Huis in de Tuin

Stone entrance gypsum model
Introduction

From gypsum model to architectural research

The Huis in de tuin, built somewhere in the sixteenth century, is arguably one of the oldest houses in Maastricht featuring natural stone. Who exactly lived here remains mysterious, but the house's appearance and location on the inside of a building block, indicate that this was probably a home for the poor, the sick or the unwanted. On all sides of the building, traces of modifications that occurred throughout history remain visible. For instance, the bricked-up doorway together with a few protruding bricks on the upper floor reveal the external staircase that once stood here.

The seemingly random assemblage of stone elements and façade openings gives this house a very distinct character. It is exactly this strange assembly of stone blocks, forming the main entrance with misaligned windows on either side, that we have attempted to capture in our gypsum model. By removing all the brickwork, the stone elements engage in a sort of balancing act, carried by the central doorway. To emphasize the individuality of the stone elements, the joints between stones have been recessed in a slightly exaggerated way.

The façade of the Huis in de tuin became the starting point for an investigation into the theme of (in)formality. We asked ourselves why we perceive one façade as being informal, and another one as formal. On what basis do we make these distinctions? Through analysing a selection of nine residential buildings in the center of Maastricht, taking the use of natural stone as our guiding principle, we aim to find out what compositional ‘rules’ influence and shape our perception of the (in)formal.
Building selection

Photographs

1. Huis in de tuin
2. Achter de oude minderbroeders
3. Het Bat
4. Morenstraat
5. Ezelmarkt
6. Sint Pieterstraat
7. Riddersstraat
8. In den Steenen Bergh
9. De Gulden Leeuw
Front façade

Scale 1:100

1. Huis in de tuin
2. Achter de oude minderbroeders
4. Morenstraat
5. Ezelmarkt
6. Sint Pieterstraat
7. Ridderstraat
8. In den Steenen Bergh
9. De Gulden Leeuw
Façade abstraction

Scale 1:100

1. Huis in de tuin
2. Achter de oude minderbroeders
3. Het Bat
4. Morenstraat
5. Ezelmarkt
6. Sint Pieterstraat
8. In den Steenen Bergh
9. De Gulden Leeuw
Façade openings

Scale 1:100

1. Huis in de tuin
2. Achter de oude minderbroeders
3. Het Bat
4. Morenstraat
5. Ezelmärkte
6. Sint Pieterstraat
7. Riddersraat
8. In den Steenen Bergh
9. De Gulden Leeuw
Natural stone elements

*Scale 1:100*

1. *Huis in de tuin*
2. Achter de oude minderbroeders
3. Het Bat
4. Morenstraat
5. Ezelmarks
6. Sint Pieterstraat
7. Riddersstraat
8. In den Steenen Bergh
9. De_Gulden_Leeuw
Decomposition of stone elements

Scale 1:100

1. Huis in de tuin
2. Achter de oude minderbroeders
3. Het Bat
4. Morenstraat
6. Sint Pieterstraat
7. Riddersraat
8. In den Steenen Bergh
9. De Gouden Leeuw
Urban context

Scale 1:1.000

1. Huis in de tuin
2. Achter de oude minderbroeders
4. Morenstraat
5. Ezelmarkts
6. Sint Pieterstraat
8. In den Steenen Bergh
9. De Gouden Leeuw
A series of façades in Maastricht, ranging from informal to formal. Why do we perceive one building as formal and the other as informal? The answer is often personal and subjective, but also influenced by a universal visual perception.

This architectural research explores the properties of the formal and the informal with the aim of generating a number of tools that can be used during the design process.

First, the series is broken down into a number of layers that are relevant for this research, i.e. the location of the building, an abstraction of the façade, the façade openings and the elements that are made of natural stone.

Next, these layers are analyzed using the laws of the Gestalt theory: a number of regularities in the visual and auditory perception (Prak, 1979). The laws that can be applied to the built environment deal with symmetry, proximity, similarity, repetition and continuity. Our visual system appears particularly sensitive to the perception of differences and changes.

This results in four themes that – for us – determine the (in)formality of the façade:

- Size & Proportion
- Similarity & Repetition
- Order & Symmetry
- Continuity & Tectonics

Conclusions

Subtitle here
The ratio between the façade openings and the stone elements that create these openings, influences the (in)formal appearance of the façade. Façades tend to look more formal when the ratio becomes higher (and the stone frame appears thinner). The degree of formality is thus also a question of refinement. Larger blocks enclosing a small window will make a façade look rather clunky, and therefore less formal.

The varying sizes of the stone elements in the Huis in de tuin also prohibit us from forming a relationship between the parts and the whole. They are bound only by proximity and the law of continuity, but do not share shape, form or proportion. Moreover, the stone blocks are all enclosing a differently shaped façade opening, which does not add to a harmonious effect.
Size & Proportion

Natural stone elements

Informal

1. Huis in de tuin
Size & Proportion

Natural stone elements

Formal

9. De Gulden Leeuw
The visual system attempts to integrate separate visual stimuli into a whole. Equalities as well as similarities are picked up immediately by the human brain (law of Similarity). Shapes that are close together are perceived as a whole, if the surrounding elements permit it (law of Proximity).

In the Huis in de tuin, none of the natural stone elements have a similar shape, and can therefore not be grouped. In the façade of the Gulden Leeuw on the other hand, many of the elements are repeated in an identical shape, and these elements can therefore be grouped easily.

Our inability to group and order the elements of the Huis in de tuin results in a more informal appearance of its façade. The great variance in sizes of the natural stone blocks only adds to this effect.
Similarity & Repetition

Decomposition of stone elements

Informal

1. Huis in de tuin
Similarity & Repetition

Decomposition of stone elements

Formal

9. De Gulden Leeuw
The law of symmetry states that the mind perceives objects as being symmetrical and forming around a center point. It is perceptually pleasing to divide objects into an even number of symmetrical parts. Therefore, when two symmetrical elements are unconnected the mind perceptually connects them to form a coherent shape. Similarities between symmetrical objects increase the likelihood that objects are grouped to form a combined symmetrical object.

An almost complete lack of symmetry in the Huis in de tuin makes this façade appear to us as very informal. If we define a vertical axis of symmetry, the objects on either side are misaligned and moreover, differ in size and shape. This blocks us from dividing the façade into groups. The Gulden Leeuw on the other hand posesses a very clear symmetry, enabling us to group objects and making this façade appear formal.
Order & Symmetry

Façade abstraction

Informal

1. Huis in de tuin
Order & Symmetry

Façade abstraction

9. De Gulden Leeuw
The law of continuity states that elements of objects tend to be grouped together, and therefore integrated into perceptual wholes if they are aligned within an object. In cases where there is an intersection between objects, we tend to perceive the two objects as two single uninterrupted entities. Our perception fills in the visual gap (closure).

Such is the case in the Huis in de tuin, where the door frame interrupts the window frames on either side. Yet we perceive the stone elements around the façade openings as three complete shapes.

Within the Gulden Leeuw, the continuation of shapes is already present in the vertical façade elements, and reveals its load-bearing principles (tectonics).
Continuity & Tectonics

Natural stone elements

Informal

1. Huis in de tuin
Continuity & Tectonics

Natural stone elements

Formal

9. De Gulden Leeuw
Informal to Formal

Inversion

To put the acquired knowledge into practice, the façade of the most informal building is made formal and vice versa.

The façade of the small house in the garden contains many useful elements to create a formal façade. These elements only need to be placed in a certain order.

The shapes of the stone elements above the door are similar to the stones above the window on the right hand side. These shapes are repeated in the two other windows and the components are then placed exactly above and next to each other. The frame of the door is made symmetrical and the upper window is aligned in the middle. Finally, the repetition of the anchors make the façade even more formal.
Informal to Formal

*Inversion*

Informal

1. *Huis in de tuin*
Informal to Formal

*Inversion*

1. Huis in de tuin
Using the theories exposed earlier, the stone elements of the Gulden Leeuw house are taken apart and reconstructed in one of the most informal ways imaginable.

Taking clues from the Huis in de tuin, all symmetry and alignment has been removed, as are the harmonious proportions. All possibilities of grouping objects based on repetition, similarity or proximity have been eliminated. Individual elements no longer enter into a relationship with each other, causing the façade to look fragmented.

The informality is further strengthened through the use of unfinished shapes. Window frames are leaning on other window frames, causing them to be interrupted. Proportionally, the façade openings have been made smaller, making the stone elements look overdimensioned and clunky.
Formal to Informal

_Inversion_

Formal

9. De Golden Leeuw
Formal to Informal

_Inversion_

Informal

9. De Gulden Leeuw