EMERGING FROM STASIS: A New Typology for the Public Building in Centro Havana

by Ethan J. Lacy
B.A. Geography, Middlebury College, 2001

Submitted to the Department of Architecture in Partial Fulfillment of the Requirements for the Degree of Master of Architecture at the Massachusetts Institute of Technology

June 2010

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ABSTRACT

This project proposes a new public institution for the most dense and deteriorated zone of Havana, Cuba. This new institution aims to capitalize on existing social networks which, consolidated and enhanced, might provide the social medium out of which a vibrant and active civic institution would arise, facilitated by a new architectural typology.

The site, Centro Habana, is an "in-between" residential neighborhood with a dense, pre-car urban fabric, high population density, close-knit social circles, and a real potential to be left behind as Havana slowly re-opens to the rest of the world. Its frequent vacant lots and abandoned buildings, products of decay induced by decades of deferred maintenance, offer rich opportunities to imagine the insertion of a new type of public institution into the existing fabric of the city.

In a context where the state is currently the only real agent for change, this project proposes a network of public buildings for the citizens of Havana, suggesting a new attitude toward modernization which resists both an abrupt reversion to unbridled market-driven development and an ideologically driven perpetuation of an oppressive and tired status quo.

Thesis Supervisor: Ana Miljački
Title: Assistant Professor of Architecture
SPECIAL THANKS:

To Ana, for your guidance, wisdom, and encouragement

To Joel, for a great semester teaching with you and learning from you

To Timothy, for your key observations in framing the project and intimate knowledge of Havana

To Debbie, for your support and encouragement all along, and heroic effort in the last push

To my fellow students who came out in force to help me in the last few days:

Masoud Akbarzadeh
Debbie Buelow
Ryan Maliszewski
Tim Olson
Jordan Allison
Rachel Gealy
Sarah Hirschman
Zach Lamb
Chris Guignon
Emily Lo
Yushino Okamoto
Morgan Pinney
Marissa Grace Desmond
Ian Kaminski-Coughlin
Keith Case
Mary Hale
George Lin
Travis Williams
Pam Ritchot
Chui Pettamasattayasonthi
Buck Sleeper

To hosts, friends, and colleagues in Havana for sharing your vibrant city and fascinating stories, especially:

John Pilling, Julio Cesar Perez-Hernandez, Marien Rios, Gerlins Rivero, Carey Clouse, Migel Coyula, and Isabel Rigol

And especially to my parents, my brother, and all of my extended family, for believing in me and supporting me for so many years.

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Ulrich Beck’s idea of ‘reflexive modernization’ allows us to reexamine critically the project and process of modernity. The so called “second modernity” in which we find our contemporary selves replaces unequivocality with ambiguity; it replaces order and sharp divisions between categories of people, things and activities with a recognition of the blurred and interconnected nature of these things. (Beck and Grande, 2004, p. 29) This distinction between first and second modernities can be drawn by examining J.L. Sert’s Havana master plan from the mid 1950s, which conceived of replacing the whole of the historical core of Havana with new car-centric modernist buildings. The unthinkable-ness of that proposition in contemporary practice– marked by an instinctual (and often nostalgic) impulse to preserve the material manifestations of past cultures– points to the vastly different set of developmental forces which seek to bring change to Havana today. That the city is largely unchanged since the revolution makes it a unique laboratory in which to test, or at least to speculate, on the manifestations of second modernity in striking contrast to what might have been.

CONTEXT

A simple, ubiquitous, USB flash drive is a valuable commodity in the mixed-up reality of Cuban life. Its value is two fold: it facilitates the covert movement of digital information and correspondence among a society in which the flow of information is strictly regulated, and, like all imported commodities, it has real economic value in a two-currency system where average state wages are $20/month and the government only subsidizes that which it can produce. Cuba, un-surprisingly, is not a competitive producer of USB drives.

The revolution of 1959 came down from the mountains and virtually waltzed into a stunned, half-drunk Havana, transforming the playground of the U.S. elite into a socialist utopia in their vision, a vision which has endured, against all predictions, for a half century.

This thesis aims to capture the opportunities inherent in and unique to the late-socialist condition of contemporary Havana. By taking on the Centro neighborhood, precariously sandwiched between two important centers of the city– it proposes a new institution to revitalize this vibrant place which has a real potential to be left behind as Havana re-connects with the rest of the world.

INTRODUCTION

Cuba finds itself in a unique historical predicament as the last holdout of socialism in a globalizing world in which a rigid and isolated ideological political system has at the same time enabled a prolapse from certain ills of progress wrought by modernity on much of the rest of the world. Cars, though a presence in Havana, are relatively sparse, and little has been modified to accommodate them. How can their inevitable return be resisted, or more smartly accommodated, avoiding and learning from the mistakes of countless other cities? The Cuban system has paradoxically created certain situations that many in the western world would call progressive: a robust system of urban agriculture, universal health care and education, near 100% literacy, etc. Most people own their own houses. And because it is very difficult to move or sell a property (it’s actually necessary to negotiate a trade), many people spend all of their lives living in a single house. Housing is in shortage, so there is much overcrowding. But a result of this is that neighborhood ties are incredibly strong.

Tourism has stepped in as a way to use capitalism to save socialism, yet while clearly benefiting a crumbling city in tangible ways, it also further exacerbates the economic divide between Cubans and the rest of the world. And in an effort to save socialism, the government tries to control access to information and create a tourist apartheid, a futile endeavor in a globalizing world, and incredibly frustrating for Cubans and tourists alike.

In Havana, and especially in Centro, public space is the street. Houses are crowded and often poorly ventilated, and privacy is limited. The street is in many cases the most comfortable and lively place to be. Without money to spend on shopping or drinking or eating out, most people stick to their neighborhoods and make their own fun. In Centro’s relentless row houses, the line of the facade is a constant, sharp, and thin division between private and public worlds.

URBAN SCALE AMBITIONS

An enhanced network of bicycle/electric scooter-only and pedestrian-only streets will link the new institutions and create a vital connection between the twin hearts of the city: Vedado and Havana Vieja, resisting the return of the car to Havana as the dominant mode of transportation. These streets can be reclaimed for the public spaces that they already are by banning cars from them and redesigning them for more sustainable and inexpensive forms of transportation: bicycles, electric scooters, and walking.
A NEW INSTITUTION

This project proposes a new public institution for the densest and most deteriorated part of the historic city, Centro, and aims to capitalize on its existing networks which, consolidated, might provide the social medium out of which a vibrant and active civic institution might arise, facilitated by a new kind of architecture.

The larger architectural question posed by this thesis seeks to give an identity to this new institution as a sort of anti-institution. By eschewing the trappings of conventional notions of the institution, or of a building in general, the project suggests a new attitude towards the street, its inhabitation, and users. The project has no doors; the division between inside and outside is deliberately blurred. The distribution of the prefabricated elements creates a deliberately ambiguous composition with two distinct elements: A living facade as screen, and an accumulation of like prefabricated elements, which, aggregated, create a spatial configuration which is at once dynamic and difficult to read as a whole.

Currently there exists an institution in Cuba which was set up in the early 60’s, the CDR’s, (Committee’s for the Defense of the Revolution) which function in some ways as a neighborhood watch dog, giving them a mixed reputation among Cubans. But the CDR’s can also function as a community organizer with a sanctioned, quasi democratic power structure, and embedded local knowledge. They exist on the scale of the city block in Centro. This project imagines these new institutions as a supplement to and re-branding opportunity for the CDR’s. Each building agglomerates several CDR’s into one centralized, shared public building, a civic node, functioning as a park or an oasis of green in the densest part of the city.

A NEW PREFABRICATED UNIT

The primary ambition of this exploration was to suggest a relatively simple, prefabricated unit which, through varying strategies of stacking and aggregation, might produce unexpected spatial richness, ambiguity, and flexibility. This ties into existing prefabrication technologies which were aggressively developed after the revolution in order to build mass housing, and which were the only sanctioned means for architectural innovation after the revolution (with some notable exceptions constructed in the “romantic period” of the early 1960’s).

A LIVING FACADE

Much of the street facade of the buildings will be expressed with covered in a layer of living plants, creating a dynamic and always changing laboratory for experimentation and visual expression, while bringing nature into the public realm of the densest parts of city. Additionally, these living surfaces provide opportunities for showcasing and disseminating the extensive knowledge about urban agriculture which is unique to Havana. People might be encouraged to start small gardens on their balconies, roofs, or courtyards, strengthening this connection between nature, food, and urban life. By providing the framework for these vertical urban gardens, the institutions encourage the agency of its users to literally propagate the image of the building through their own embedded knowledge. The use of plants as a building material also suggest an ephemeral, mutable symbol of the city which can change over time and broadcast the health and state of the neighborhood directly onto the street. In a way, it’s a new form of propaganda without words, a billboard in a city without advertisements, announcing the start of something new.
Restoration is the booming industry in Havana. Teams of workers on scaffolding move their way up and down the streets rendering the buildings in a fresh coat of Caribbean pastel colors and patching crumbling facades with fresh plaster.

After the economic crisis of the 1990s which followed the fall of the Soviet Union and the loss of its generous Cold War-fueled subsidies, the Cuban state launched a desperate but careful effort to use capitalism, in the form of tourism and limited foreign investment, to save the revolutionary socialist project. By legalizing the dollar in 1994 (which later became the convertible peso in 2004), the government spurred a system of two currencies, in an attempt to capture the hard currency necessary to import the things that it could not provide. As a side effect, this created a powerful incentive for Cubans to engage in a dollar-based black market economy in an attempt to “resolve” the shortages and hardships of everyday life.

The instabilities that are a result of this situation are palpable in contemporary Havana. In its failed attempt to segregate tourism and daily life, the state has inadvertently reintroduced to Cuba the concept of a better life through material consumption.

The floodgates of a transition to liberal capitalism, typical of contemporary Latin America, are held back tenuously by a subdued yet palpable police presence which enforces a litany of rules designed to funnel tourist dollars as much as possible away from individuals and into the government coffers. Attempts to subvert and exploit this system for personal gain, naturally, abound.

Private enterprise is limited to about 150 different fields, none of which allow for retail selling of hard goods. Most private enterprises cannot hire employees. The government, therefore, operates like a sole monopolistic corporation who’s goal is to provide for its people, yet it carries with it all of the inefficiencies inherent in a monopoly. The state self consciously uses tightly controlled capitalism in certain sectors in order to capture the hard currency necessary to perpetuate the now rather tenuous socialist project.

USING CAPITALISM TO SAVE SOCIALISM

After the economic crisis of the 1990s which followed the fall of the Soviet Union and the loss of its generous Cold War-fueled subsidies, the Cuban state launched a desperate but careful effort to use capitalism, in the form of tourism and limited foreign investment, to save the revolutionary socialist project. By legalizing the dollar in 1994 (which later became the convertible peso in 2004), the government spurred a system of two currencies, in an attempt to capture the hard currency necessary to import the things that it could not provide. As a side effect, this created a powerful incentive for Cubans to engage in a dollar-based black market economy in an attempt to “resolve” the shortages and hardships of everyday life.

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1990– beginning of “special period”

1800 1850 1900 1950 1975 2000 2010 2050

U.S.S.R.

2004: U.S. dollar banned, replaced with Convertible Peso (CUC)

1994: U.S. dollar legalized, start of dual economy

1 CUC = ~24 Pesos nacionales

Pressure on the urban center of Havana increases, while improved standards of living wants to reduce density?

The social achievements of the revolution are maintained?

Sugar and its related anxieties die for good?

2002: tourism overtakes sugar

Global tourism spikes and becomes the economic enabler for a new kind of utopia?

Cuba got rich on sugar, but in doing so the country became vulnerable to volatile world market prices, and failed to produce many of its own agricultural products.

Tourism was introduced after 1990 in an attempt to capture hard currency in the face of a serious economic recession.

Tourism dollars

SUGAR PRODUCTION

Literacy

Population (Havana)

ECONOMY

IMPORTS AND EXPORTS

GLOBAL TOURISM: SOURCES

IMPORTS:
- oil
- food
- machinery
- chemicals
- consumer goods

EXPORTS:
- sugar
- nickel
- tobacco
- fish
- medical products
- citrus
- coffee

RESTORATION

Painting the facades for the tourists

Coppelia ice cream/Yara cinema

University of Havana

Malecon Parque Central

LOCALS: SOCIAL AND CULTURAL SITES

TOURISTS: SITES OF INTEREST

SITES FREQUENTED BY TOURISTS

Hotel Nacional

Paseo del Prado

Obispo street

Casa de musica

Coppelia/La Rampa

CENTRO

HAVANA VIEJA

VEDADO

MIRAMAR

TYPICAL TOURIST WANDERING SPHERE

TOURISTS’ SITES OF INTEREST

LOCALS’ SOCIAL AND CULTURAL SITES
El bloqueo, the Cuban term for the U.S. embargo, is demonized and blamed for many of Cuba’s woes from the past half century. But this notion of blockage can be extrapolated to many different frustrations of Cuban life. Access to information is tightly controlled. Internet use is virtually impossible for the average citizen. Mass media such as television and radio are strictly controlled by the state. Cubans, by and large, are not free to travel internationally. Public transport is unreliable and slow.

All of this creates a perpetual state of immobility, the flip side of which is a remarkably strong network of neighborhoods, barrios, in which people look out for one another in ways which have become rare in much of the modern world.
**TRANSPORTATION: TIMELINE**

- **City buses**: Peaks around 1975, making a comeback after a decline set off by the crisis. New buses from China are being phased in to replace improvised camellos towed by noisy big rigs.
- **Bicycles**: Use spiked after the collapse of the Soviet bloc, making gas prices prohibitive. Cheap Chinese bikes, and their association with this dark period, have led to a stigma against bikes today.
- **Cars/1000 people**: Cars never really took off as a mode of inter-city transit, but are still in use today.
- **Electric trolley lines**: Havana had the most extensive trolly system in the Caribbean. By 1951 the lines were bankrupt.

**WHAT IF?**

- **Modern street cars**: Provide cheap and clean transport?
- **Long distance train service**: Is a better option than highways?
- **Buses come back to re-mobilize the city in the short run?**
- **Widespread bike and scooter use returns?**
- **Cars never really come back to Havana?**

**MODES AND DIVISIONS**

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**For comparison, the U.S. currently has approx 600 cars/1000 people.**

Bicycle use spiked after the collapse of the Soviet bloc, making gas prices prohibitive. Cheap Chinese bikes, and their association with this dark period, have led to a stigma against bikes today.

Buses are slowly making a comeback after a decline set off by the crisis. New buses from China are being phased in to replace improvised camellos towed by noisy big rigs.
A concept which began with the Soviet Constructivists in the 1920’s, the “social condenser” building aimed to create pockets of socialist utopia in which new political and social ideals could be encouraged by and manifested through architectural means. In the U.S.S.R., two different typologies emerged: collective housing (living) and workers’ clubs (recreation and education).

These ideas were picked up by Le Corbusier and others during the post-war period, and manifest today loosely in the market-influenced hybrid program building. This project aims to position itself within this trajectory while searching for a new typology specific to the latent opportunities of contemporary Havana. It will offer a new vision for the role of the “social condenser” building in a city which is caught in a slow but inevitable transition. This new typology will be specific to Havana but relevant elsewhere both as an attitude and strategy for intervention in the historic city and also as an implicit critique of both capitalist-driven hybridity and socialist-driven ideology. It searches for a new response to the contemporary quest for modernity.
mechanism of the skyscraper to manifestation of the social restaurants and lounges. floors are apartments, and men on the first 12 floors: Squash Program: 38 floors. Athletic club for the revolution. Shortly after coming to power all over the city. However, the projects were abandoned in the past 10 years, the projects are still not complete, the property all over the city. It's the Castro government public state-subsidized ice cream; the most public space in Havana created after the revolution. Coppelia represents probably the most popular attraction. People stand in line for hours for ice cream. Coppelia Ice Cream parlor – Havana, El Vedado.

Ricardo Porro, Vittorio Garatti, Roberto Gottardi, 1960-65

National Art Schools – Havana, El Vedado

Coppelia Ice Cream parlor

Why relevant?

Modern Dance, Plastic Arts, Dramatic Arts, Music and Ballet. People enjoyed a game of golf on the newly created public park. The total area is 3,500 m², on a single building within a network of similar buildings, the aim was to associate culture and education in everyday life. It's an experiment in sharing in a dismantled building. Re-uses a modernist facade from an elementary school plays, etc.). The building is taken care of by the local community; it's never staffed. Used by disparate groups (teenagers, adults, residents, the shelves are never borrowed freely; the building is open onto the lawn. Theatre is allowing for performances to spill out onto the lawn. Theatre is creating a new variation on the typology. The performance space itself is on the ground level, openness clearly draw from prefabrication and mechanization. In mid-1950s, prefabrication and mechanization were abandoned in the midst of an ideological shift towards slow restoration after international intervention. By 1965, still not complete, the process. The futuristic saucer form of the edifice is an affront to the ousted elite, but also an example of the social condenser, creating an endurance of deprivation, something as simple as ice cream creates an enduring ritual becomes a social event in Cuba.

Mario Girona, 1966

Why relevant?

Why relevant?

Mario Girona, 1966

Havana, El Vedado

Coppelia Ice Cream parlor

National Art Schools

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Why relevant?
Decay in Centro Havana has conflicting implications. These small pockets of open space in the city are often re-appropriated for different uses by state or private agents, allowing for a unique type of urban dynamism. Parking lots, markets, small urban farms, car repair shops—they provide a much-needed relief from the dense residential fabric, yet, like urban cemeteries, they symbolize the eventual demise of that very fabric.

How can the system, already in place, of distribution of local, non-industrial, non-corporate food become the centerpiece of a series of nodes: community centers, libraries, internet and information terminals, housing improvement offices, adult education and computer classes, etc.? Through re-purposing buildings constructed for capitalist means, the regime segmented and compartmentalized these programs. A bank became the main hospital. Bourgeoisie mansions became schools; vacant lots became markets. The presidential palace became the museum of the revolution. Havana was self-consciously re-appropriated yet scarcely modified in the image of the revolution. Today, a new round of re-appropriations of its existing buildings is taking place in Havana, as "important" buildings are renovated into new tourism uses. But little is being done to inject new life into these old, decaying neighborhoods.

VACANCY: DECAY AS DRIVER OF URBAN DYNAMISM

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A free-standing facade both hints at a grandiose past and allows for new uses which are relevant to the everyday functionality of the contemporary city: a parking garage and bodega for distribution of rationed food supplies.
VACANCY AND URBAN MOBILITY IN CENTRO

LOT TYPOLOGIES

EXISTING CINEMAS

VACANT LOTS

POSSIBLE SITES

OTHER VACANT LOTS

EXISTING PEDESTRIAN STREETS

PROPOSED PEDESTRIAN STREETS

CALZADAS (PORTICED STREETS)

GREEN/OPEN SPACE

PROPOSED BIKEWAYS

EXISTING PEDESTRIAN STREETS

TRANSPORTATION ARTERIES

OTHER VACANT LOTS

POSSIBLE SITES

VACANT LOTS

EXISTING CINEMAS
TYPOLOGIES OF VACANCY

One-sided lot: long and skinny with one side facing the street.
9-12 X 30-40 meters
Current use: garage

Long corner lot.
12-15 X 25-35 meters
Current use: market

Square corner lot.
30-40 x 30-40 meters
Current Use: shortcut

state parking garage, deep lot, new wall
state parking garage, new wall
food market and garbage collection, new wall for security
state parking garage, facade and frame intact
state parking garage, facade intact
state run metal shop for restoration work
Havana’s system of Urban Agriculture arose after the fall of the Soviet Union, when the mechanized-collectivized system of agriculture became inviable overnight in the face of a deep economic crisis coupled with impossibly high gas prices and loss of food imports. In response, the state quickly organized an innovative network of semi-privitized, small scale, organic farms close to their target markets. In addition, a network of farmers markets and research and support institutions allowed the system to become successful in providing relief to the crisis of food security. In the process, it has become a model for the local food movement worldwide and another state sanctioned symbol of the success of the revolution.

Agriculture in the city exists at many scales, from the more conventional farms on the outskirts of the city, to the high yield organiponicos in raised beds, to individual producers growing vegetables on their roof or balcony.

As the economy has begun to recover, the organiponicos have maintained their importance in the life of the city, economically, culturally, and gastronomically. However, food production on the individual scale has diminished somewhat with a return of food security. How can the dissemination of this activity, unique in the world, be re-encouraged in the dense heart of the city?
URBAN AGRICULTURE: AUGMENTING GREEN SPACE

URBAN GREEN SPACE

PRODUCTION

- Huertos Populares (private/shared gardens)
- Patios (horizontal farms)
- Parcelas (fixed lots)
- Canales
- Campos de autocultivo
- Organic farms

DISTRIBUTION

- Agropecuarios (fixed lots)
- Organoponicos (direct sale)
- Black market

FOOD PRODUCTION/YEAR:

- 20,000,000 LBS
- 56,000,000 LBS
- 60,000,000 LBS
- 29,500,000 LBS
- 35,800,000 LBS

DISSEMINATION

Created in 2000, this government sponsored movement aimed to disseminate information and educational materials to growers in the city. CTAs sell seeds, plants biofertilizers and organic pest controls, and they created model parcelas (private plots) and other dense urban settings to demonstrate the success of the system. These sites sprang up within a few years, and 160 were chosen as “model sites” for each municipality. These were used to showcase the success of food production using practices derived from permaculture. 70,000 “green” Havana’s neighborhoods by promoting small scale private plots. The Movimiento de Patios y Parcelas (agricultural consulting stores) not only dispersed agricultural information but also created a black market, a practice which is widespread and tolerated to some extent. Many food items are sold on the “free” black market, a practice which can supplement their income. Free-enterprise markets (agropecuarios) are largely used to sell surpluses (after making state quotas) at fixed prices. They are the site of most farmer’s markets. Smaller direct sale lots are located on vacant or abandoned properties outside the city, tucked into patios, balconies, roof decks, or hospital. Some are privately run on open land. Larger farms have been set up on open land. In the city’s “greenbelt,” or “free” black market, a practice which is widespread and tolerated to some extent.
By remixing the utopian visions of the Cuban revolution (social equality, community, strong social services) with those of capitalist democracy (freedom of expression, equal opportunity), the program for this project re-conceives the best of what is already happening in Havana and adds to it that which is to come.

A NEW PUBLIC INSTITUTION

NEIGHBORHOOD INFLUENCE: SPATIAL DISTRIBUTION OF NEW PUBLIC INSTITUTION
Conceived as a prototype which might be deployed onto different vacant lots in the city, this proposal suggests a strategy for deploying a prefabricated system of precast concrete C-section “trays.” By aggregating these units in different ways, different spatial qualities can be attained which reflect the programs contained within.

By allowing rotation, the units can “pile” in such a way as to create a dynamic and ambiguous spatial reading through a simple 30 degree rotation on each level.

By constraining the units to a straight “stack,” they can conform to the street and support the tubes for the facade, and they can house more formal programs: libraries, internet access points, meeting rooms.

The space between the stack and the pile becomes an open air void which encourages the circulation of air and a visible porosity among the different programs.
PREFABRICATION

PREFABRICATION PRECEDENTS IN POST-REVOLUTION CUBA

1965 - 1968

1965 - 1968

2010

+...+

PREFABRICATION

IDCS - 1969

2010

ORIENTATION

PROCESS

HYDROPONIC LIVING TUBES

Steel bracket bolts to prefabricated units

Slits cut in outer felt layer, plants inserted, soil removed. Roots propagate felt fibers

2 layers of synthetic felt stapled to 15cm polyethylene drain pipe
PLAN: GROUND LEVEL 1:300

PLAN: +18 meters

PLAN: roof +25 meters

typical PROGRAMS:
1: entry
2: bodegas
3: public refrigerator
4: vegetable market
5: scooter parking/charging
6: kitchen
7: delivery entrance
8: ice cream dining
9: info center/library
10: daycare/playground
11: ice cream prep
12: circulation/common spaces/gardens
13: meeting rooms
14: internet access points
15: CTA (gardening info center/store)
16: teaching gardens
17: park/sitting spaces
18: water storage tanks
TECTONIC MODEL 1:50

CASTING BED AND CONCRETE UNITS IN VARIOUS LENGTHS
This prototype tests a new take on the living wall or vertical garden concept. Currently a rising trend within the world of architecture, several high profile projects have been recently completed utilizing these systems. The concept was developed by French botanist Patrick Blanc, who has recently completed the Caixa Forum in Madrid with Herzog and de Meuron and the Quai Branly museum in Paris with Jean Nouvel. This system utilizes many of the logics which have led to the success of Blanc’s system: a plastic substrate, felt as hydroponic growing medium, active irrigation with nutrient solution, and selection of species appropriate to the microclimates induced by the wall.

This prototype is testing the idea of using these systems in a way which goes beyond the application of plants onto an opaque surface. By utilizing ubiquitous and cheap plastic tubes (drain pipe) as the growing medium, a 2-sided, porous, and performative wall might be produced. In this way, too, the figure of the tubes can emerge as a counterpoint to that of the plants, providing a means for expression that goes beyond the compositional distribution of different plant species.

At the time of this writing, this prototype has been planted for only three weeks, so it remains an experimental work in progress. The hope is for the plants to spread to completely cover the felt, yet ultimately retain somewhat the figure of the tube.
PLEXIGLASS WATER BASIN

SUBMERGIBLE ELECTRIC PUMP AND TIMER

5mm TUBES BRING WATER TO TOP OF EACH TUBE

RIVETED ALUMINUM FRAME

PLANTS STUFFED INTO SLITS IN OUTER FELT LAYER

2 LAYERS OF SYNTHETIC MOISTURE RETENTION FELT, ATTACHED WITH GALVANIZED STEEL STAPLES

15 cm POLYETHYLENE DRAIN PIPE SLIPS ONTO ALUMINUM POSTS

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ALUMINUM C-SECTION POSTS

PLEXIGLASS WATER BASIN

PLANT DISTRIBUTION ON PROTOTYPE


Rosenau, W P. "Flirting with capitalism: rebuilding Havana will require not only foreign investment, but also a government committed to creating a healthy city." Urban land 6111 (2002): 98-103. Print.


