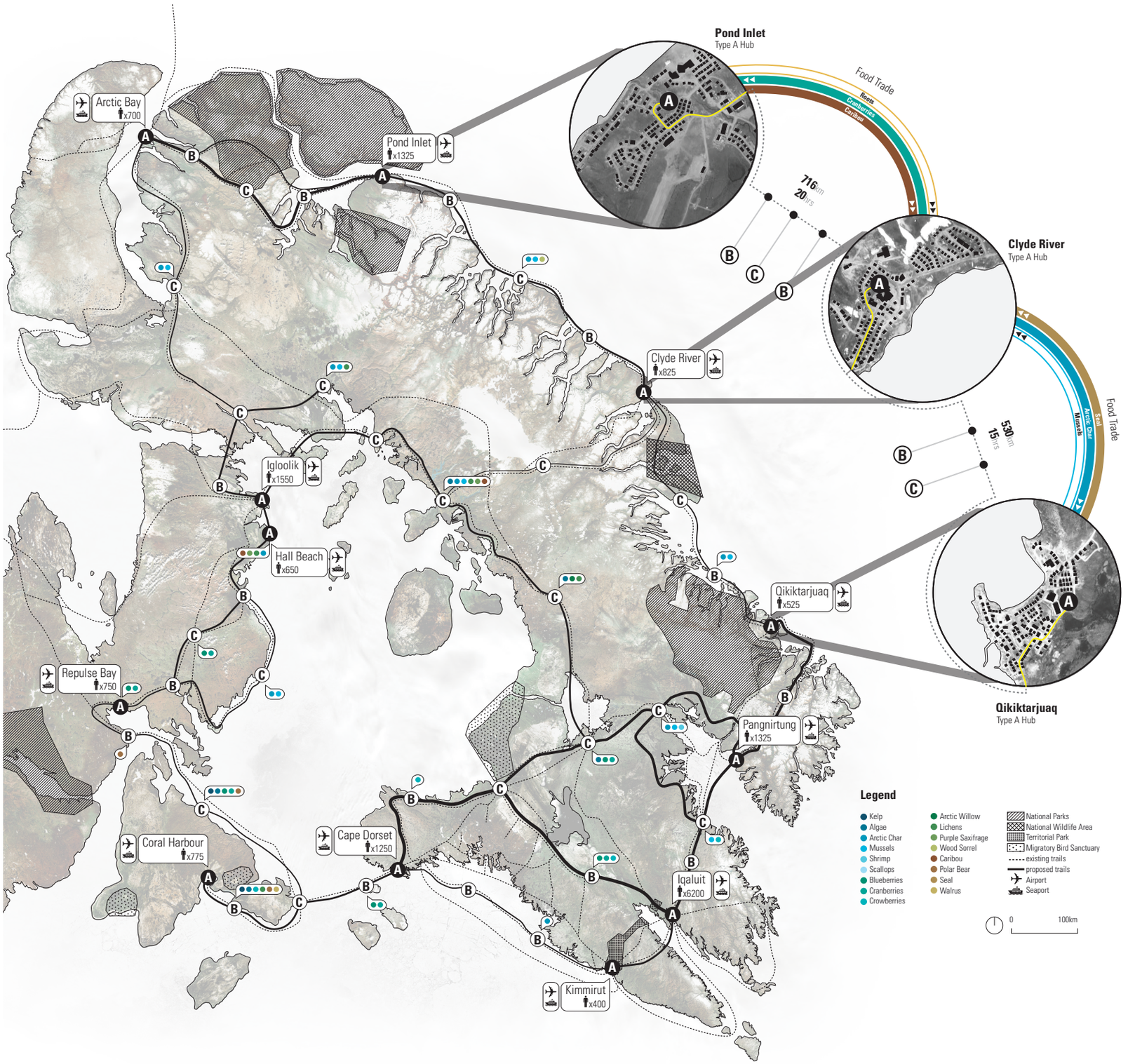
Project Team:
Mason White, Lola Sheppard, Fionn Byrne, Nikole Bouchard, Matthew Spremulli, Ali Fard

Northern Food Culture
The traditional Inuit diet in Northern Canada, which is centered on hunting and gathering, has been slowly compromised by an influx of southern manufactured food products. Both north and south are coping with the health impacts of this diet, but it is amplified in the north, due to the high cost of shipping fresh produce and healthier, perishable goods, to remote northern communities. This has yielded significant health issues as well as the loss of knowledge of country hunting among the youth. The Canadian territory of Nunavut, in particular, is suffering from these recent dramatic changes as well as the ongoing challenges of food security among radically dispersed communities. The Arctic Food Network (AFN) proposes a snowmobile-accessed, regional network of arctic farms and camp hubs. The AFN encircles the large body of the Foxe Basin in Nunavut, Canada, home to a richly diverse wildlife, along the coast of Baffin Island and some 11,000 Nunavummiut.

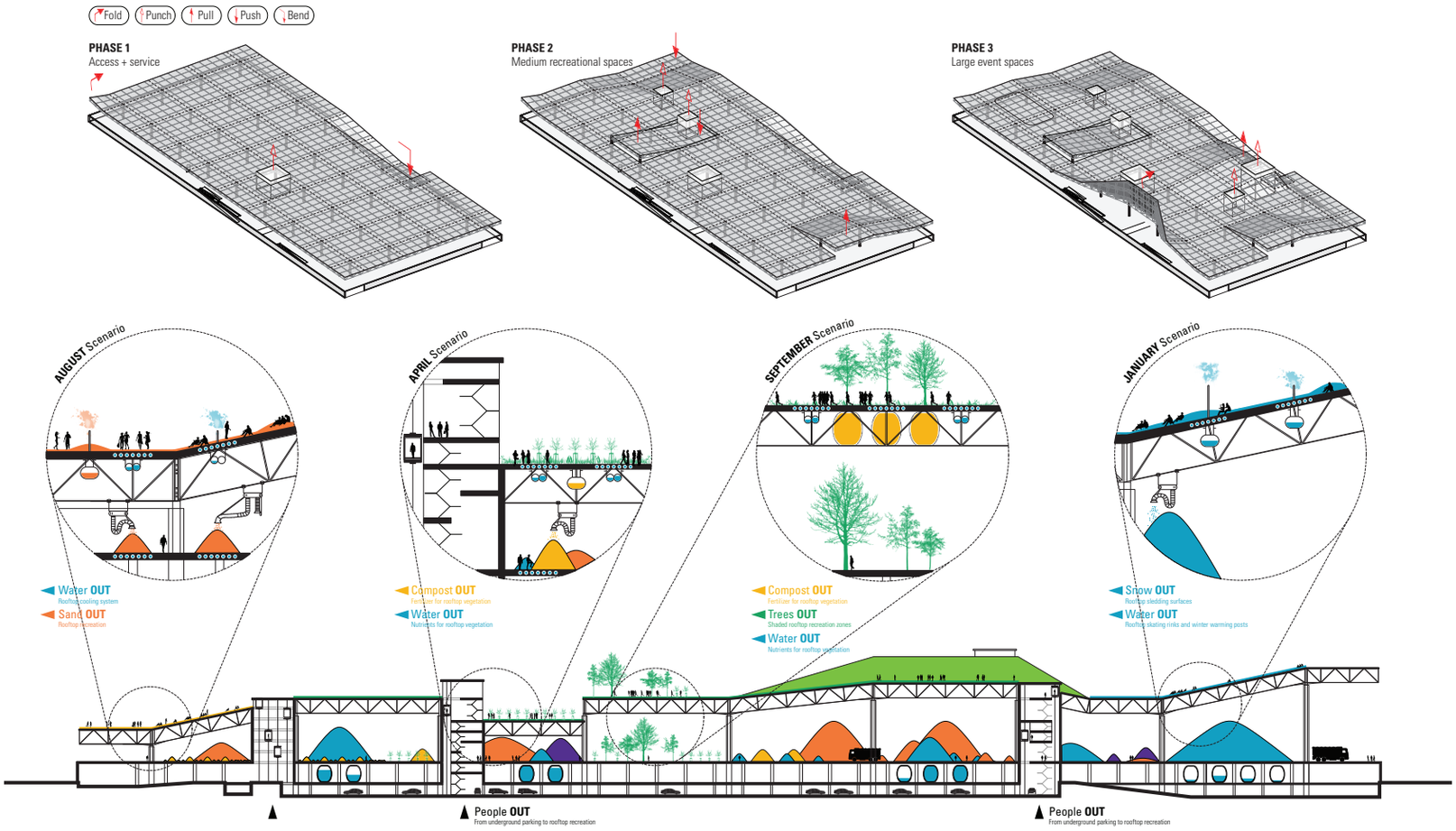
Baffin Island Trails
The Arctic Food Network utilizes an existing network of snowmobile trails, the only form of ground connection amongst the eleven disconnected Inuit communities of Baffin Island. Our regional study on mobility, food security, and health in this region led to the pursuit of a network of small structures that acknowledge the Inuit tradition of temporary enclosure in a cold climate. The AFN is a new model for cold climate survival that would assist to sustain the rapidly increasing (youthful) populations in northern settlements, but also potentially offer a future exportable economy for the North. Each of the hubs along the AFN opportunistically negotiates its local ecosystems, emergent biological potentials, and its proximity to communities. AFN hubs are proposed to be distributed at 160km intervals. Hubs occupy varied sites: land, water/ice, or coastal conditions, and each of these sitings is selected for its access to a specific harvestable food product. Beyond the desire for a range of sites, the specific locations/sites would be discussed and developed with local communities and government partners.

Cabins, Meshes and Poles
The network is comprised of what we call sheds, meshes, and poles, which refer to a set of uniquely integrated elements merging architecture, landscape, and technology. These integrated elements assist in negotiating the harsh dark winters and treeless landscape of the Canadian north. In being conceived as a kit of parts, the project is intended to be highly adaptable, implementable in an incremental manner, and cost efficient, while seeking to provide a unique network of modest spaces that serve mobility in harsh climate, support social networks, and strengthen traditional learning. Because of this flexibility, the focus of different sites can adapt to needs: some might focus more on hunting or fishing cabins, others more on harvestable arctic produce. The AFN project is equal parts regional agriculture, seasonal camps, data transmission centers, and ecological management stations. In addition to providing a secure food and travel network, AFN seeks to merge new technologies with traditional practices to support an emergent twenty-first century economy.





Arctic Food Network map


Fold
Punch
Pull
Push
Bend
PHASE 1
Access + service
PHASE 2
Medium recreational spaces
PHASE 3
Large event spaces
AUGUST Scenario
Water OUT
Rooftop cooling system
Sand OUT
Rooftop recreation
APRIL Scenario
Compost OUT
Fertilizer for rooftop vegetation
Water OUT
Nutrients for rooftop vegetation
SEPTEMBER Scenario
Compost OUT
Fertilizer for rooftop vegetation
Trees OUT
Shaded rooftop recreation zones
Water OUT
Nutrients for rooftop vegetation
JANUARY Scenario
Snow OUT
Rooftop sledding surfaces
Water OUT
Rooftop skating rinks and winter warming posts
People OUT
From underground parking to rooftop recreation
People OUT
From underground parking to rooftop recreation

From Place to Plant
McCormick Place REDUX / Chicago, Illinois

Project Team:
Mason White, Lola Sheppard, Fionn Byrne, Nikole Bouchard

The reconsideration of Chicago's iconic McCormick Place offers an opportunity to address and celebrate Chicago's impressive urban logistics while extending the city's project of open space by creating a new urban park experience. Towards this, we propose that McCormick Place is converted from a place to a plant; A plant for the management of urban materials: soil, trees, salt, sand, and snow. Given Chicago's extreme temperature swings from averages of 20°F in winter and 82°F in summer, any large-scale public space will need to confront these swings to be viable year-round.

Consider this:
• Chicago has a 300 truck fleet for snow removal.
• The last three winters have brought more than 50" of snow each season.
• Almost 250,000 houses now participate in the Blue Cart recycling program.
• Over 200,000 tons of salt are used each winter.
• Thousands of urban trees are lost each season.

Reformatting McCormick

McCormick Place is converted from a machine in service of commercialization into place for public opportunities and urban logistics. This yields two new spaces. One—the interior space of McCormick—is given over to the management and operation of soil, trees, sand, salt, snow, and water. The second—the roof—is reformatted to serve as a mutable urban oasis.

Byproduct Park

For the materials management space, the interior is gutted, leaving the flexible long-span spaceframe in addition to a series of tower-like cores. These volumes serve as a working space for city employees managing the collection, distribution, and conversion of granular materials, while also providing public access to the public roof. The existing roof of McCormick, equivalent to twelve football fields in size, is pulled, pushed, folded, and bent to accommodate a range of urban experiences responding to season. Zones of the roof can be made into a beach during the summer, with surplus sand from the winter. Or, zones can be made into a sledding parkland during the winter by blowing filtered snow from urban collection. Visitors are brought to the lower level of the building and then pulled up through the transparent cores, allowing them to catch views of the working space on their way up to the public park.

Synthetic Systems

The existing spaceframe trusswork of McCormick is interwoven with conduit and ductwork that distribute materials across the interior, and, when desired, can be distributed, sprayed, or blown onto the roof. The interior and exterior landscapes are constantly changing according to weather and needs, making the roof a bellwether of annual material usage and surplus. The project merges the inner workings of urban maintenance and logistics with recreation and a dynamic public realm. McCormick Plant pays homage to the legacy of its Miesian structure, but re-programs and re-formats it for the 21st-century. The new roof park creates a unique and unprecedeted public space in American cities.