Abstract

What keeps places unique in times of globalization? If information, goods, food, architecture are the same everywhere, what's the difference between places? What are people identifying with?

Eating habits are a main factor of cultural identification. How can architecture contribute to these feelings of belonging, self awareness and joy? How can it teach something about the place and the people living there?

What if a new kind of culinary architecture can help opening people's eyes towards their own eating culture? What if they would learn rediscovering and appreciating its richness there?

The American mixture can be seen as a micro cosmos of the whole world under ongoing globalization. Since the U.S. is a very progressive country, I claim that studying their experiences can help us understand future trends of our global culture. Learning from their problems will help understand or even avoid the same problems elsewhere.

One of the American challenges is obesity. Researchers expect U.S. life expectancy to fall dramatically in coming years because of obesity. This would be a startling shift in a long-running trend toward longer lives.

What is American? How can the American culture be captured? How do Americans identify themselves? They are part of a blend of virtually every culture on this earth. Idealistically, nobody can be a stranger because everybody is. They have one thing in common: their ancestor's or even their own history of dissatisfaction, hope, journey, arrival and good or bad luck in the new homeland.
Submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Architecture.

| Susan Piedmont-Palladino | Jaan Holt | Paul Emmons | Marco Frascari | Jonathan Foote |
What keeps places unique in times of globalization? If information, goods, food, architecture are the same everywhere, what’s the difference between places? What are people identifying with?

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One of the American challenges is obesity. Researchers expect U.S. life expectancy to fall dramatically in coming years because of obesity. This would be a startling shift in a long-running trend toward longer lives. By their calculations within 50 years obesity will shorten the average life span of 77.6 years by at least two to five years. That is more than the impact of cancer or heart disease, said lead author S. Jay Olshansky, a longevity researcher at the University of Illinois at Chicago. (Washington Post, March 17, 2005)

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Focus

The Americans are proud of their collective achievement and independence. Their strong sense of liberty and freedom is a vivid foundation for their laws and everyday life. They clearly identify themselves as Americans but every family is still aware of its unique cultural origin. They share common American habits but retain their one-of-a-kind family traditions depending on minor and prior ascents.

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While virtually every family agrees to the Thanksgiving turkey, many of the people I interviewed celebrate Christmas in their very special way. While one family is having grandma’s Mexican food, the other one is enjoying a Cuban meal, Polish Borscht or even different kinds for each day of celebration and each part of the family tree. This is the basis for a very rich miscellaneous composition.

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I imagine a building that encourages its guests to enjoy, relax, interact and learn about healthy food and eating. It will build a bridge between culture and food and will widen the important mutual understanding between the different cultures by using food as common basis and the cook as an ambassador.
We drink energy drinks that wake us up when our body wants to sleep. We eat food without sugar, fat or carbohydrates although feeding our body is its actual task. We diet without exercising. We work out instead of walking to places. We try to do everything very fast and get ill more often. We are fighting our body in order to gain more beauty, speed and output. What would happen if we would work hand in hand with nature? What if we would take a nap when we are tired and eat whatever we hunger for in the right amounts? What if we would be fast when it makes sense to be fast, and allow ourselves to be slow when slowness is called for? «Urban life itself acts as a giant particle accelerator» (Honore 2004:24). In my restaurant people should find a timeless oasis removed from this urban pressure.
Georgetown is known as a very vivid part of the city. Not only its university, countless offices, shops, restaurants and bars but also its European scale, historic architecture and the harbour drawing international tourists make it a unique place. Local people mix with tourists and students.

The Potomac is one of the main reasons for the capital’s location. Even though its function shifted within centuries from trade to tourism and recreation, it is not less important nowadays than back then. A site at the river seems perfect to link busy urban life to local nature.
Since I wish to remove people from their everyday routine, make them forget about stress, calm down, relax and enjoy their break and food, Roosevelt Island is the perfect site for my design. Used for agriculture in the 18th century, it now is an island covered by forest, marsh and swamp. The plants and animals there live their natural rhythm without much of human influence taken. A wooden path lets visitors dive into the wilderness and observe wildlife as well as seasonal change. The Theodore Roosevelt Memorial reminds of the president’s passion for the earth’s natural places and foresight in planning for their preservation.
The chaotic nature on Roosevelt Island stands in great contrast to the city's order. It puts the visitor in a different world. Nevertheless the surrounding civilization is present at any time. The sounds of moving leaves and bird's songs mix with the noise of cars passing on the main land and airplanes landing and taking off from the closed-by Ronald Reagan Washington National Airport.

The dense jungle opens at some places allowing glimbs to the other river bank with the Kenedy Center and Georgetown's waterfront development.
Employees currently approach Roosevelt Island by passing the footbridge—its only built connection to the main land. George Washington Memorial Parkway and the Mount Vernon Trail. Some employees land with their canoes directly at the beaches of the island. The adjacent parking lot makes it very comfortable to get to this point. Cyclers arrive there via the...
In order to connect the island more directly with Georgetown, an old unused tide lock - at the point where Rock Creek is flowing into the Potomac River - is waiting for a new function as a water taxi landing. This can take passengers to the other side on a frequent basis. The discovery food can begin.
The 91-acre island provides enough area for visitors to wander around and discover hidden places. Dropped off by the ferry boat, they can take a walk through the woods on the bedrock or on the wooden paths erected in the mud. They’ll appreciate the relaxing fresh air and green environment on their search for the location of culinary adventure.
Approaching the island it is hard not to notice the rock sticking out of the water and the earth. According to geologists this is the easternmost exposure of bedrock in the Piedmont. Creating the island, Diamictite was the only material withstanding the forces of the migrating Potomac river. The rock mostly consists of a matrix of quartz and feldspar. In its characteristics it is very similar to granite and is usually used as decorative stone.
Respect Nature is in balance. Balance doesn’t mean stillness. It means equal existence of extremes, everything in between as well as ongoing change.

To me, respecting our natural environment means understanding its potential and using it wisely.

Roosevelt Island offers me stone. I accept it as my building material. I accept the challenge to discover, understand and use its character for creating a building that lives from its locality.

Man protects himself from natural extremes by architecture. How do we build and be respectful to nature? By preserving? Preserving what? By not touching? How do we make ourselves a home then?
In order to use the stone on Roosevelt island a quarry is necessary. This destroys the natural place but provides a site and building material at the same time. The stone remains in its natural locality but will be transformed into an economically, culturally and educationally useful stage.
Wrestling with nature

“...To hold his fist closed tight, as if the skin of his palms had grown fast to the steel he clasped - to keep his feet steady, pressed down hard, the flat rock an upward thrust against his soles - not to feel the existence of his body, but only a few clots of tension: his knees, his wrists, his shoulders and the drill he held - to feel the drill trembling in a long convulsive shudder - to feel his stomach trembling, his lungs trembling, the straight lines of the stone ledges before him dissolving into jagged streaks of trembling - to feel the drill and his body gathered into the single will of pressure, that a shaft of steel might sink slowly into granite - this was all of life for Howard Roark, as it had been in the days of the two months behind him. He stood on the hot stone in the sun. His face was scorched to bronze. His shirt stuck in long, damp patches to his back. The quarry rose about him in flat shelves breaking against one another. It was a world without curves, grass or soil, a simplified world of stone planes, sharp edges and angles. The stone had not been made by patient centuries welding the sediment of winds and tides; it had come from a molten mass cooling slowly at unknown depth; it had been flung, forced out of the earth, and it still held the shape of violence against the violence of the men on its ledges. The straight planes stood witness to the force of each cut; the drive of each blow had run in an unswerving line; the stone had cracked open in unbending resistance. Drills bored forward with a low, continuous drone, the tension of the sound cutting through nerves, through skulls, as if the quivering tools were shattering slowly both the stone and the men who held them. He liked the work. He felt at times as if it were a match of wrestling between his muscles and the granite. He was very tired at night. He liked the emptiness of his body’s exhaustion...” (Rand 1996:54)
Quarry workers with wedges and hammers

The hillside part of the block cannot be cut with the wire because it is not possible to drill a hole parallel to the slope.

In former times workers used natural gaps for breaking the stone. Today they drill a line of holes and use slowly burning explosives to be more accurate and predictable.
Cable saw cutting raw slabs

Sliding backwards on tracks to keep a constant tension, the cable saw rotates the diamond wire to cut the stone.
Wet saw cutting precise granite slices
### Sample of Dimactite

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>13 Liter</td>
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<tr>
<td>Mass</td>
<td>36.4 Kilogram</td>
</tr>
<tr>
<td>Density</td>
<td>2.8 Kilogram/Liter</td>
</tr>
<tr>
<td>1 cubic meter</td>
<td>2.8 tons</td>
</tr>
</tbody>
</table>
Splitting with wedge and hammer
Cutting with dry saw

This very dusty and rough process raises the question of what to do with quarrying leftovers. The dust and broken stones can be used for making concrete and as a filling material at the waterfront.
Cutting with wet saw

Surprisingly precise, this is how I imagine solving difficult construction details.
Polishing with sand paper

The polished surface is very smooth and shiny. Every little enclosed material can be seen. I will use this finish for kitchen counters and dining tables.
The place will be changed forever. The stone is removed from where it used to be. The water that was slowly sickering down the slope through a thin layer of soil will now meet the cut at its deepest part instead. It will run along the ground section changing the color of the stone, gathering in the scraps left behind from the machines. It will seek a new path on its way down to the river and celebrate the contrastful existence of the unnatural gap.
Dealing with the stone myself made me feel both its strength and resistance. It made me conscious of the incredible effort it takes to actually force its potential to serve my purposes. But I also learned that the available equipment enables us to cut very exact pieces out of the stone that make a precise construction achievable.

The hardness of the stone asks for a precise method of cutting the natural mass of the bedrock into an efficient shape. Every cut wants to be planned. Not a single one should be senseless. The bigger the units the less cuts necessary.

The high weight of the stone restricts the possible unit size that can be handled on site. Dealing with equal units suggests a cutting and reassembling system that reflects and celebrates this process. Every effortful won piece must be given a position and function within the new structure that replaces the former bedrock.

1130x1130x1300 mm cubes harmonize with the human figure applying its scale to the stone.
Cutting out an area of 30x30 cubes creates, defines and limits the space and the amount of material for the man made new cosmos.
Cutting the cubes out of the bedrock leaves areas surrounded by marks. These indicate the grid for the reassembly. The main outlines of the new structure will be illuminated to remind of the forcefull process.
The different zones of the building serve special purposes. Every visitor has different needs depending on the time of the day, his mood or company. There are three dining areas gathered around the kitchen as the heart of the building: the lounge at the side, the gap in the back and the main dining hall in the front. Additionally, a roof terrace offers variety.

<table>
<thead>
<tr>
<th>Kitchen</th>
<th>Dining area</th>
<th>Lounge cave</th>
<th>Storage</th>
<th>Fire tower</th>
<th>Circulation</th>
<th>Stone</th>
</tr>
</thead>
</table>

The different colors mark different zones for the new structure. Every zone has its own function. The stone is filling in and dividing space.
Guests and goods can approach the building from two directions. The first possibility is to come down the path after entering the island via foot bridge or shuttle boat. And secondly, at high water, the ferry can go directly to the site. A big staircase connects and unifies the two entries. It is carved out of the rock bed and follows the natural slope.
Dealing with the place means dealing with what it provides. As settlers used the new land for their survival, I’m utilizing the bedrock and river sediments. Comparable to food, I’m harvesting and processing the natural stone by cutting it into building material. The saw dust, leftover stone pieces and river sediments will be used to make concrete and glass.

While the stone needs to be formed with great effort, concrete naturally fills in. While stone takes great pressures, reinforced concrete can take over more complex load-bearing tasks. While stone and concrete have a haptic character, glass lets your eyes wander through itself, but is also used for glass columns and beams. The design takes advantage of the character of each raw or processed material and joins them in simple details.
Details ceiling support

- Glass surface
- Stone surface
- Concrete in section
- Stone/steel in section
- Heating
Detail facade east

Heating
Glass surface
Insulation in section
Glass in section
Concrete in section
Steel in section
Section bb
Section cc

Glass surface
Rust surface
Stone surface
Concrete in section
Stone in section
The building steps back from the cut and leaves a deep narrow gap used as outdoor dining area.

The glass facade separates people facing each other while sitting at the tables on the inside and outside.

The lively bar area allows communication and - in contrast to the dining hall and lounge area - a speedy pace of eating.
The removable glass facade in the lounge area allows the visitor to get in touch with the natural layers of the earth in section. The large seating benches, fire places and lighting effects contribute to a comfortable mood.
Transparency

Observing without exposure
Enclosure with stone and light
View from southeast
View from northwest
View entrance
Elevation south
Printed Media


Internet

http://www.structural.de/text/sterglass-e.html

http://www.bartonengineers.co.uk/glass.html

http://www.glasgowarchitecture.co.uk/wolfson.htm

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All images are created by the author.
Christine Büttner-Gräfenhain

*05 October 1976

2007
Master of Architecture
Virginia Polytechnic Institute and State University
Alexandria, Virginia, USA

2003
Diploma Degree in Architecture
Anhalt University of Applied Sciences
Dessau, Germany