Liberating Access

Architecture as an open framework
Architecture
Architecture
Time
Genesis Vs. Longevity
Expected demand

Adaptation
Duration of demand

Adaptation
Temporality of demand

Adaptation
Architecture as framework
Architecture as the frame, not the picture.
Capacity to adapt

_the measurable quality of a base building to accommodate a range of variations within the constraints of a given base building.
How to prevent vacancies?

Research Testground

Adaptation
Urban

BUILT FORM OVER TIME
EXPERIMENTS ON URBAN RULES

BY OLINA TERZI

Building

FIXATIONS OF BUILT FORM
OBSERVATIONS ON OFFICE AND HOUSING

BY OLINA TERZI

Element

STAIR DESIGN ALTERNATIVES
ADDING VALUE TO BUILDING CIRCULATION

BY OLINA TERZI
BUILT FORM OVER TIME
EXPERIMENTS ON URBAN RULES

BY OLINA TERZI
• At least fifty percent (50%) of the total glazed surface area of the building, (excluding glazed areas with back insulated panels), must have a north orientation which includes 150 degree angle started from east toward North West.

Intentions of Urban Law:
• “To keep Dubai a healthy city that follows the highest standards of sustainable development and has clean pollution-free environment”

50% of all glazed surfaces should be directed towards the North.
Env 2 - Public realm provision
Glasgow, Scotland
2009

- This regulation requires a percentage of every new development over 2000 sq/m in Glasgow to be allocated to open space or the public realm.
- New residential development must provide access to good quality recreational open space.
- City Centre developments must contribute to public realm areas.

Intentions of Urban Law:
- Provision and maintenance of high quality spaces.
- Well designed public realm.
- Spaces that are accessible, safe, and available for community use.

Any retail development above 2000m² is obliged to provide 12sqm of public realm per 100sqm gross floor area.

Any housing development (flatted) of the same size should provide 1.25 hectares of recreational open space per 1,000 population.
Building Regulations
Montreal, Canada
1900’s

• The law referred to the indigenous typology of the ‘s “Plex”, rowhouses consisting of three to four stacked apartments

• The law made setbacks mandate on newly-built residential streets, and also increased apartment sizes in the downtown from 20 by 60 feet to 25 by 100 feet

• This indirectly encouraged the use of outdoor staircases and made apartments

Intentions of Urban Law:

• Prevent street overcrowding

• Raise the urban quality of the street

Each floor is owned by different landlords, thus private access is sought. Steel staircase used as public seating of social space.
Regulation

Nothing is legally sanctioned within this zone, while spontaneous and informal development is ignored within this zone, because it occurs 'at-risk'.

The defined setback ranges from 3-9 meters depth and no physical development is legal within this zone.

Within this zone is built the ubiquitous fences that define property boundaries, but also the ditches, the only drainage infrastructure in the city, which every property is required to provide.

Intentions of Urban Law:

- Higher urban quality of streets
- As a means to define an easement that the State can use for road infrastructure expansion

Nothing is legally sanctioned within this zone, while spontaneous and informal development is ignored within this zone, because it occurs 'at-risk'.

British Town and County Planning
Lagos, Nigeria
1936
Rules concerned with dimensions are expressed in terms of prescriptive numerical measures that have to be abided.

Those concerned with performance set conditions that should not be violated, but the means to conform to the latter is not disclosed.
Intentions

- Economic
- Environmental
- Safety
- Aesthetic
- Infrastructure
Regulation

Intentions
- Economic
- Environmental
- Safety
- Aesthetic
- Infrastructure

Impacts
- Massing
- Facade
- Structure
- Access
- Services
The Montreal ‘plex’ is a typology that consisted of two to three separate properties; a small groundfloor apartment for the owner, and one to two rented apartments on the upper floors. These were accessed via an exterior staircase hovering above a groundfloor front yard. Therefore, each staircase was privately used by a maximum of two households and each front yard consisted of one staircase.

In terms of massing, each groundfloor volume supports double its volume on top, while accessibility routes can be shared by a maximum of 2 people.

If this model is used for expansion, the maximum amount of apartments that can be stacked depends on how many vertical shafts fit in the groundfloor’s yard; namely, three.
Fixing the extent to which neighbours share access within a dense environment, defines a different density for the block, depending on the extent of sharing—in this case 72 cases of shared access shafts by a maximum of 2 people.

A critical point in the population of the block, namely when an additional rule is needed, is when the built volume reaches its maximum height and additional volumes have to be placed nearby. The rule needed will concern the spacing of adjacent structures.

Worth noting is that if sharing was agreed for more than 2, the density and layout of the whole block would change drastically.
How to protect and regulate accessibility routes over time?
How to make accessibility routes more efficient?
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Formal rules

Regulation
“Regarding rules as design tools offers a valuable urban design attitude. It departs from an approach of overall control, towards a non-fatalistic form of control.”

The interviewee
Prof. Dr. Alex Lehnerer
ETH ZÜRICH
Department of Architecture
The design of a flexible framework allowing multiple spatial possibilities...
Architecture as framework

...at the same time abiding civilising design rules preventing conflicts or hazards
Regulation

Impacts

- Massing
- Facade
- Structure
- Access
- Services

_Architectonic tools_
FIXATIONS
OF
BUILT
FORM
OBSERVATIONS
ON
OFFICE
AND
HOUSING
BY OLINA TERZI
What's the problem?
Building types

offices
dwellings
Structural Spacing

Form Fixations

10 m

6 m
We build for functions

“Form ever follows function”
- Louis Sullivan
Building functions

Form Fixations

Nap Room  Private Flat  Lodger's Room  Co-live Co-work  Shared Office  Cellular Office  Meeting Room

HOUSING  OFFICE
Building break-up

**Office**

- Services: 21%
- Structure: 4%
- Volume: 22%
- Access: 40%
- Porosity: 10%

**Housing**

- Services: 27%
- Structure: 18%
- Volume: 16%
- Access: 24%
- Porosity: 23%
**Form Fixations**

*Fixed space*

![Fixed space diagrams](attachment:fixed_space_diagrams.png)

**Structure**

- 10 m spacing / 4.3% of area
- OFFICES: 50%

**Housing**

- 6.5 m spacing / 7.3% of area
- HOUSING: 53%

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*Fixed space form fixations diagram*
Reduction of static spaces
Architectonic tools

Form Fixations

Impacts

Massing

Facade

Structure

Access

Services
STAIR DESIGN ALTERNATIVES
ADDING VALUE TO BUILDING CIRCULATION

BY OLINA TERZI
Adaptable access

Exhibition boards

half-landing  collective  inhabitation

Playful Library

mixed  public  freedom

Access as Tool
_Inhabitation

Reading corner  #015  Downstairs Storage  #030

straight  semi-private  inhabitation  straight  semi-private  inhabitation

Access as Tool
Social attraction

Access as Tool

Fireplace  #010

Spiral Monument  #029

spiral  collective  social

arched  public  social
Freedom of movement

Access as Tool

**Ramp-stair**

- Mixed
- Public
- Social

**Seating Steps**

- Mixed
- Collective
- Freedom
Design for and with accessibility
Methodology

Setting conditions
BUILT FORM OVER TIME
EXPERIMENTS ON URBAN RULES

Architectonic tool
FIXATIONS OF BUILT FORM
OBSERVATIONS ON OFFICE AND HOUSING

Added value
STAIR DESIGN ALTERNATIVES
ADDING VALUE TO BUILDING CIRCULATION
Liberating Access
Support
Support Infill
_Massing

Liberating Access
Support

Block

50 x 50 x 50 m
Liberating Access
Support

_block

Block
50 x 50 x 50 m

Grid
5 x 5 m
**Liberating Access Support**

*Facade*

- **Block**: 50 x 50 x 50 m
- **Grid**: 5 x 5 m
- **Light**: 15 m wide, 77% naturally lit
Liberating Access
Support

Extrude

x 2.5 site height
Liberating Access
Support

Extrude
x 2.5 site height

Inclined plateau
300 x 15 x 5
Liberating Access

Infill

_Access
Liberating Access
Support

25%

Linear

Perimeter cores
Liberating Access
Support

Loop

Grid
Liberating Access
Support

Plateau

Forest
Extrude

Inclined plateau
Massing/Porosity = 2.5

Structure
Truss cantilevers
_Semi-outdoor space

Liberating Access
Support
Semi-outdoor space
Semi-outdoor space
_Structure

Liberating Access
Support
Indoor space

Liberating Access
Indoor space
Infill
Public Vertical Street
Liberating Access Support

G EDTION ALL VERSIONS

INFILL AXOMETRIC PLAN
Scale 1:200
1-person Studio
12-person Residence Hall
Support Infill
“Regarding rules as design tools offers a valuable urban design attitude. It departs from an approach of overall control, towards a non-fatalistic form of control.”
“Spatial order is tied to the size of the human body and its social groupings. It offers an open ended mode of operation.”

- John Habraken
Design for access

Access as tool

Amsterdam

Berlin

Tunis
Architecture as framework

Liberating Access

Support
Thank you