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Patterns + Systems
...green parking systems

by

Manfred Barboza

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ABSTRACT

Patterns + Systems
...green parking systems

by

Manfred Barboza

from afar Gaia inspires us to see
in her the design possibilities...

...the fractal becomes the unit for
understanding the macros...
...within this macros the cities dwell...
...from the city we extract urban behaviors
with similar intelligible natural patterns...

...within the parking systems,
natural qualities are hidden...
...qualities that find their way
through the concrete...
through the lines...
through the shadows...

...and in the end... nature finds it's
way through the structure...
to silks...

inspirations...
and dreams...

that's what you give me
ACKNOWLEDGMENTS

to learn...

I have learned from the
wonders of nature...
they have inspired me to transcend
beyond my believes...
giving me awareness...
a sense of exploration...
the gift of seeing...
really seeing...
and most important...
humbleness...
for it drives me to believe
in a greater good
through design...

thanks to,

Lars Lerup and Carlos Jimenez for the opportunity of a lifetime,
I am forever in debt...

David Guthrie for his teachings...
    David Brown

Alvaro Rojas for believing in me
and opening doors filled up with dreams...

my parents for giving me life,
and the continues emotional support through-out...

my brothers for in one way or another being part
of this endeavour...
specially to Allan...
for his unselfish action in trying to find a better education for me...
the macro
   from afar Gaia
01

the micro
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the macro
from afar Gaia

from afar Gaia seems abstract...
un-real
such amazing structures grasp our eyes
only to find from within...
our own natural behaviors...

behaviors that intrigue us...
behaviors with greater meaning...
behaviors that reflect the complex but yet
fragile earth we live in...

Kazakhstan in winter
"this photograph captures a 30-mile-wide stretch of country side. even in april, the snow is piled high against the tree rows in the collective farms outside Oosterny."
"Winds not only heap up sand into dunes, but also generate regular and beautiful patterns of sand dunes... the characteristic shark-tooth pattern of Al Kidan shows up well in these views at a low sun angle. The pattern is made up of straight lines and the shark-tooth V-shapes."

Orbit, pg. 71

"This multiple pattern indicates that winds have probably shifted in the course of time, blowing at first roughly parallel to the straight dunes, and then later toward the points of the V's."

Orbit, pg. 70
Ranches in Western Mato Grosso, Brazil

"The state of Mato Grosso spans much of the mid-section of Brazil. Shown
in this 40-mile square scene is typical, relatively new forest clearing.
Large ranches occupy the semi-tropical plateau, where drainage is
better than in the lowlands and there is less risk of flooding during the
wet season."

From Orbit, pg. 173

Corn Fields in Ohio, U.S.A.

taken from internet
Farming the Desert

“Each of these green circles is 200 acres of farmland. A deep well in the center of each circle pumps water from 1,000 to 4,000 feet underground. The Saudis can grow wheat and animal feed 220 miles from the Red Sea because of a large capital investment for roads, wells, irrigation equipment, seeds, fertilizer, and power.”

CIBIT, pg. 66-67
the micro
the fractal

the fractal behaves equally complex...
responding to light...electrical impulses...
gravitational pulls...

within the micro... self-similar gestalts
tend to appear...effortlessly

the “in between” space from the macro
and the micro is where cities dwell...

Self-Assembled Structure
"the self assembly of a cell is one of the most marvelous feats in nature.
It's molecules serve one another by feel...it is a society of molecules—a
city-state. It feeds, defends, and repairs itself, and it builds the components
that allow it to replicate and form colonies."

On the Surface of Things, pg. 50
Computer Monitor Screen
"Light is hard to steer; it has no handles we can grasp-no mass, no charge. electrons are more elusive. they can be guided with electrical charge, toward positive charge and away from negative. a computer is a billboard in which we paint patterns of light using electrons as the brush."

On the Surface of Things, pg.17

Migrating Bacteria
"This dish records the history of a civilization of bacteria-the few days that it lasted. from these patterns, we infer how bacteria sense their environment, we sample our environment with different and more highly evolved senses than they do, but there are remarkable similarities between their sensors and ours."

On the Surface of Things, pg. 87
parking landscapes + the lines

where cities dwell

fast and yet so slow...
real and so un-real

where cities dwell patterns emerge...
social, infrastructural, behavioral,
economical...political
patterns that absorb space...
	parking patterns determine growth, development...
	hey also become desolate places, active only

in a wider time lapse that pedestrians never

experience

it is a landscape...
a landscape altered only by the flow of cars...
lacking shadows, orientation... lacking life...
lines that create a rigid geometry with endless possibilities...

these lines create a system...a network of interconnectedness between car, driver, pedestrian, lines, concrete...

what if we were to elevate this lines to create a canopy...

shadow making...energy producing structures absorbed by nature...
zarzan:
an artificial permeable material...
used for covering export plants in the mountainsides
of Heredia, Costa Rica

this material creates an almost perfect environment
for plants to grow...
depending on the density of the "zarzan"...water
enters the covered space...

light enters through the texture...but shadow still
prevails...

we live in shadows...between them...around them...
under them...
through the cracks...through the creases...
through the crevaces...
through them...nature finds it way...
nature creates possibilities...

the concept lies behind the tectonics of
the place...the nature and the geometry
of the site leads the way to create
solutions...

Parking Lot, Downtown Houston, Texas
Parking Lot, Downtown Houston, Texas
the canopy system
within the parking systems

parking systems have an inherent geometry
a geometry of lines and joints that compose
the parking grid...

by combining the lines and joints of an
existing parking lot...
we then would create a new surface...
a geometry that self-explains itself...

certain joints can become natural
opportunities for grass to grow...
the strip mall canopy -A-
within the parking systems

the unit - the micro -

the strip mall unit becomes the
three-dimensional element that explains
the single parking space...

this is the addition of three units that create
a pattern discourse between negative and
positive spaces...

the structure in time will be absorbed by
glass, ivy, weeds...
the series - the macro -

the understanding of the unit - the micro - is important for the later appreciation of the series - the macro -...

one explains the other...

the series no longer is only seeing as a pattern... but also as a system... it breathes...
the strip mall canopy -B-
within the parking systems
nature absorbing the structure
the strip mall - void -
within the parking systems
the strip mall - circulation behavior -
within the parking systems
the strip mall - negative + positive -
within the parking systems
the strip mall - proposal A -
within the parking systems
the strip mall - proposal B -
within the parking systems
the big store canopy
within the parking systems

the unit - the micro -

the big store parking lot offers other possibilities than that of just parking...
a parking canopy can suddenly give way to an exterior space where people can mingle and sell merchandise...
the idea of bringing people outside underneath a shadow...
to experience an outside market-place...
Fleets Supermarket at Kirby near Reliant Park, Houston, Texas

Super Target at Main and Kirby, Downtown Houston, Texas
the big store - void -
within the parking systems
the big store - circulation behavior -
within the parking systems
the big store - negative + positive -

within the parking systems
the big store - proposal A -
within the parking systems
the big store - proposal B -
within the parking systems
the sign + portal canopy

within the parking systems

the unit - the micro -

the unit also can become a billboard...
it can promote an environment for
green possibilities to occur within the
city-scape

becoming not only a canopy...
but also an urban feature...
a green parking system...
the series - the macro -
the sign + portal canopy - void -
within the parking systems
the sign + portal canopy - circulation behavior -
within the parking systems
the sign + portal canopy - negative + positive -
within the parking systems
the sign + portal canopy - proposal A -
within the parking systems
the sign + portal canopy - proposal B -
within the parking systems
the downtown canopy
within the parking systems

the unit - the micro -

in a downtown environment...
the unit can take characteristics of a plaza...
a sculpture garden...a green area for
pedestrians to meander...

a green structure within a city block...
an artificial green parking system...
the downtown canopy - void -

within the parking systems
the downtown canopy - circulation behavior -

within the parking systems
the downtown canopy - negative + positive -

within the parking systems
the downtown canopy - proposal A -

within the parking systems
the downtown canopy - proposal B -

within the parking systems
the tree-event canopy

within the parking systems

the unit - the micro -

an event...
a tree within a parking lot...creates a dialogue

an interconnectedness between the shadow,
pedestrian, and other trees...

yes...we are made of light...but the shadow
is within us...
we belong to the shadow...

in this moment...a tree becomes an event...
the tree-event canopy - void -
within the parking systems
the tree-event canopy - circulation behavior -
within the parking systems
the tree-event canopy - negative + positive -
within the parking systems
the tree-event canopy - proposal A - within the parking systems
the tree-event canopy - proposal B -
within the parking systems
the big parking lot canopy
within the parking systems

the unit - the micro -

a big parking lot lacks a sense of orientation... of human scale...

in this situation the module is elevated vertically...
the structures can carry numbers and advertisements... becoming orientation devices

green walls... giving shadow, producing air...
the big parking lot canopy - void -
within the parking systems
the big parking lot canopy - circulation behavior -
within the parking systems
the big parking lot canopy - negative + positive -
within the parking systems
the big parking lot canopy - proposal A -
within the parking systems
the big parking lot canopy - proposal B -
within the parking systems
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