RESTRUCT THE IN-BETWEEN SPACES IN BUCHAREST

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Border Condition of Public Building
Seminar 16/17
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INTRODUCTION

This report shows the process from the beginning of the research to different phases of development and finally the design intent, and also includes conclusion and reflection on this research. The process is divided into mainly 3 phases: early research which is the work before P1 presentation, further development after that and MO workshop. Mapping technique was applied through the whole research and acted as a tool to analyze the space and create new perspectives mean while the technique itself was also developed. The results of the research are eleven mapping drawings of 4 different categories of in-between spaces from 3 aspects of understandings. Thoughts of these spaces are deepen through making these drawings. To use these results, model methods are introduced during the MO workshop to generate architectural ideas from the drawings and with assemblage model of which elements and languages are chosen based on personal intent, the first idea of design was discovered.
Entourages in Architectural Drawings: A Reflection on Architectural Drawings of Japanese Architects

INTRODUCTION

Problems in doing a graphic mapping research:

At the beginning of the research stage of my master graduation project, I chose to do drawings as a way of mapping technique to handle thousands of photographs taken in Bucharest, Romania, which is the city in which the graduation studio project is located. This practice could be seen as a way of observing: I draw what I see and what I understand in the image or several images of the same scene. This process allows me to turn my observations into graphic recording results in terms of architectural drawings which work as data bases for further research.

By doing these research drawings, a certain mode of observation and representation was generated during the process. These drawings started to share the same system (Figure 1). In the beginning, I started with a plan drawing of the scene I was going to study, showing my understanding of the spatial relationships behind the image and items as well as their positions in this space. Then I added elevations of main facades and fences to show the scene vertically. After that, I drew the objects I saw instead of making a list of them, as I did initially. Arrows and marks were also introduced, where necessary, to depict behaviors of people or of spatial qualities. In several cases, sections were also included to add more sense of the space. Finally, distinctive and characteristic details of the fences or objects were drawn as an understanding of the structure and craft.

However, the mode of these study drawings is not well developed enough to carry the whole comprehension of the scene. New methods and references should be developed to improve this mapping technique. By studying drawing references and literature about architectural drawing, I am trying to enhance my own system and perspective on this topic.

During the study, I noticed that entourages in architectural drawings are somehow neglected by the literature, there are few texts reflecting on this kind of elements in architectural drawings. The entourages I am going to talk about in this text include the ideas of scale figures of humans, plants and objects such as furniture, device and commodities. Architectural draw-
ings depict the objective conditions of an architectural space as well as subjective intentions of the architect. Every single line drawn on the paper carries a certain purpose and reason why the author does it. In this way, even elements like entourages which are usually skipped and deemed to be less important have their own meanings supporting the ideas of the whole drawing.

Entourage helps to depict the condition which cannot be described sufficiently and reveals the other aspect of reality. An architectural drawing without entourages implies nothing but spatial condition. For example, construction drawings only convey the layout of the space with measurement, materials and details; it is hard for people to even tell the function of the space without name or text of the drawings in some situation. Meanwhile, if a piece of furniture, a bed for instance, is put in the drawing, another layer of reality will be added. People can easily get a sense of the scale of the room, how to use it, the daily life happening in it. Although the purpose of construction drawings is to tell the workers how to build the architecture, we can see that drawings without entourages have difficulty conveying the intent of the designers. So in my opinion, the skill to apply entourages in architectural drawings is also important and has its value. We should improve the skill and understanding of applying entourages in our drawings to let the drawing speak for us.

The architectural drawings of Japanese architects are quite different, compared to drawings of architects from the West from the point of entourages. The Japanese architects depict the entourages really carefully, and are good at using entourages to show the atmosphere they want to achieve and intention they want to pass to the audience. These are excellent references to look for this topic, and from the drawings of some Japanese architects I am trying to find out the role of entourages and conjecture the intention of the architects. Also some drawings of European architects will be introduced to add different perspectives in this topic.

HUMAN FIGURES

The book Graphic Anatomy Atelier Bow-wow is a collection to catalogue houses designed by Atelier Bow-wow, and contains illustrations of houses with a unique drawing style and technique. As addressed in the preface of this book: “…, but now they
have used their skills to give house illustrations a spatial depth, based on drawings such as plan details and section details,“¹ readers could divide what they see in the drawings into several layers. Taking the illustration of House Tower (Figure 2) as an example, the audience can see a vertical section with details following a contemporary common manner of technical drawings with patterns denoting different materials, various line thicknesses showing sectioning relationship and measurements and labeling. Moreover, there is one perspective point in the middle giving this drawing a spatial depth and many other layers of information. Not only offering a sense of spatial dimension, standard but simplified furniture and human figure offer scale and scenario senses as well. Necessary materials in the perspective are also identified to create atmosphere of each room. From the drawing which is not inside the book but used as the cover, a plan detail with blue and red hand drawing sketch lines, we can tell the working process and intentions of these illustrations. By containing these layers of drawing in one single picture, readers are clear about the composition of rooms and components, the adjacent exterior environments, actions and locations, and the relationships between objects. “This provides the appearance of multiple intentions fraught with contradiction and confrontation, organically linked through the medium of specific architectural element, as well as producing the appearance of unexpected phenomena of light and daily life, in response to the physical constraints on each individual house.“²

Looking through the drawings of Atelier Bow-wow, people can easily find that they use scale figures to tell the story. “Human figures help to provide simple and clear indications of dimension in scaled orthographic drawings; in perspective they contribute


2. Illustration of House Tower, Atelier Bow-wow
to the depiction of a proper sense of depth.” These is the basic purpose of using scale figures in architectural drawings. Although it is more precise to indicate dimension of architecture project with using other means, for example numerical keys or other labels, than using scale figures, human figures promote an immediately understanding of scale. Scale figures are particularly effective for one can quickly refer the familiar shape and scale of human body with those of the figures depicted, one can develop a sense of how big or small the object is and depicted in the drawing. When figures are used like this, the observers can establish a relation between their own experience in daily life and the experience in the drawings: how imposing or diminutive a building might seem, how lofty or compressed its spaces would feel.

Although human figures are conventionally used to express scale in architectural drawings, they need not be constrained to this. Human figures can also provide clients or potential users effective points of association through which to develop an understanding of how a building might affect them in other ways. If figures are drawn as inhabitants or occupants of a projected space, for example (rather than as stylized, metric figures placed in the drawing), they can help to express a range of possible actions and experiences. These might include projected patterns of occupation, use, and movement, anticipated lines of sight, points of physical contact with the building, and so on. Such figures can also help designers to speculate effectively about the actions and experiences of users and the elements that might be developed to accommodate them. Scale figures need not be merely metric, they can be helpful to reveal the immeasurable qualities of architecture.

Marco Frascari suggests that human figures used by most contemporary architects “have lost any ontological dimension; they are simply a form of communication oriented to the common man and to the technician, or a formal representation to other architects of the possible problems of scale and dimension.” For example in contemporary perspective drawings, it is common to use fully articulated figures. Though they might be depicted well or actually enough, they hardly do anything with the buildings or spaces in the drawings without necessary narratives.

We can assume that Atelier Bow-wow is fully aware of this phenomenon, and trying to use these human figures to tell the story.

In Atelier Bow-wow’s drawings, the figures are roughly depicted: almost profiles or their haircut and clothes besides the body, from which it is enough for people to be able to tell the genders, approximate age (kids, teens, adults or oddly). The figures start to lead the reader to explore and experience the spaces. The position of each figure establishes certain relationships between them, these reveal


the social layer of the drawings. Then the figures started to be read as families or neighbors depicting the usage and atmosphere of the space. Each figure also carries on one movement or activity, allowing readers to form a deep understanding as well as the furniture interacting with them.

PLANTS IN ARCHITECTURAL DRAWINGS

In plan drawings, the situations using human figures are reduced comparing with plants and objects. The plan drawings are built by projection of each element from top view, the information of human body is squeezed only showing the top of the head and shoulders at the most of time; it is hard to tell the age, identity, gender, the intention the human figures can carry is limited. So the figures in plans are mostly used in scale studies. (Figure 3) The Architectural drawings of Japanese architect, Junya Ishigami, stand out among the drawings I was studying, because through his drawings people will notice that he pays so much effort in depicting the entourages rather than the architecture itself. The trees are drawn in a precise manner that you can clearly tell different species from different types of leaves, colors and branches. While the buildings are drawn in a rather simple style: single lines and extremely clean elements such as slabs and tiny columns. The entourages he uses in these drawings become crucial to conjecture his intentions.

In 2008, Junya Ishigami was invited to organise the exhibition of the Japanese pavilion for the architectural biennale in Venice. For the exhibition, he designed several greenhouses on the outside of the pavilion. First, Ishigami was impressed by the plan drawings by Takamasa Yoshizaka, the original designer of Venice Biennale Japanese Pavilion, made in the year 1957, which remains standing on the Biennale grounds today. He said: “the drawing shows that architectural drawing need not be merely a demonstration of space—it can also be an expression of space.” In Yoshizaka’s drawing, elements like trees and stepping stones are represented in an incredible precise way. By depicting the entourages with such precision, Yoshizaka gave the Japanese Pavilion a coherency in which it is difficult to draw a clear distinction between inside and outside. The building’s ceiling was filled with skylights and a large void occupied its center, penetrating the roof. These elements made the pavilion feel like a boundless container of air and light. (Figure 4)

Inspired by Yoshizaka’s drawing, Ishigami made several drawings to


present his image of architecture of the future. In the drawing “Greenhouse Building” (Figure 5) he wrote down the words: “Stacked greenhouses whose environments vary layer by layer, a study in different natural environments at different heights throughout town.” By this drawing I shall say, the focus in this design is no longer the building, the container, but the natural, the interior environment, because Ishigami depicted the trees so precisely that we can distinguish tropical plants from the bottom to temperate flora at the top; while the building is just drawn in single lines as its surfaces and double lines as floor slabs. Hence there is the final design of the green houses around the pavilion. And the structure of the houses is exactly a direct transformation of the drawing that the structures are so simple, consisting only white steel sticks and glass. As we can find from the drawing, the focus of this design is switched.

OBJECTS IN ARCHITECTUAL DRAWINGS
If we say, plants in architectural drawings show the relationship between buildings and natural environment, the objects, as one part of entourages, reveal the intention of human behavior or in other words, daily life in the building. We can watch another drawing of Ishigami, the Forest-like Architec-

Although the planning was devised to correspond with the building’s functional requirements, even as its architects, we weren’t sure what the outcome efforts would be.”\(^6\) This uncertainty made the architects curious about how the space would be used after several years since it would be completed. So they recorded all the objects the users added by drawing them in the plan (Figure 7). Not only had they drawn down the furniture, but also small objects and equipment in the space. If it is hard to depict by projection, texts were introduced to explain the reality. Hence it becomes clear how the functions are grouped, and the unlimited path created among the fittings. If we take a careful look at this drawing, we will start to understand the pattern people react to the building: “in a space where columns are closely set (about one meter apart), shifting a table by a mere 50 centimeters can cause a dramatic

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change of location pattern, in an area where the columns are situated at seven-meter intervals, the spatial quality is barely affected by a slightly repositioning of furniture."

Thus it can be seen that objects in architectural drawings play an initial role of depicting people’s behavior. The vast majority of human behavior cannot happen without participation of objects. The relationship between them is getting more and more intensive with the development of human society. In the past, if one went running for physical exercise, one just needed to go and run; while today there is treadmill for people to do it indoors, needless to say various kinds of running gears. There is always something created for a certain action. The object could be seen as a trigger of human behavior for people that share a common sense of the same object; they follow similar patterns of using it, they have similar memories of experience with it.

Objects in architectural drawings help to convey intentions of architects. Putting different combinations of objects into the drawing, it is much easier for people to get the sense of how the space is going to act based on their own experience with the objects: a toy placed on a piece of carpet may imply a piece of space for kids to play; flower pots on the windowsill may be regarded as an indoor garden while putting a set of bolsters may make the windowsill a reading corner, these interpretations of the objects would help to define the space depicted in the drawing. Just like the drawing of Atelier Bow-wow mentioned above, although there are already many human figures, the objects further explain the architects’ intention and the atmosphere they want to express. Hence not only do we see figures, subconsciously we also see how the figures in the drawing interact with the transition of objects along the movement of our eyes. With objects as additional explanation, the story behind the drawing completed.

**Conclusion**

The enthusiasm of Japanese architects towards depicting entourages in their drawings compared with western architects, reflects the different understanding and perspectives towards the idea of space. The Chinese philosopher Lao-tzu who did in 531 BCE, is the founder of Taoism which influenced the culture of the whole east Asia. One of his theories about space is deeply rooted in people’s understanding architecture. Translating directly into English, he said: “Chiseling doors and windows (on the walls) to make a room, when there not (if we ignore the walls), there is the space.” Japanese artist Okakura Kakuzo in his The Book of Tea translates the words as “The reality of the building does not consist in the four walls and the
roof but in the space within to be lived in.”
Lao-tzu’s words offer Asians a dialectical thought of architecture. Maybe the essence of architecture can be the void – the space, rather than the solid – the building. So this is one of the reasons many Japanese architects paid so much effort on entourages in their drawing.

Another Japanese architect, Akihisa Hirata’s drawing (Figure 8) shows the atmosphere of a communicative alley in the project Sarugaku with massive entourages which successfully depict the scene the architect wanted. In The 2016 Venice Biennale Japanese Pavilion, there is also a model of Yokohama apartment by Osamu Nishida+Erika Nakagawa reproducing the real living condition with numbers of models of daily objects. (Figure 9)

By applying the entourages, these works uncover the real look of normal people’s daily life which might be quite different from some architectural drawings. They hold the building back and push the quality of life brought by the space of building forward. And this position gives birth to their pureness and conciseness of the building style that they can remove what is unnecessary, as said by Junya Ishigami: “I wish to consider what maintains architecture’s purity, no matter how much of the mechanical system may

be replaced; what degree of purity the space can retain, no matter how much the program may change. How the architecture can be use purely, no matter how values change.”

I had no intention of judging which one is better, and outside Japanese architects there are also many architects taking good advantages of applying entourages in their architectural drawings. My aim is to gain more ideas of this drawing technic through this research, and remind people that there is an aspect of elements in architectural drawings we did not pay enough attention to which we can get benefit and inspired from; which we can generate another way of representation; which we can hold a different perspective towards architecture.


9: Model of Yokohama apartment.
Reference
EARLY RESEARCHES

INTRODUCTION

To deal with the recordings of field work, a observation mapping/ drawing technique is introduced and by doing that, a data base of the research is established. These drawings reflect the most valuable properties we concern. From the initial analysis, we started to classify the scenses into catagories in order to give them definitions for later use.

The spaces are fragmented and constraint by boundaries in Bucharest, how would they achieve common lives in different level within this condition?
SITE MAP

This map shows the site where we started our research in Bucharest and where the scenes were found. This part of city fabric contains certain richness of urban fabric.

The site is fragmented, which composed of unit housings built during 1950s and big blocks contructed around late 20th century. This two time period marked two different political backgrounds in Bucharest which was cast into this site.

First we marked different social domains in this area and then went along these borders between them and recorded the spots of in-between spaces which interested us.
PHOTOS OF SCENES
The photos of scenes of in-between spaces were gathered back from Bucharest.
OBSERVING MAPPINGS

We chose to do drawings as a way of mapping technique to handle thousands of photographs taken in Bucharest. This practice could be seen as a way of observing: we draw what we see and what I understand in the image or several images of the same scene. This process allows us to turn my observations into graphic recording results in terms of architectural drawings which work as data bases for further research.
To analyze each scene, based on the observation drawings, we extract materials, textures and patterns in the photos to show the impression of the in-between spaces with a plan study: a plan drawing from observation drawings, an abstraction of the space and a drawing showing visual and physical accessibility.

In this stage, we classify the in-between spaces we study into six categories. Connection: A relationship in which a person or thing is linked or associated with something else. -- Oxford English Dictionary

‘Connect’ spaces are the in-between spaces connecting different groups. Such as yards shared by several families and a street with two rows of houses.
Perceptual drawing of one of the ‘Connect’ space
Pocket: a small patch of something; a small, isolated group or area; a cavity in a rock or stratum filled with one or other material.--Oxford English Dictionary

‘Pocket’ spaces are the in-between spaces of which the abstracted plan shows a shape of a pocket, usually a yard of a single family.
Perceptual drawing of one of the ‘Pocket’ spaces
Passage: the action or process of moving through or past somewhere on the way from one place to another.--Oxyford English Dictionary
‘Pocket’ spaces are the in-between spaces as a cut in a building mass which separate and link two different spaces.
Perceptual drawing of one of the ‘Passge’ spaces
Entrance: an opening, such as a door, passage, or gate, that allows access to a place; an act or instance of entering somewhere.--Oxford English Dictionary

‘Entrance’ spaces are the in-between spaces in front of the entrances.
Node: a point in a network or diagram at which lines or pathways intersect or branch.--Oxford English Dictionary

‘Node’ spaces are where two or more in-between spaces are intersected.
Combination: inbetween spaces which mix the former 5 types
Reconstruct the In-Between Spaces in Bucharest.

Perceptual drawing of one of the ‘Combination’ spaces
**Conclusion of Phase I**

The definition of the project and its themes needs further clarification and elaboration. The employed mapping techniques seem not really well-developed and thought-out. Before starting the next phase, we re-define and classify the 6 categories into 4:

Connect: in the name of the in-between spaces which link different units, showing spatial qualities as sharing or communication between them. Besides the communicative activities, overlapping is also a notable behavior with implication of territory.

Pocket: Implies the in-between spaces fenced by single unit, usually a yard next to/ between two individual houses. These spaces show a strong sense of territory with certain level of privacy. The owner can choose to either expose or hide this space from the public, generating self-expression by the form, style and development of the fences.

Passage: Not only an access from one space to another, but also a transition both emotionally and of human activities, usually a cut through a building.

Node: When two or more in-between spaces joint together at a point, there generates a node zone where people's circulation and activities intersect and activate the zone with spatial and architectural changes.
DEVELOPED RESEARCHES

INTRODUCTION

In this phase, four different prototypes are developed and redefined. We start to depict each scene based on its specific properties. The process reveals invisible aspects of architectural context within the site which provides a new perspective to unscramble contextual meanings.

After the scenes were developed, we start to draw the scene with its own logic coming out from the drawings. We spatialize the characteristic drawing which can be seen as conceptualization of the understanding of the space.

In the end, in the time-movement drawings, we start to depict time or movement in the scenes which add another layer of information and thoughts of the space.

Following this process, the understanding of these in-between spaces become in-depth, and transits from depicting reality to conceptualization; from reality to abstraction.
Four layers of connections are demonstrated in the drawing. We are trying to refine different levels of connect which are not strongly visualized but dominant within this courtyard.

Physical Connections are different links of path; visual Connections are different view point fixed by object; some connections are accent heterogeneity within this courtyard, such as water pipes, electric meter, walls; whilst doors, windows and some sharing street view which are designed as barrier for different space but as connection under this condition.

Unit housing with courtyard is widespread in Bucharest, interestingly, almost every courtyard are fenced and separated in different degree, including abandoned yard.

**Connection** - Analysis
In the spacialization drawing, we reorganized the line which based on its on logic. the Physical connections are developed as tunna, visual connections are platforms which links different object.
Five layers of transformations are demonstrated in the drawing. Passage is widely used architectural method for binding two different spaces in Bucharest, they are easily found near superblocks and churches. ‘Passage’ shows the property of transition: when people get through this space, the landscape changed from natural to ritual; the space provide a transitional series for people’s behavior when approaching the church.
In this spacialization drawing. The abstraction of texture, light intensity, forms are developed as a passage to show continuous transition.
This drawing shows countious light and texture variation based on time. It has two direction and timeline within this drawing. The first one goes as radius decrease, the second is perpendicular to the drawing.
Four layers of Pocket are demonstrated in the drawing. We treat pocket as an object, in which provides an experience only got one direction to get in and out no matter physically, visually or sensually.

Courtyard, fences, windows, doors and flowers and leaves are highlighted under different scale.
In this spacialization drawing, we are trying to spatialize the different levels of enclosure in a cubic manner with certain architectural qualities. And the composition starts to mimic the street of row houses with yards, which provide a view from urban scale.
In this drawing, pockets are reappearing and reconstruct along people’s movement. We are inspired of Tschumi’s notations system, but realized with spacial language. This could be seen as a notation system recording the movements and the elements of enclosure one might encounter during the activities. The lower drawing is stretched to a straight timeline, so these pockets are tangential to timeline and easily fit into storyline.
Five layers of Node are illustrated in the drawing. Different spaces are carved out for transportation and when these linear spaces intersect, they form nodes. Then more spaces start to carved out to join the node.
The occlusal relationship obviously shows in the drawing. Three types of spacial condition are founded. They can connect as a cube together to form complete integration space.

The intersection spaces are carved out. It let vacancy. People cannot see it, but feel it.
This is another way of node representation. The space are unflod along the main transportation (road), it shows dominated occlusal relationship along the main node.
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MO WORKSHOP

INTRODUCTION

MO workshop contains two phases of practices:
The first phase is called 2.5D model. During which we started to turn the drawings into flat models for the first time, and try to mis-read the drawings, looking for new properties embodied by the outcome of the 2.5D model and new perspectives of the drawings.

The next step is "assemblage". Assemblage is similar to a three-dimensional collage, with elements or structures of the drawings or 2.5D models putting together to create new relationships among the new compositions.

By doing this process, with these models, we try to generate our own personal intent, spatial qualities, methodolgies or design concepts.
2.5D Model I

This model is a spatialized version of the conceptual drawing of 'Connect' in-between space.
Elements of this drawing are transformed into different architectural languages.
The model shows the relationship between walls, masses and connections. But the attempt is literal.
For this flat model, first, we fold the paper along the directions of the walls in the drawing which segregate the paper into many parts creating unevenness of the surface and different heights of the paper. There are two oblique directions. Along one direction, we cut out figures from the drawing creating gaps. Along the other direction, black stripes are introduced that waving through the gaps.
Assemblage

This assemblage model contains different elements from the conceptual drawing of Pocket. The barrel-shaped boxes come from the pockets in the drawing, and by twisting them, a new mode of enclosure is created. The spatial position of the boxes also shows piercing and floating relationships of the masses.
CONCLUSION AND REFLECTION

Through the research process, in the end, the qualities of the in-between spaces of Bucharest are redefined by doing mapping practices. The in-between spaces in my research site which draw our interests, are divided into four main categories based on their forms programs and other characteristics, namely ‘connection’, ‘pocket’, ‘passage’ and ‘node’. The main property of each category is redefined through the mapping process.

The idea of ‘connection’ is mainly about connectivity in this kind of in-between spaces. The connections in these spaces also reveal a social aspect of the relationship between the units in this space. The idea of ‘pocket’ is about enclosure. The different levels of enclosure is discovered and through the study of the surfaces, the relation between the people in and outside the pocket is found. Likely, the main thinking about ‘passage’ is ‘transition’, not only spatially, but also ritually and emotionally. For ‘node’, the relationship between public and private in a joint zone is found that public caves into private masses and bite together. These properties are shown in the 11 drawings.

Through this research, we had a close look of the contemporary border conditions in the form if in-between spaces which are good cases for this discourse because in-between space embodies borders of different units and domains directly.

By investigating, tracing and mapping these spatial conditions, the studio emphasizes the attempts to include adjacent, and peripheral ideas into design project. This approach stresses the importance of projecting the design process into tectonic, spatial and verbal constructs, all of which are seen as important components in the development of an architectural project. Hence, this gives a chance to apply drawings as a design tool. Through the mapping process, drawings are made and with the understanding of the space going deep, the ideas depicted in the drawings goes from reality to conceptual ideas and abstraction. Hence, the understanding of an ordinary space would be different and generates new ideas.

The richness of the result of drawings gives materials to generate design ideas. From the drawings, we summarized a pool of design languages in the form of words and diagrams which we can apply in the future stages of design process. To switch the drawings to spatial qualities, methods like 2.5D models and assemblage is introduced. The models coming out from this stage act as generator of design concepts by operating elements or design languages from the drawings. The elements are not used directly and literally, but through a certain way of mis-reading the drawings, hence, new ideas and spatial qualities are discovered. Further, the result can be used as design strategies and spatial intent from the models, the shift from plan (drawing) to space is achieved.

Yifan Yang
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