Jiaxiu CAI, phd candidate, Urbanism Department, Faculty of Architecture and the Built Environment, Delft University of Technology
Email: J.Cai@tudelft.nl
Tel: +31 0623 034299

Thinking in Forms as well as Patterns

An Integrated Framework for *Urban Morphology*, *A Pattern Language* and *Urban Design*

Abstract

Urban Morphological approaches and Pattern Languages are often used implicitly in urban design processes. Few empirical studies have investigated the use of them in different phases of collaborative urban design processes. This paper first proposes a framework relating urban morphology, pattern language and urban design, which helps to understand why and how these can be discrete yet related. Then an empirical study is presented which was carried out on an eight-day students' collaborative urban design workshop. Then a comparative study is presented regarding the design process and the achievement of design outcome between different design groups focusing on the role of the two approaches. This study not only schematically represent the intrinsic relations between the two methods and their relation with urban design, but also reflects on their potentials and limitations in the urban design process.

Key words: Urban morphology, pattern language, urban design, collaborative design process

1. Introduction

Pattern recognition is one of the basic capacities of the human mind. (Haken, H & Portugali, 1996) This capacity is one of the advantages humans have to adapt to and change our environment. The human brain abstracts causes and effects, and documents recurring solutions obtained in different circumstances in order to understand the structure and underlying principles of the surrounding environment. (Salingaros, 2008) In time, people not only learn to counteract the difficulties in life based on existing solutions but also combine different solutions to deal with more complex problems.

Though recent researches claim that designers have their own ways of thinking and communicating, (Cross, 2006) in a general sense, designers as human beings still share this way of working in the design domain. For example, designers construct their "solution library" based on the experiences gained from previous projects; or the information from trips on which they learn from many nice built environments; or books, etc. They search for solutions in their mind to make references for a design commission they are facing. However, though these

phenomena are known among designers, the essence of a "designerly way of thinking" and how designers approach design is rather implicit.

Design studies progressed significantly since the design methods movement of the sixties in last century. Design theory and methodology in architecture and the industrial design domain have been elaborated remarkably on the basis of the sophisticated development of design studies. However, little attention is given to this topic from the urban design domain. (Çaliskan, 2012) For example, the whole urban design field sticks to an invalidated model that has been under debate in design studies. (ibid) In response to this, Çaliskan provided a renewed conceptual framework regarding design thinking in urban design processes to reflect on both contemporary theories and on the practice of design. Then he tested his model in two urban projects conducted by one expert designer and a beginning level designer respectively. The design reasoning in action is revealed in the analysis in particular. The method he used to conduct the analysis is based on in-depth interviews with the designers and evaluation of original drawings, which were made during the design process. Çaliskan's research made a step further in the urbanism domain regarding design thinking. However, his research focus was not how designers use certain approaches to design. Besides, his analysis is based on the designers' memories (interviews) and their drawings, a so-called "afterwards analysis" instead of real time observation during the design process.

Standing upon Çaliskan' research, aiming to contribute to the study of design thinking in the urban design domain, this research seeks for how designers use certain approaches towards urban design and how design methods influence the design process and design outcome at the end. The urban morphological approach (UM) and the pattern language approach (PL) are chosen particularly for their common, be it often implicit use in urban design (UD). This paper first proposes an integrated framework to depict the relation between UM, PL and UD. Then the intrinsic relations between these are discussed. The proposed framework is inspired by Stephen Marshall and Olgu Çaliskan's paper < *A Joint Framework for Urban Morphology and Design* > that was published in Built Environment in 2011. It proposed a joint framework relating urban morphology and design, and discussed the nature and significance of the essence of the two and their relation. This research adds *A pattern language* into the discussion and proposes an integrated framework to relate urban morphology, pattern language and urban design. It also takes a step further by testing and interpreting it in a collaborative urban design workshop. The analysis of the role of UM and PL is conducted based on real time observation of the design process and on the designers' survey and semi-open interviews at the end of the workshop.

2. A framework linking Urban Morphology, Urban Design and Pattern Language

From the analysis on the theoretical level in this section, some discussions have been made to help us understand the intrinsic relation between urban morphology, pattern language and urban design. A theoretical framework is proposed to integrate UM, PL and UD. (Figure 1) It sees UM, PL, and UD as reduction and processes. The remainder of this paper interprets this framework and tests it in the eight-days design workshop with master students.

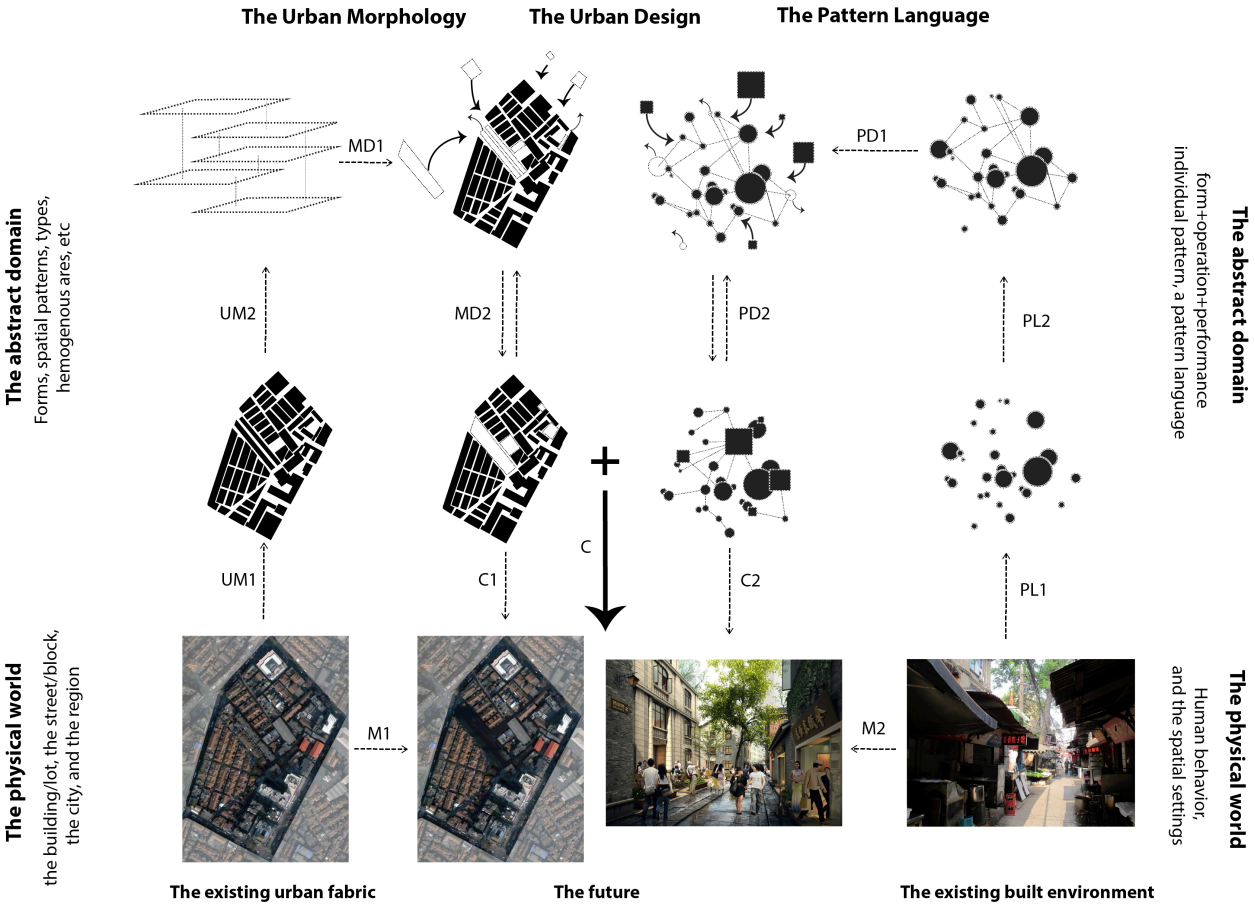

Figure 1. Framework integrating Urban Morphology, Pattern Language and Urban Design

2.1 Basic principles of UM, PL and UD

	Urban Morphology	**A Pattern Language**	**Urban Design**
Basic Vocabulary	Form (M)	Individual pattern: Scene (MOP)	Individual architectural elements and ambient space
Process	Time	Timeless	Incremental/radical
Range	Resolution	Scale & Abstraction	Scale

Table 1. Principles in UM, PL and UD

2.1.1 Urban Morphology

The morphological approach encompasses a long tradition of studying urban form. It was initiated in Italy in the 1960s. It was then developed further around the world. (Moudon, 1997)

The International Seminar on Urban Form (ISUF[1]) is an international organization for researchers and practitioners in the field of study of the urban form.

Form, resolution, and time are the three principles on which the study of urban morphology is based. Moudon (1997) argues that it is possible to study any urban form applying these three principles. The basic study unit of UM is form. This refers to the three basic physical elements that define urban form: buildings and their related open spaces, plots or lots and streets. Resolution refers to scale in the sense of the amount of information to be included in a map. The more zoomed in, the more information a map contains; the more zoomed out, the less information a map contains. Time refers to transformation of forms.

2.1.2 Pattern Language

Co-evolving with the morphological studies since the 1960s, design and planning professions paid attention also to sociology and environmental psychology. Person-environment relation research, simply investigating how people behave in a given environment, has become a bona fide part of the architecture and urban design domains. (Moudon, 2003) The pattern language introduced by Christopher Alexander is an efficient tool to relate the use of space to physical urban forms. It is also an effective approach for designers to invite and facilitate laymen participation in the design process.

A pattern language is a network consisting of individual patterns and the relation between them. An individual pattern is a group of information. In < *A pattern language* >, each individual pattern has a title which recurs in built environment domain, followed by a pattern statement to explain the title which can be seen as a hypothesis. This hypothesis is the actual pattern. This statement can be gained from the experience of daily life, scientific research, etc. Sometimes a pattern contains an image or sketch to visualize the phenomenon. A pattern always ends with a prescription that indicates the implication for practice. An individual pattern does not exist by itself. What makes a pattern language is the link or the relation between individual patterns. However, an individual pattern can also be organized or understood according to Tzonis' (1992) MOP scheme. M refers to morphology: the physical form itself; O represents operation: how people use the space; P represents performance: how well the space is used.

[1] ISUF is based in Great Brittan. It was inaugurated in 1994, bringing together urban morphologists worldwide. It seeks to advance research and practice in fields concerned with the built environment. Members are drawn from several disciplines, including architecture, geography, history, sociology and town planning. http://www.urbanform.org/

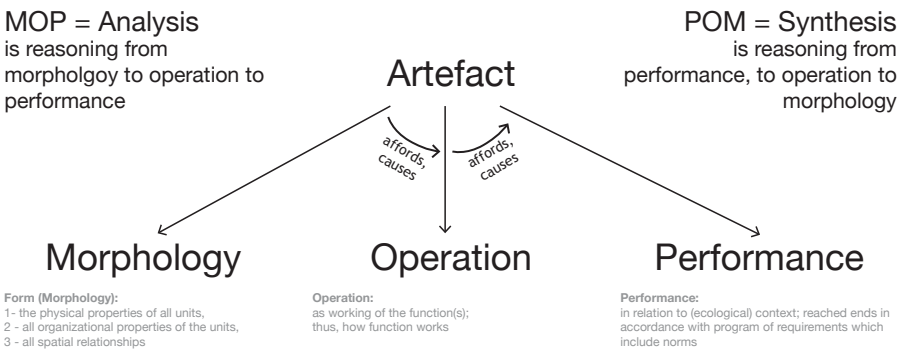

Figure 2. Design as the oscillation between analysis and synthesis. Based on Tzonis (1992), Guney (2008) and Stolk (2015)

Alexander claims that pattern language is timeless. The essence of some individual patterns stays the same despite of time, though in time the form of the patterns might differ. For example, the pattern‘communication’stays the same, though the forms can differ from a phone to skype (internet). The patterns anchor the evolution of human society, which retains continuity. These are the patterns that evolving new individual patterns are based on.

There are differences in scale and abstraction among individual patterns. Salingaros (2000) proposed two essential additions to the limited main stream understanding of PL. These two additions clearly manifest the characters of individual patterns regarding their scale and abstraction.

First, a series of couplings between the patterns that clarify the hierarchical orders between them:
1. One pattern contains or generalizes another smaller-scale pattern.
2. Two patterns are complementary, as one needs the other for completeness.
3. Two patterns solve different problems that overlap and coexist on the same level.
4. Two patterns solve the same problem in alternative, equally valid ways.
5. Distinct patterns share a similar structure, thus implying a higher-level connection.

The second addition is providing clustered patterns for designers, which makes the pattern methodology more suitable for application in design-processes. Sets of connected patterns provide insights in the method itself, and at the same time are open to add or replace individual patterns.

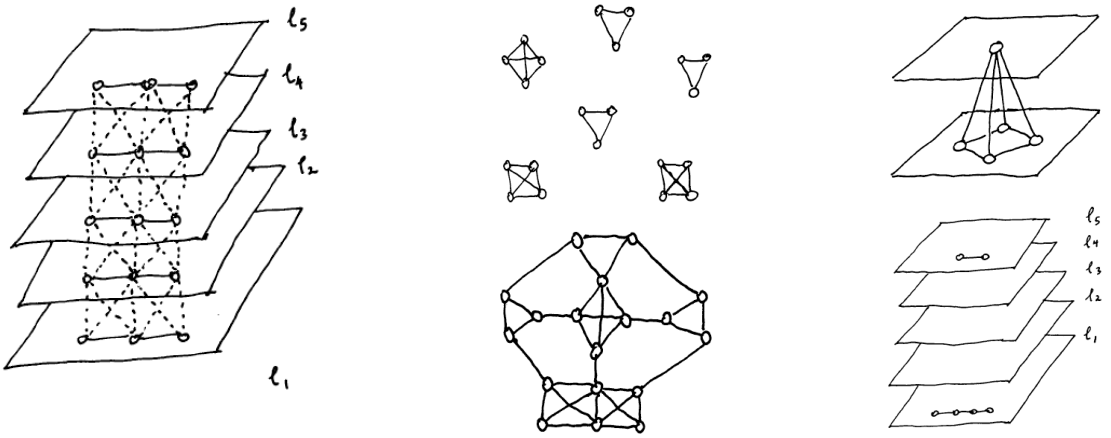

Figure 3. Clarifications on the couplings between patterns as suggested by Salingaros (2000).

2.1.3 Urban Design

Urban Design is an open system that uses individual architectural elements and ambient space as its basic vocabulary, and that is focused on social interaction and communication in the public realm. (Carmona, M., Heath, T., Taner, O. & Tiesdell, S. 2010)

2.1.4 Scale of UM, UD, and PL

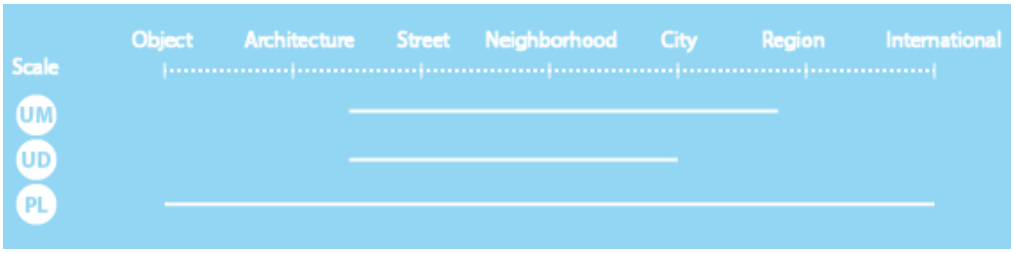

Figure 4. Scale properties of UM, UD and PL

UM deals with the space larger than architecture, smaller than a region. It studies the architecture related spaces to landscape. UD reaches the space larger than architecture and smaller than a city. PL can have a rather extensive scale. It can contain pattern from the small object to the global scale.

2.2 Urban Morphology, Urban Design and Pattern Language as reduction

The concept of ‘reduction’ is taken from the term ‘reduction drawing’ used in the Dutch or Delft School of morphological analysis. Literally it means to take things apart, to reduce the amount of information in the complex situation in order to better understand the main structure or structuring system. Figure 1 shows that UM, PL and UD all take a step away from the physical world to work on a more abstract level. UM is firstly a projection, a ‘shadow’ of the

real world. (Marshall & Çalıskan, 2011) PL can be seen as an abstract network of scenes of the real world. A design can be seen as a ‘fore-shadow’ as well as ‘pre-scenes’ of a future reality.

2.3 Urban Morphology, Urban Design and Pattern Language as processes

The processes of UM, UD, and PL are shown in Figure 1. Both UM and PL perform an act of cognitive interpretation of the real world, while design is an act of creative (re)organization.

UM1 shows that UM first gets from the physical reality of an urban fabric to the abstraction of urban morphology. Then that information is further reduced into different layers, and the combination of different layers provides better understanding of the morphology. (UM2) Then an actual act of creative reorganization (MD1) takes place to take away some of the forms and at the same time put in new forms. MD1 is an experimenting phase in which different compositions and possibilities are tried. It can take more than one round to arrive at a design. (MD2)

Similarly, PL1 is a process to abstract the actual scenes from the real world into individual patterns. PL2 links and relates different individual patterns. Both PL1 and PL2 are interpretations of the real world. Then in PD1 the actual design starts. PD1 eliminates some of the less relevant individual patterns and adds some new patterns. PD1 is also an experimenting phase in which a newly proposed network is generated. (PD2)

3. The Design Workshop

In order to investigate the role of UM and PL in a collaborative design process and the relation between the two different approaches towards urban design, an eight days urban design workshop with sixteen students was setup. Students were asked to elaborate an urban design to improve the current built environment of the former British Concession in Wuhan, P.R. China. The background of the participating students was architecture, urban planning and landscape architecture. The students with different backgrounds were divided evenly in four groups. Two groups were appointed to use the morphological approach in the design process, while the other two groups were appointed to use pattern language. One student in each group was nominated as a research observer to record the whole design process. The workshop was set up in four phases: preparation, inquiry, design, and reflection. (Figure 5)

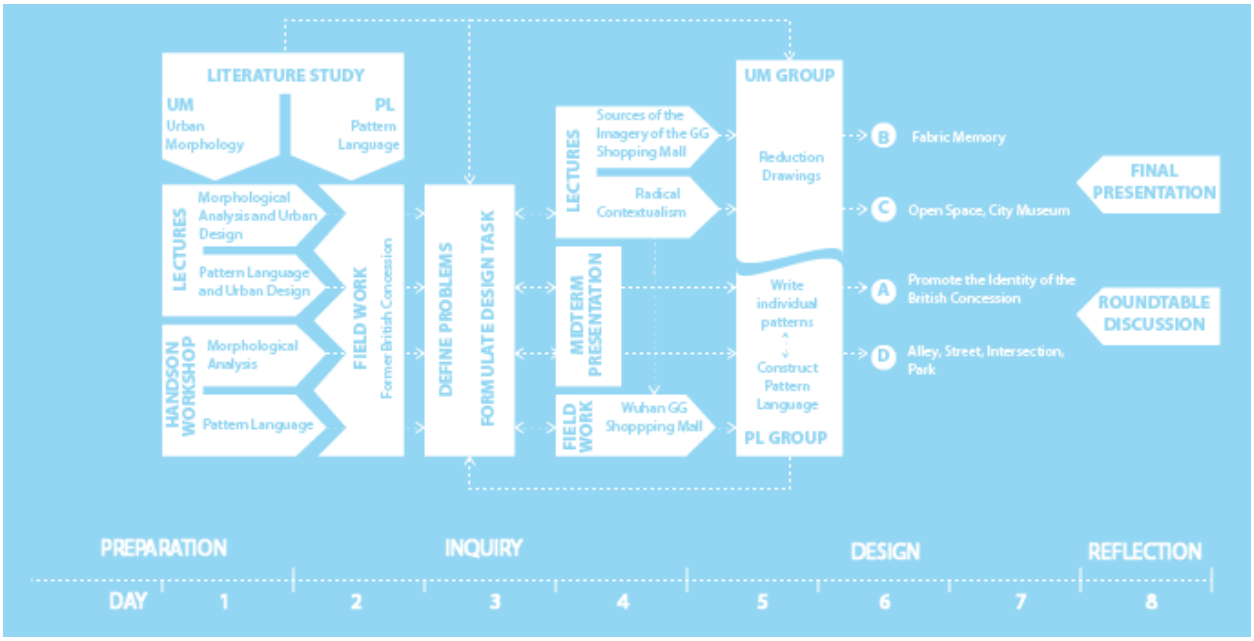

Figure 5. Set up of the eight days workshop

3.1 Preparation phase

The preparation of the workshop consisted of three parts: literature studies (self-study), two lectures and two hands-on workshops. It aims to teach the students the urban morphology approach (UM) and pattern language approach (PL).

Some key literatures regarding the design methods (UM and PL) were sent to the students two weeks before the workshop. Students were asked to read and discuss these by themselves. (Appendix 1, literatures and instruction)

In the morning of the first official working day, two lectures were given to the students. < *Morphological analysis and urban design* > reviewed different morphological schools in the world. The Dutch morphological analysis, reduction drawing and layer approach was explained in particular. The relation between morphological analysis and urban design was discussed afterwards. < *A pattern language and urban design* > first introduced the concept of pattern language and its theoretical basis. Then the role of pattern language as a bridge linking research and design was explained. Some examples regarding the pattern application were introduced.

In the afternoon, two learning-by-doing workshops were conducted. One was a mapping workshop; the other one was a pattern workshop. Each workshop took two hours, composing four sessions. The students joined the workshop with their appointed design method. The mapping workshop invited students to draw their own mental maps and trained them to make reduction and abstraction drawings. The possible ways to use these drawings in the design process were discussed in the workshop. In the pattern workshop, the students were trained to develop their own individual patterns and construct a pattern language with the group. It aimed to make students understand the components of an individual pattern, and the difference in scale

and abstraction between patterns, and to inspire students to think of the possible role of PL in the design process. (Appendix 2: the design of the pattern workshop; Appendix 3: the design of the morphology workshop)

3.2 Inquiry phase

Based on the work done in the preparation phase, on the second day the students and teachers investigated the site from the viewpoints of the two methods respectively. The students from the UM groups were instructed to observe the built environment as 'physical form', including aspects of accessibility, density, urban fabric, relation of façade to public space, etc. Students from the PL groups were instructed to look for interesting scenes in the built environment, such as the combination of public life and spatial settings.

On the third day, students and teachers worked in groups to reflect on the fieldwork, define design problems, and formulate their design task and theme using the means of UM and PL respectively.

The morning of the forth day was reserved for midterm presentations and reflections on the experience so far. In the afternoon, the lecture < *The Sources of the Imagery of the Guanggu Shopping Mall in Wuhan* > was given. Images of the Guanggu Shopping Mall were compared to the "authentic" examples they refer to. This showed how complicated the relations are, but also how effective, and how cross-cultural influences are one of the mechanisms of globalization. Then a short excursion to the Guanggu Shopping Mall was organized. In the evening, the lecture < *Radical Contextualism* > was given. The lecture gave Contextualism its theoretical foundation, using the work of philosophers and theorists on historical and contemporary culture. Examples of the work of the office HKB Urbanists showed how this can applied to the practice of urban design.

During the inquiry phase, the site visit trained students to recognize patterns and understand the site efficiently. The working session forced students to think in a structural way, define the design problems, and formulate their design theme logically. The two lectures provided underlying philosophy and understanding of urban design and intervention. The short excursion to Guanggu Shopping Mall gave students a close experience with an interesting and successful design example that they all knew, but learned to look at in different ways.

3.3 Design phase

On the fifth, sixth and seventh days, students and teachers worked in groups to elaborate urban designs based on the findings and understandings of the inquiry phase. No doubt, design is a recursive process. At a certain point, students needed to go back and revise the problems and themes.

3.4 Reflection phase

In the morning of the eighth day, public final presentations were organized. Invited experts gave reflective comments and discussed with students after each group's presentation. In the

afternoon, a three hours reflection session regarding the design methods and process took place among the participated students. The students were proposed to answer a survey and participate in the discussion. Students shared their feelings and thoughts in different phases of the workshop and their experiences with different design methods. (Appendix 4: Survey)

4. Findings and discussion

4.1 Role of UM and PL in the design process

It is shown from the notes on the whole design process, written by the appointed research observers in each group, that every now and then the designers ran into problems and misunderstandings. Sometimes the design process was held up; while at other times sparkling ideas were generated which boosted the whole design process. This is to be expected when two or more people are working together to elaborate a complex design. This section discusses the roles of UM and PL in the different phases of design processes, such as defining problems, conceiving solutions, making decisions, inspiring ideas, speeding up the design process and communicating ideas.[2]

4.1.1 Difference in framing problems and conceiving solutions

From the analysis of the notes taken by the observers, one of the interesting findings is that in contrast to common belief, instead of getting stuck in the phase of actual design where designers have to come up with design strategies, students have difficulties to frame a problem. Considerable time was spent to describe and define what problems needed to be solved, or avoided; or what problems were solved before by certain design proposals. Basically it was about how to construct a common language to relatively easily achieve a shared understanding concerning the framing of design problems. Can UM and PL help to achieve that? Students from the PL groups reached a common group decision on design problems and solutions much earlier than the students from the UM groups in the workshop. The reasons might be as follows.

First, comparing to UM, PL is more abstract. PL comes to the concrete design with forms (C2 in Figure1) rather later than UM, which understands (UM1,UM2 in Figure 1) and manipulates the physical forms (MD1) at the beginning. Though the components of each individual pattern include forms, those forms can be rather abstract and can be changed according to different contexts. This‘vagueness’property of PL is quite positive and was highlighted by McDonnell (2010). The ambiguity leaves room for designers to negotiate. This openness to possibilities is also important at the beginning, when flexibility is needed. To sum up, the vagueness and openness of PL allow designers to stay on a more abstract level, which makes the problem definition easier than sticking to the physical forms too quickly from the beginning.

[2] The basic understanding of design differs. The conventional opinion to see design as problem solving has been challenged by emerging debates. Filippo and colleagues (2009) propose that designing can be considered as an act of balancing a situation. To avoid a complex debate about the underlying nature of design, and to avoid misunderstanding and misleading the students in the first place, this research takes the general and common opinion to see design as a way to solve concrete problems in the environment.

Second, the fact that each individual pattern has a ‘name’ also simply makes it easier for designers to grasp, manipulate, and communicate with co-designers. Names imply meaning and the underlying line of reasoning, and a rationale that can be shared or debated. As such, the pattern names helped the communication among PL groups more explicitly, which might result in an earlier problem definition and a more productive and efficient discussion. The students in the UM groups need to point out the forms on the map and explain. They did understand each other, as maps and sketches are basic communicating languages among designers, though not until after a long and laborious discussion and explanation needing a certain level of abstraction, which makes it less efficient.

4.1.2 Difference in the design phase

Once students decided on the problem to solve, the abstract design strategies, the real physical design had to start. Students from the UM groups do design relatively easier with concrete physical form and have a better spatial hierarchy in the design outcome. However, the students from the PL groups have difficulties to come up with concrete and appropriate, aesthetic physical forms. In addition, their design outcomes have the tendency to only intervene in the smaller scale of the spaces in the city. This is unexpected, as the pattern language they constructed themselves for the design had different levels of scale and different levels of abstraction. This might be explained as follows.

First, as explained above as well, the PL approach comes to the actual physical forms very late in the process. The efficient communication and discussion resulting in swift decision in the problem framing phase might cause the students’ illusion about the actual progress of the design. They somewhat underestimated the difficulties in the design phase. They just came up with something without really experimenting and testing the different combinations of physical forms when they realized that they were approaching the end of the workshop.

Second, the difference of working through the scales might explain why the UM groups resulted in a more structured design outcome, while the PL groups resulted in smaller interventions in the built environment. A common behavior when UM is used to understand a site is for designers to work from larger scale to smaller scale. This way an understanding of the spatial hierarchy in the city is naturally generated. However, when designers are looking for patterns in the built environment, or validate existing patterns, they work from smaller scale to larger scale. This way the combination of different smaller patterns might evolve into larger scale and more abstract patterns. But these patterns and the language might be too complex to relate to the actual spatial hierarchy. Design can start from either scale, or can start from both large and small scale, which requires the combination of the two approaches.

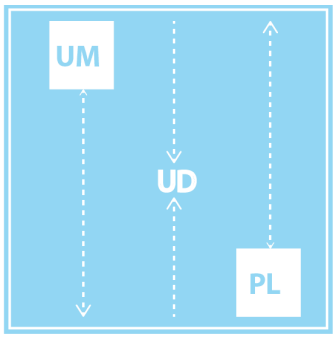

Figure 6. Working scales in design process

4.1.3 Communicate ideas

Reading maps and recognize spatial patterns, working with forms is what designers are trained for. However it might be too abstract or too far away from daily life for laymen to be able to understand. Next to the fact that PL can efficiently be used among designers, it is also a tool for designers to communicate with laymen, to invite public participation. As designers we do not impose or force our thoughts on people, but we invite other people's opinions. Designers do not use patterns to sell design. Instead, designers use them as a tool to invite public participation. Imagine we are in a situation where we are together with laymen, different stakeholders and clients in a community. We have a proposal and we want to ask them if they like or not. Their opinions and preferences are of course invited too. We can formulate the proposal in different patterns and ask people to do the exercise that we just did. If we have a pattern with the most likes, this makes it clear that people accept certain ideas. If we have a pattern with half likes and half dislikes, this invites debate. If we have a pattern with most dislikes, this invites argument or it is made very explicit that people do not like that certain idea. For instance, we propose we will change the streets in front of the house to dead-end streets only for parking. The inhabitants might all dislike such an idea. In such a way, the designers detect the wishes of the laymen and are able to show this explicitly to the developers. Consequently, it is also smart to develop some patterns that might cause conflict. To sum up, there are mainly two roles for patterns: designers can make a pattern book for themselves or their design partners, with whom they can share ideas and design in this way. Designers can also develop patterns to discuss, to debate, to argue, to communicate, and to create a common ground for those involved.

4.2 ‘Good Pattern’ and ‘Good Form’

PL and UM are introduced to the students as ways of system thinking and doing. The two approaches emphasized the significance of the way the elements and relations are constructed. The elements go across different levels of scale and abstraction. Their interlocking and overlapping nature, and their interrelatedness is as important and meaningful as the elements themselves. In general sense, a thing is not a thing except its relation to both its context (the things it contributes to), and the things it is made up of.’ (Marshall, 2013) This underlying understanding helps to answer the questions students asked in the workshop and in design education in general: What is a ‘good pattern’ and what is a ‘good form’?

In a design process, in the pattern language that is constructed some individual patterns have many relations to others, while other patterns are more isolated. Sometimes, some individual patterns are without any connection to other patterns. As explained in 2.1, a pattern is a small piece of information gathered from research, from observation, from our daily experience, which can be brought into a design. Design is a complex activity. The pattern language we build up to a design is a tool to solve specific problems or add meaning to the built environment. It is a combination of and connection with different individual patterns. If an individual pattern has fewer links with other patterns, it means it contributes less to the design. In this sense, it is a ‘bad pattern’.

Similar to the understanding of what is a ‘bad pattern’, if a ‘form’ or a group of ‘forms’ is rather isolated or disconnected from their spatial context, and they look somewhat strange on the map, that implies something special happened to the urban fabric at a certain moment in the history. In that sense, it is a ‘bad form’ or a ‘strange form’. However, what is discussed here does not literally mean ‘bad’ or ‘good’. It means that designers need to look up and research those ‘strange forms’ and find an understanding of them.

5. Conclusion

Alexander (1979) states: ‘Many people find it hard to make their design ideas precise…[and]… are unwilling to express them with the precision needed to make them into patterns’ and ‘it is at least as hard as anything in theoretical physics.’ (p.261) Indeed, trying to make things explicit especially in the design domain is a challenge, but it is meaningful. This paper first presents an integrated framework fro UM, PL and UD to explain their discrete yet related characteristics. It sees UM, UD, and PL as product as well as process. Also to work with them in a reduction manner is explained.

The second part of paper reports on a case of using UM and PL in an eight days student workshop. Some of the advantages and disadvantages regarding the use of PL and UM to approach UD are explained. PL’s vagueness property help designers to communicate more efficiently and makes it easier to reach certain decisions regarding the framing of the design problem or to elaborate design strategies. However, PL might be too abstract to ground the design in a concrete manner, which results in difficulties in the design phase.

6. Limitations and future work

This paper is a first attempt to link Urban Morphology, Pattern Language and Urban Design. The three can be seen as three separated domains with each a different tradition; they can also be seen as parts of the same domain if we are able to make them work together. More research is needed to demonstrate more systematically the relation between UM, PL and UD. The challenge to integrate them and better understand them, potentially resulting an integrated design tool, might facilitate us to build a better environment. To construct the tool, besides the test in the students design workshop, more literature review and investigation of the actual relations between them in the real design practice are needed.

Next to the theoretical framework, in the second part of this research, there are some limitations. First, due to the limited amount of samples, the students' individual design capacity might also be a main factor to influence the research outcome despite of the actual properties of UM and PL. Second, the average age of the participating students was 24. Most of them only had internship experience in practice. Thus a test among experienced expert designers might differ. Further interrogation of expert designs could help establish emerging results more strongly. Third, the duration of the workshop was rather short. Students did not have time to play with the elements of the urban fabric, to compose, to experiment, to get a feel for using them before undertaking the formal design. As such, a relative longer education program such as three-month design course is recommended. A tracing research can also be recommended based on the same design course through years.

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Appendices

Appendix 1. Literatures

1. Morphology group:

Moudon AV(1997) *Urban morphology as an emerging interdisciplinary field.* Urban Morphology (1997) 1, 3-10

Instruction: This is one of the fundamental papers which explains very well the theoretical basis and development of urban morphology.

Pinzon CE (2009) *Mapping Urban Form, morphology studies in the contemporary urban landscape.* TUDelft 2009.

Instruction: This is a PHD dissertation in TU Delft urbanism department. Please study <part 2. Meta—Mapping> to understand the tradition of morphology, its development overtime and its application in contemporary academic context.

Chapter 3. The urban morphology tradition.

Chapter 4. Mapping urban form, retrospective reconstruction.

Chapter 5. Context of the map: other contemporary maps.

Chapter 6. Conclusions for case studies.

J.Beijer (2013) *Los Angeles: the Metropolis and five stages of modernity.* TUDelft 2013.

Instruction: This is a master thesis in TU Delft urbanism department. The thesis mainly contains two parts: the project and thesis. The project elaborates through the scales of metropolis (from the region to the streets) and links every scale to a theoretical concept. Please go through all the maps from P20 to P37 to have an idea about mapping, especially on regional scale. Read through P38 to P43 to have an impression of mental maps. P49 to P65: Mapping on the scale of downtown. P72 to P75: Mapping on the scale of streets. P82 to P115, please study the design part to understand the urban design outcome composing different scales.

2. Pattern group:

Salingaros NA (2008) *The structure of pattern languages*. arq: Architectural Research Quarterly, 4(02)

Instruction: This paper was clearly written by Salingaros who was a colleague of Christopher Alexander. Salingaros explained the application of pattern language on a theoretical level and clearly pushed Alexander' work forward by introducing the concept of cluster of patterns.

Dorst, Machiel van, et al (2013) ***The Pattern Book: European Masters in Urbanism*** **TUDelft 2013.**

Please have a look at this book to have an over all idea about the components of an individual pattern and the construction of a pattern language. Do not go into the whole book too in detail. However, do choose one or two individual patterns which you are interested in to study. The students' reflection at the end of the book might be interesting too.

Lugten, Martijn (2014) ***Re Sil(i)ence. Design patterns for an aircraft noise abating spatial environment.*** **TUDelft 2014.**

Instruction: This is a full mark master thesis in TU Delft urbanism department since 10 years ago. It is a nice example of clustering individual patterns in the pattern library and using pattern language as a tool to approach urban design. Please read Part C: C3: network of design patterns and C4: clusters of design patterns. (P199 to P211). Part D: D3. Results Design case Badhoevedorp: 3.1, 3.2 and 3.3. (P 234 to P244).

Appendix 2-1: Hands-on workshop on patterns

Participants: 8 students from the 3rd and 4th group.
Two instructors: Professor Henco Bekkering and Jiaxiu CAI
One observer/ researcher: Lu YANG

This workshop was divided in four phases: lecture, developing an individual pattern, building a collective pattern language, reflection/discussion.

Phase 1: Lecture. (20minitues)

First 20 minutes lecture briefly introduced the pattern language theory and its application; explained the set up of this hands-on workshop.

Aim:

To let the students have an overall idea about:

1) the role of patterns in relation with design and research.
2) the origin of A Pattern Language and its influence.
3) the possible components of individual patterns.
4) how to connect individual patterns into a pattern language.

Phase 2: Developing an individual pattern. (40 minitues)

The students were asked to develop 3 patterns individually in 25 minutes. A well-designed A4 individual pattern sheet (Appendix 2-2) was handed out to students to fill in. When the students were working on that, the teachers were discussing, instructing and encouraging the students to start with their own spatial vocabulary and daily life experience. Then each of the students was asked to read aloud their favorite pattern to let the teachers and other students reflect on it. The reflection session was controlled within 15 minutes, and the following questions were asked:

1) Do you feel it was difficult or not to develop individual patterns?
2) Is it easier to start with smaller scale or higher scale?
3) Is it easier to start with more abstract or more concrete ideas?

Aim:

A. To let the students understand:

1) the components of an individual pattern by doing.
2) patterns can be abstract or concrete; can have lower scale or higher scale.
3) more patterns can be developed based on existing patterns depending on abstraction and scale.
4) a pattern is a way to start, to relate research and design.

5) while developing individual patterns, an awareness is needed of who is going to use them: professionals, design partners, clients, or laymen.

B. To test the following hypotheses:

1) It is easier to start with lower scale and more concrete patterns rather than higher scale and more abstract patterns.
2) Students with different majors and a different background in the kind of environment in which they grew up develop different patterns in relation to scale and abstraction.

Phase 3: Building a collective pattern language (40minitues)

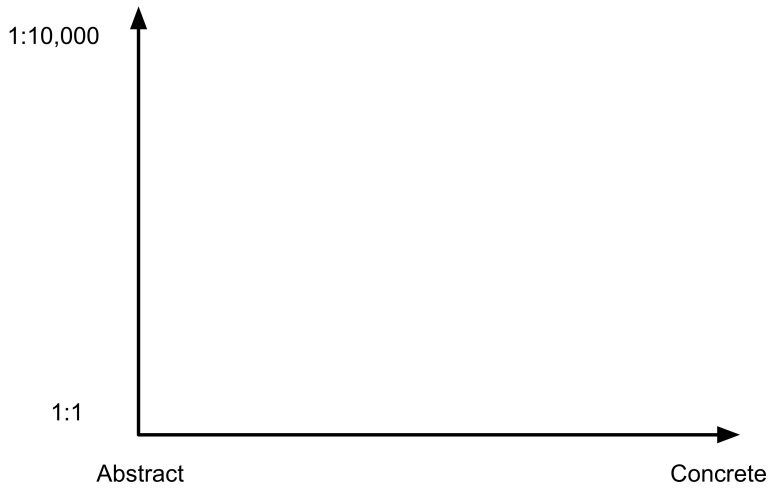

Figure1. Pattern range in relation to abstraction and scale.

Figure 1 was drawn on one A1 sheet of paper and hang on the wall. The students were asked to write each of their patterns on a sticker and stick it within this pattern range. They had to discuss with other students about the relation between the patterns in order to better position their own patterns. The students were allowed to relocate other students' patterns. Then a marker was given to students to link their patterns and other related patterns. The teachers were involved in the whole process. Afterwards, a 10 minutes reflection and discussion were organized with the following questions:

1) Where do most of the patterns locate in the range? Why?
2) Which pattern has the most links? Why? And which pattern has the least links? Why?

Aim:
A. To let the students understand:
1) Patterns have hierarchy.
2) How to build up a pattern language.

B. To test the following hypotheses:

1) Most of the patterns are located in the right lower part of the range: relatively concrete and relatively low scale.
2) The pattern that includes form, operation and performance has the most links. The pattern that does not include performance has the least links.
3) The patterns that are mainly about form are located in the left top, the patterns that are mainly about behavior are located in the right bottom.

Phase 4: Reflection on patterns (20minites)

The students were asked to put the patterns that they would like others to reflect on on the wall (in total 5). One green and one red marker were given to the students. The students were asked to read the patterns one by one carefully, to choose 3 patterns they like and mark with green color, to choose 1 pattern they dislike and mark with red color. Afterwards, a 10 minutes discussion and reflection was organized.

Aim: To let the students understand:
1) A pattern is a way to make issues explicit, to draw discussion and debate.
2) A pattern is a good way to communicate with design partners, clients and laymen.
3) Sometimes we can also leave a blank piece of paper and invite other people to contribute.
4) A way to invite comments and debate on your own work.

Appendix 2-2: Pattern

Name____Age____ Male/Female____ Major Background_____ City of Origin:_____

Pattern Number:

Title	
Hypothesis	
Theoretical back up	
Practical implication	
Image (sketch)	
Relation with other patterns	

Appendix 3-1: Hands-on workshop on mapping in the design of public space

Participants: 8 students from the 1st and 2nd group.
Two instructors: Professor Henco Bekkering and Jiaxiu CAI
One observer/ researcher: Lu YANG

This workshop was designed into four phases: lecture, mapping, building collective map archive, reflection/discussion.

Phase 1: Lecture. (45 minitues)

First 45 minutes lecture briefly introduced morphological stuies, and the Delft layer and reduction mapping methods. Lynch's mental mapping and Cullen's serial drawings were also explained; explained the set up of this hands-on workshop.

Aim:

To let the students have an overall idea about:

1) Different techniques and results of morphological studies.
2) the role of maps in relation with design and research.
3) the application of reduction drawings and mental maps.

Phase 2: Mapping. (60 minitues)

Session 1: Mental map (30 minutes)
Task 1: Draw your mental map of Wuhan. (10 minutes) (Appendix 3-2 Mapping 01)
Task 2: Draw your mental map of the British Concession. (10 minutes) (Appendix 3-2 Mapping 02)
Reflection and discussion: 10 minutes. (The maps were hanged on the wall.)

Aim:

A. To let the students understand:

1) the meaning and application of mental mapping by doing.
2) mental maps can be abstract or concrete; can have lower scale or higher scale.
3) mental mapping is a combination of elements that have made a great impression on you. It differs between people.
4) mental mapping can be developed in time with more details. (This is a matter of the level of abstraction. Will give the example of Donald Appleyard's experiments on a guy who lives in London.)
5) mental mapping can be a way to start, to relate research and design. (Give the idea that we can invite people to draw mental maps on the street and overlay them in the computer to see which part in the city we want to enhance and which part we could allow to recede.)

B. To test the following hypothesis:

1) Students with different majors and a different background in the kind of environment in which they grew up draw mental maps differently in relation to scale and abstraction. (Architects might draw buildings, urban planners might draw urban form and the relation between buildings, landscape architects might draw either bigger spatial structures or smaller. Students from the South might focus more on… students from North might more focus on…)

Session 2: Reduction drawings (30 minutes)
Handout was sent to the students, including an Auto CAD map, historical maps, aerial photographs and some photographs of the British Concession. The students were told to be free to draw reduction drawings according to their own focus in two ten-minutes sessions. (Appendix 3-2 Mapping 03) Afterwards, all the maps were hanged on the wall and a 10 minutes reflection was organized.

Aim:

A. To let the students understand:
1) the meaning and application of reduction drawings by doing.
2) reduction drawings can be abstract or concrete; can have lower scale or higher scale.
3) the difference between reduction drawings and abstraction drawings.
4) the context of the drawings. What are they going to use these maps for: to share with design partners, to present to clients, or to communicate with laymen?

B. To test the following hypothesis:
1) When the designers have some information of a site, it is easier to start with higher scale and more abstract drawing rather than lower scale and more concrete drawing.
2) The drawings made at the beginning phase were used to understand the context and were used to communicate with design colleagues.

Phase 3: Building a collective map archive (20 minitues)

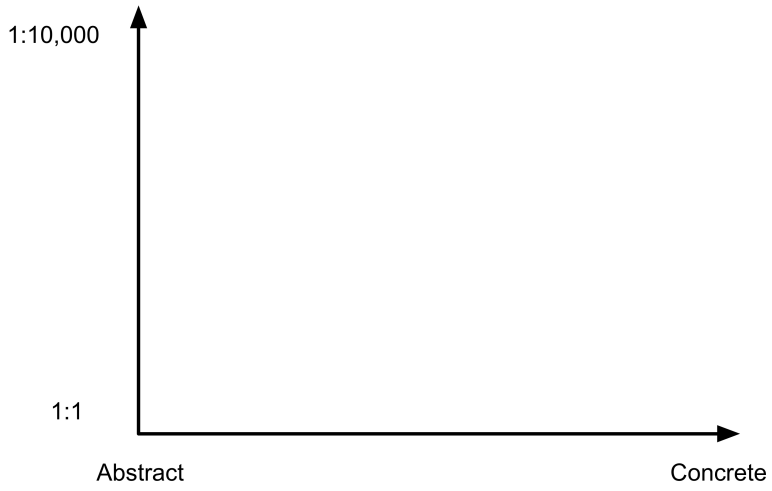

Figure1. Range in relation to abstraction and scale.

Figure 1 was drawn on one A1 sheet of paper and hang on the wall. The students were asked to locate their maps within this range. They had to discuss with other students about the relation between the maps in order to better position their own maps. The students were allowed to relocate other students' maps. Then a marker was given to students to link their maps and other related maps. The teachers were involved in the whole process. Afterwards, a 10 minutes reflection and discussion were organized with following questions:

1) Where do most of the maps locate in the range? Why?
2) In which way do you think your maps relate to other maps and why?

Phase 4: Reflection on maps (20 minites)

The students were asked to put the maps that they would like others to reflect on on the wall (in total 5). One green and one red marker were sent to the students. The students were asked to choose 3 maps they like and mark with green color, to choose 1 map they dislike and mark with red color. Afterwards, a 10 minutes discussion and reflection was organized.

Name: _____
Age: _____
Male/Female: _____

City of Origin: _____
Major background: _____
How long have you been in Wuhan: _____

My Mental Map of **Wuhan**

Name: _____
Age: _____
Male/Female: _____

City of Origin: _____
Major background: _____
How many time have you visited British Concession:_____

My Mental Map of **British Concession**

Name: _____
Age: _____
Male/Female: _____

City of Origin: _____
Major background: _____

Name of your map:

Appendix 5: Survey

The purpose of this survey is to figure out the role that morphology and a pattern language played in different phases in the collaborative urban design process. In addition, this survey was designed as a tool to help students to reflect on the 8 days workshop; and summarize the difficulties and achievements during the workshop.

这个调查问卷的目的是为了了解城市形态学研究和模式语言在整个城市设计过程中的角色和起到的作用。此外，这个调查问卷也可以被看作是一个帮助你反思和总结工作坊中所遇到的困难和所获得的成绩的工具。

This survey was designed into four parts: 1, profile of the designer; 2, how morphology is used in different design phases; 3, how a pattern language is used in different design phases; 4, open questions. If you used morphology method in the workshop, please answer questions from part 1, 2 and 4. If you used a pattern language method in the workshop, please answer questions from part 1, 3 and 4.

问卷被分为 4 部分：1，个人情况；2，形态学在设计中的运用；3，模式语言在设计中的运用；4，开放式问题。如果你在设计中使用了形态学的方法，请回答第 1，2，4 部分的问题；如果你在设计中使用了模式语言的方法，请回答第 1，3，4 部分的问题。

The questions are all multiple choices. Please according to your own circumstance to answer.

所有问题都为多项选择，不存在对错，请根据个人所遇到的具体情况回答。

Part 1: Profile of designer

1.	What is your name? 姓名	_____
2.	How old are you? 年龄	_____
3.	What is your gender? 性别	o Male （男） o Female （女）
4.	What is your major background? 你的专业背景是什么？	o Architecture （建筑） o Urban Planning （城市规划） o Landscape Architecture （景观建筑学） o Others （其他）_____

5.	How many years have you studied your major? 你学习你的专业多少年了？	o 1- 4 years （1 到 4 年） _____ o 5 to 6 years（5 到 6 年） o More than 6 years （多于 6 年） _____
6.	How many years have you been involved in practice? 你参与到设计实践中大概有多少年了？	o None （从来没有） o Less than 1 year （少于一年） o 1- 4 years _____ （1 到 4 年） o More than 5 years _____（多于 5 年）
7.	What kind of practices have you done till now? 到目前为止，你都做过哪些实践项目？	o Architecture（建筑） o Urban Design（城市设计） o Urban Planning（城市规划） o Landscape Architecture（景观建筑） o Mainly 主要是_____
8.	If you worked before, what kind of institute were you in? (Optional) 你过去在哪类单位工作过？	o Design Institute （设计公司） o Municipality （规划局或政府部门） o University（高校） o Others（其他_____
9.	If you worked before, what role did you have in the design process? (Optional) 如果你曾经工作过，在设计过程中你担任的角色是什么？	o Architect assistant （助理建筑师） o Main architect（主创建筑师） o Project manager（项目管理者） o Supervisor （指导者） o Others（其他） _____
10.	Which group were you in in this workshop? 本次工作坊你在哪个组工作？	o _____

Part 2: Morphology 形态学

1.	Are you familiar with morphological theory and its application? 你对形态学的理论和应用了解吗？	o Yes o No o I know them implicitly 我只是隐晦的知道并且使用，但是并没有很明确的

了解其理论，发展过程以及使用方法

2. How easy did you understand the morphological theory and its application from the lecture and hands-on workshop? (1=easy; 5=difficult)

   在第一天的讲课和 hands-on workshop 中,对于形态学介入城市设计的方法的教授和训练，你觉得在多大程度上可以理解？（1=非常容易理解；5＝很难理解）

   - o 1
   - o 2
   - o 3
   - o 4
   - o 5

3. What could be improved or explained clearer in the lecture and hands-on workshop?

   在讲课和 hands-on workshop 中，你建议在哪些方面可以进行改进，或者哪些方面需要解释更清楚些？

   - o _____
     _____
     _____
     _____
     _____
     _____
     _____

4. When you were analyzing the site through the morphological approach, did you start with lower level scale or higher level scale?

   当你通过形态学来分析场地的时候，你是从相对小尺度开始的还是从相对大尺度开始的？

   - o Low scale 小尺度
   - o High scale 大尺度
   - o Both 两者同时进行

5. When you were in the beginning phase of design task (field work, defending problems and searching solutions), were you thinking with scene or morphological units?

   在你的设计的前期阶段（现场调研，界定问题和寻找解决方案），你是以场景来思考问题还是以形态单位来思考问题的？

   Scene: a group of information: with event, people, spatial layout, etc

   场景：一组信息，包括事件，人，空间结构等等

   Morphological units: urban forms, plot division, streets, blocks, buildings, courtyard etc.

   形态单位：城市形态，场地划分，街道，街区，建筑，庭院，等等

   - o Scene 场景
   - o Morphological units 形态单位
   - o Others 其他_____

6. When you started to design, were you thinking in scenes or morphological units?

   - o Scenes 场景
   - o Morphological units 形态单位

	当你开始设计的时候，你是以场景在思考还是以形态单位在思考？	○ Others 其他_____
7.	To what extend do you think morphology can help you to **communicate with your design group mates**? Please explain how? (1= not helpful; 5= very helpful) 多大程度你认为形态可以帮助你和你的设计同伴交流？并且请解释。（1=没帮助；5=很有帮助）	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ _____
8.	To what extend do you think morphology can help you to **define the design problems**? Please explain how? (1= not helpful; 5= very helpful) 你认为多大程度形态可以帮助你界定设计问题？并且请解释。（1=没帮助；5=很有帮助）	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ _____
9.	To what extend do you think morphology can help you to **conceive solutions**? Please explain how? (1= not helpful; 5= very helpful) 你认为多大程度形态可以帮助你寻求设计解决方案？并且请解释。（1=没帮助；5=很有帮助）	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ _____
10.	To what extend do you think morphology can help you to **make decisions**? Please explain how? (1= not helpful; 5= very helpful)	○ 1 ○ 2 ○ 3 ○ 4

	你认为多大程度形态可以帮助你做决定（设计过程中）？并且请解释。（1=没帮助；5=很有帮助）	○ 5 ○ _____
11.	To what extend do you think morphology **can inspire you to generate ideas**? Please explain how? (1= not helpful; 5= very helpful) 你认为多大程度形态可以激发你的灵感，可以帮助你产生设计想法？并且请解释。（1=没帮助；5=很有帮助）	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ _____
12.	To what extend do you think morphology can help you to **speed up the design process**? Please explain how? (1= not helpful; 5= very helpful) 你认为多大程度形态可以帮助你提高设计速度？并且请解释。（1=没帮助；5=很有帮助）	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ _____
13.	In which other ways do you think morphology can help you in the design process? Please explain how. 在整个设计过程中，你认为形态还可以在哪些其他的方面对你有所帮助，请解释如何对你有所帮助的。	○ _____
14.	Do you think morphology can be understood by any	○ Yes

stakeholders, such as clients, designers, laymen? Please explain why?

你认为形态可以被客户，其他设计人员，普通住户等理解吗？请解释为什么。

- o No
- o _____

15. What is the strength and weakness of morphology method to approach urban design?

你认为从形态学出发来介入城市设计的强势和弱势分别在哪里？

- o Strength 强势 _____
- o Weakness 弱势 _____

Part 3: A Pattern language

1. Are you familiar with a pattern language theory and its application?
   你对模式语言的理论和应用了解吗？
   - o Yes
   - o No
   - o I know them implicitly 我只是隐晦的知道并且使用，但是并没有很明确的了解其理论，发展过程以及使用方法

2. How easy did you understand a pattern language theory and its application from the lecture and hands-on workshop? (1=easy; 5=difficult)

   在第一天的讲课和 hands-on workshop 中,对于模式语言介入城市设计的方法的教授和训练，你觉得在多大程度上可以理解？（1=非常容易理解；5＝很难理解）
   - o 1
   - o 2
   - o 3
   - o 4
   - o 5

3. What could be improved or explained clearer in the lecture and hands-on workshop?
   - o _____

在讲课和 hands-on workshop 中，你建议在哪些方面可以进行改进，或者哪些方面需要解释更清楚些？

_____
_____
_____
_____
_____

4. When you were analyzing the site and developing individual patterns, did you start with lower level scale or higher level scale patterns? More abstract or more concrete patterns?
当你分析场地并且发展单个模式的时候，你是从相对小尺度的模式开始的还是从相对大尺度的模式开始的？

- o Low scale （小尺度）
- o High scale（大尺度）
- o Both at the same time （两个同时进行）

5. When you were analyzing the site and developing individual patterns, did you start with more abstract or more concrete patterns?
当你分析场地并且发展单个模式的时候，你是从相对来说更抽象的模式开始的还是从相对具体的模式开始的？

- o More abstract （更抽象）
- o More concrete （更具体）
- o Both at the same time （两个同时进行）

6. When you were in the beginning phase of design task (field work, defending problems and searching solutions), were you thinking with patterns or morphological units?

在你的设计的前期阶段（现场调研，界定问题和寻找解决方案），你是以模式来思考问题还是以形态单元来思考问题的？

Morphological units: urban forms, plot division, streets, blocks, buildings, courtyard etc.

形态单位：城市形态，场地划分，街道，街区，建筑，庭院，等等

- o Patterns （模式）
- o Morphological units （形态单位）
- o Others_____（其他）

7. When you started to design, were you thinking with patterns or conventional morphological units?

当你开始设计的时候，你是以模式在思考还是以形态单位在思考？

- o Patterns （模式）
- o Morphological units （形态单位）
- o Others_____（其他）

8. To what extend do you think patterns can help you to **communicate with your design group mates**? Please explain how? (1= not helpful; 5= very helpful)

多大程度你认为模式语言可以帮助你和你的设计同伴交流？并且请解释。（1=没帮助；5=很有帮助）

- o 1
- o 2
- o 3
- o 4
- o 5
- o _____
  _____
  _____

_____
_____
_____

9. To what extend do you think patterns can help you to **define the design problems**? Please explain how? (1= not helpful; 5= very helpful)

多大程度你认为模式语言可以帮助你界定设计问题？并且请解释。（1=没帮助；5=很有帮助）

o 1
o 2
o 3
o 4
o 5
o _____
_____
_____
_____
_____
_____

10. To what extend do you think patterns can help you to to **conceive solutions**? Please explain how? (1= not helpful; 5= very helpful)

多大程度你认为模式语言可以帮助你寻求设计解决方案？并且请解释。（1=没帮助；5=很有帮助）

o 1
o 2
o 3
o 4
o 5
o _____
_____
_____
_____
_____
_____
_____

11. To what extend do you think patterns can help you to **make decisions**? Please explain how? (1= not helpful; 5= very helpful)

多大程度你认为模式语言可以帮助你做决定（设计过程中）？并且请解释。（1=没帮助；5=很有帮助）

o 1
o 2
o 3
o 4
o 5
o _____
_____
_____
_____
_____
_____
_____

12. To what extend do you think patterns **can inspire you to generate ideas**? Please explain how? (1= not helpful; 5= very helpful)

o 1
o 2
o 3
o 4
o 5

多大程度你认为模式语言可以激发你的灵感，可以帮助你产生设计想法？并且请解释。（1=没帮助；5=很有帮助）

- ○ _____

13. To what extend do you think patterns can help you to **speed up the design process**? Please explain how? (1= not helpful; 5= very helpful)

多大程度你认为模式语言可以帮助你提高设计 速度？并且请解释。（1=没帮助；5=很有帮助）

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ _____

14. In which other ways do you think patterns can help you in the design process? Please explain how.

在整个设计过程中，你认为模式语言还可以在哪些其他的方面对你有所帮助，请解释如何对你有所帮助的。

- ○ _____

15. Do you think patterns can be understood by any stakeholders, such as clients, designers, laymen? Please explain why?

你认为模式语言可以被客户，其他设计人员，普通住户等理解吗？请解释为什么。

- ○ Yes
- ○ No
- ○ _____

16. What is the strength and weakness of a pattern language method to approach urban design?

- ○ Strength（强势）
  _____

你认为从模式语言出发来介入城市设计的强势和弱势分别在哪里？	_____ _____ _____ _____ _____ _____ o Weakness（弱势） _____ _____ _____ _____ _____ _____ _____ _____

Part 4: Open questions: 开放问题

1, What you have learned from this 8 days workshop?
在这 8 天的 workshop 中你学到了什么？

2, What was your previous understanding of urban design and design process **before** this workshop? What is your understanding of urban design and design process **after** this workshop?
你以前对于**城市设计**和**城市设计过程**的理解是什么样的？现在又是什么样的？

3, How do you perceive the design process and outcome in your group?
你如何评价你们组的设计过程和设计结果？

4, Please compare your group work and the work in other groups in terms of design process and design outcome.
请对你们组的设计过程和设计结果和其他的组进行比较。各自的优缺点，创新点，怎样扬长避短。

5, What is your opinion about the method you used in your group. What are the conveniences and difficulties to apply it in design?
你如何看待你们组所使用的设计方法。你认为在设计过程中使用它们的方便之处和难处分别是什么？

Appendix 6: Schedule

DATE		CONTENT	APPENDIX
Fri. Nov 7	18:40	Arrival Tianhe Airport	Take off, accommodation, dinner, etc.
Sat. Nov 8	9:00--9:30	**Opening:** Introduction and organization of the workshop. (Aim, Design task, design process, group division, Delft urbanism graduation studio, general introduction of Morphology study and pattern language) Jiaxiu CAI	1 big Working place. Projector.
	9:30--10:15	**Morphological Analysis and Urban Design** Professor Henco Bekkering What can we learn from morphological analysis for urban design? Examples are given of the "Delft School" and its development, of Collage City (Colin Rowe and Fred Koetter, 1972), The Image of the City (Kevin Lynch, 1960), and The Concise Townscape (Gordon Cullen, 1961). There is not one fixed method; it is all about wanting to understand the existing city, and your own designs.	
	10:30--11:15	**A Pattern language and Urban Design** Jiaxiu CAI What we can learn from the built environment and how can we elaborate design based on what we have learned? This lecture will firstly explain the theoretical context of pattern language. Then the role of patterns will be discussed, specifically how patterns bridge research and design. In addition, students' work from TU Delft and UCL will be shown to inspire the application of pattern language.	
	11:15—11:50	**Brief introduction of Wuhan and British Settlement** (Political, economic, demographic situation; historical transformation; plans for the future) Lu YANG	

	13:30—15:30	A. **Hands-on workshop on pattern** (group A and group D). Instructor: Professor Henco Bekkering, Jiaxiu CAI, Assistant: Lu YANG	Relatively isolated working place, need projector, several A1 papers, Markers (red and green), lodestone board.
	15:45—17:45	B. **Hands-on workshop on mapping** (group B and group C). Instructor: Professor Henco Bekkering, Jiaxiu CAI, Assistant: Lu YANG	
	Evening	Group discussion and design of fieldwork (no teachers): prepare the maps, determine the route, list focus, and distribute task within group.	
Sun. Nov 9	9:00—17:00	**Field work** (teachers join)	Transportation
Mon. Nov 10	9:00—11:30 14:00—17:30	Group working (teachers join): framing the problems, formulate the design task and theme.	Big working place
	Evening	Group working (preparation for the presentation, drawings, logic of the narrative. No teachers)	
Tue. Nov11	9:00—11:30	**Group presentation** (Each group 15 minutes presentation + 15 minutes discussion)	1 big Working place. Projector.
	14:00—15:00	**The Sources of the Imagery of the Guanggu Shopping Mall in Wuhan** Professor Henco Bekkering Images of the Guanggu Shopping Mall are compared to the "authentic" examples they refer to. This shows how complicated the relations are, but also how effective, and how cross-cultural influences are one of the mechanisms of globalization.	
	15:30—18:00	**Short excursion to Guanggu Shopping mall.**	

	19:00— 21:00	**Public lecture: <Radical Contextualism>** Professor Henco Bekkering The lecture gives Contextualism its theoretical foundation, using the work of philosophers and thinkers about historical and contemporary culture. Examples of the work of the office of the speaker show how this can be transformed into the practice of urban design.	Lecture Hall+poster
Wed. Nov12	9:00—11:30 14:00— 17:30	Group working (teachers join): Design	
	Evening	Group working (no teachers)	
Thur. Nov 13	9:00—11:30 14:00— 17:30	Group working (teachers join): Design	
	19:30	Group working (no teachers)	
Fri. Nov 14	9:00—11:30 14:00— 17:30	Group working (teachers join): Preparation for the final presentation. Drawing and narrative for the final presentation	
	Evening	Print	
Sat. Nov15	9:00—11:40	Final presentation. (Each group 20minutes presentation + 20 minutes evaluation)	
	14:00— 17:00	Round table discussion with the students in the workshop about the feelings and thoughts in different phases of the design. Their experiences with different design methods. Fill in questionnaire and join the discussion.	
Sun. Nov 16	11 : 11	Departure from Tianhe airport	Check out the hotel and take off to the airport in time. Might leave the hotel around 8:30 am.