

## REFLECTION

### OVERALL CONTENT - Project of stress and city in urban fabric research group

The project of stress and city is carried out in urban fabric research group under the study theme of "Health and Climate". The research group studies "the relations between these tangible and intangible structures in different contexts" (urban fabric research group, 2016). It fits exactly in what the project of stress and city addresses in the thesis. The "stress" is mainly referred as wellbeing of urban immigrants, which is the intangible part in the project. While the focus of "city" in the project is highly dense environment that consists of perspectives of density, physical phenomenon, and spatial impact and so on, which is the tangible part of the project. They are brought together in the project to explore possibility of improving mental health from spatial perspective. The thesis is in one of the most important research directions in urbanism field, and meanwhile it explore a relatively new field. Based on preliminary research, there are not many researches and designs addressing the similar topic yet, especially for the case of urban immigrants. This thesis provides valuable exploration of the methodology from this perspective. The related analysis and design provides good material to reflect on this topic. They together create a more common understanding of stress and city from spatial perspective, and serve as a stepping stone for later related researches and design.

However, the new exploration also means that there is a lots of knowledge gap to fill in, and the gap is large between the between psychology study and urbanism study. It poses lots of obstacles in the process of exploration in limited time. As concluded before, it is needed to make assumptions to fill in gaps and it is difficult to carry out evaluation, which could undermine scientific value of the research. To better deal with existing limitations and gaps, several things can be done. Firstly, the research topic should not be too large in the beginning like what the thesis does. Although focus of the thesis got narrowed down to specific point

soon and it is beneficial to lay a comprehensive basis in beginning of the exploration, some time and energy is wasted in the process of gathering and selecting the information. Secondly, more support can be provided in the research group. Some basic knowledge of the psychology of space can be provided in the beginning, and more professionals with this knowledge can be included in the research group.

### METHODOLOGY & APPROACH - Project of stress and city in urban fabric research group

The explorative feature of the project in between the knowledge gap is reflected in methodology. Because of limited previous researches and the abstract knowledge gap, there is no existing solid structure to guide the research in the first place. As a result, large scope of knowledge related to the topic of stress and city are reviewed, and they contributes to narrowing down focus of the project steps by steps in the exploration. It starts from stress and city, and then it is narrowed down to wellbeing of urban immigrants and high density. After environmental analysis and behavior investigation on site, it is further narrowed down to the specific problem of crowding in Xiasha urban village. In the process, the representative case of Xiasha urban village is used to connect abstract theories and practical situations for better understanding and exploration. Based on identified context and the most related problems, a design is proposed in the case of Xiasha urban village. The design consists of different measures to deal with corresponding problems. They are concluded as stress patterns (problem and solution pairs) which are the combination of related theory and the regularity in practice. From here on, the scope of the research expands. Transferability and application of these patterns to larger contexts are explored. The explorative feature of the project in between the knowledge gap is also reflected in its approach. The 2 main approaches promoted by the urban fabric group are "Design driven by science" and "Design driven by practice". Under the methodology of narrowing down scope in exploration, the project is mainly driven by practice. The practice helps to fill in

the abstract and limited knowledge in the cross filed of psychology and urbanism. Meanwhile it orients from, gains support from and finally contributes to the science.

The methodology of narrowing down and the practice-oriented approach have various benefits. Firstly, they fits in the research context that there is abstract and limited knowledge in the gap. The methodology keep the systematic and logical way of thinking in the first place, while it gives the focus to grasp on in the narrowing down process. The practice makes the process possible and easier by confirming abstract research results. Secondly, although some knowledge and problems are put aside in the process of narrowing down because of limited time and information, they are related in a comprehensive knowledge system. These different factors

can easily relate to each other when more researches are carried out.

The methodology and approach also have their limitations. Firstly, in the narrowing down process, some important aspects such as social problems can not be focused in the project. The possibility of coming up with better design solutions is limited in compromise of time, information, and detailed level of the project. To solve the limitation, the neglected but important factors are reflected on in different parts of the thesis. More research needs to be carried out to fill in this gaps. Secondly, it is difficult to gather comprehensive information in practice, especially for the aspect of psychology of people. Some assumption have to be made in process based on available information, so there is possibility of deviation of truth. More meth-

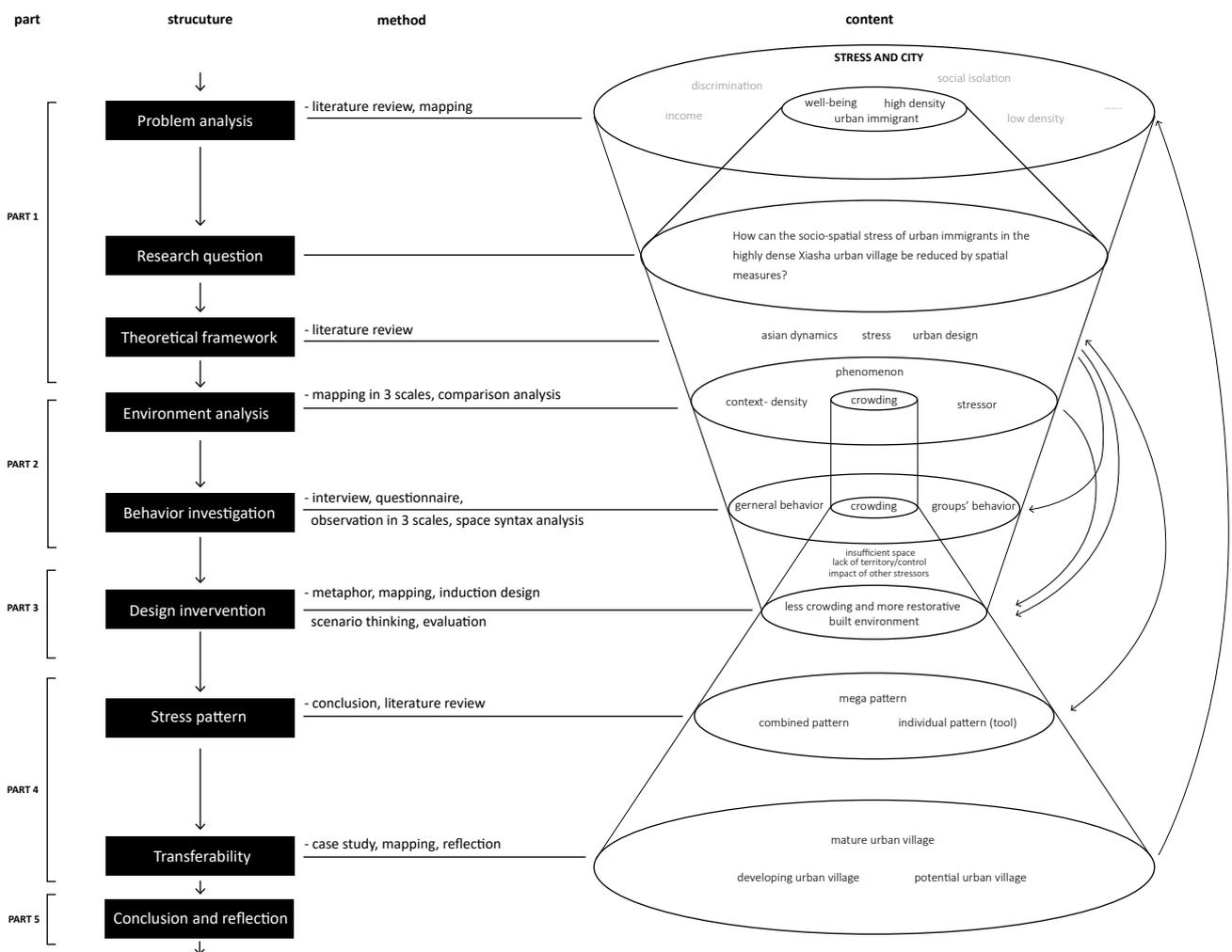


Figure 4.4. Diagram of methodology, By author

ods of measuring the psychology of people in different space are needed to be developed for increasing the accuracy of the investigation and design.

In the report, the methodology and approach have various inter-related steps that are carried out one after another. They are presented in this way to show rational and scientific thinking in the research, but in application these different steps should be more flexible and the process would have to go back and forth in order to get the final result. In the process, the research part should lay the basis for the design, while the design part limit scope and restructure findings of the research. Their relation is not in a linear structure, but in a complex network. In my research, the flexibility can still be enhanced for saving time and reducing chances of running into a dead end in the process.

### **THEORY, DESIGN AND PATTERN – Process of research by design**

One of the main methods in the thesis is research by design. The process of it is a co-evolution of problems and solutions. The thesis starts with research of related theory, but it is too abstract to define the exact problem and to build up the knowledge. To solve this problem, the design of the specific case of Xiasha urban village is used. The important parts of the design process, the environment analysis and the behavior investigation, are used to confirm the problem and knowledge oriented from the theoretical research. It provides the basis to form the solution in the design. Meanwhile the design process raises more questions from the practical perspective to stimulate the development of the research of theory and problem. In the loop, the research and design co-evolve with each other, which reaches a better understanding of the problem and better result of the solution. Moreover, besides coming up with the solution in the representative case, more general stress patterns are concluded. They show the possibility of dealing with the stress problem from the spatial perspective which is still relatively lacking in the stress research field. In this way, the design further contributes

to more general stress-related research. Meanwhile, the design also functions as showcase for the application of these patterns.

Reflection back on these processes, “exit to diversity” appears to be an important core. Different types of street are created, and different ways of reducing crowdedness and providing restorative qualities are combined in these different streets diversely. Meanwhile, they are inter-connected, which provides exits for each other. The diversity not only provides practical guidance to design different streets, but also reveals what is important in different streets. For example, commercial street should be combined with measures that do not occupy too much space while neighborhood gathering street should be combined with measures that provide large rest area. However, diversity does not exist in most of urban villages, as most streets are occupied by cars and commercial area. To implement the diversity, more control and better collaboration from different parties should be combined.

### **TRANSFERABILITY - Stress and city in the wider social context**

To expand the scope of the research and application, transferability of the concluded stress patterns to other types of urban villages in Shenzhen are researched. Different way of combining and adapting the stress patterns are proposed according to the features of the different types of urban village. It gives the basic instruction for the usage of the pattern library, while it gives the flexibility to different people to adapt them in specific cases. In application, several limitation of transferring these stress patterns should be noticed:

Firstly, each specific urban villages has its own challenges and opportunities. The stress pattern can not perfectly solve all the problems in all the cases. More patterns can be introduced in the library to solve different problems. The relation and cluster of the patterns identified in the pattern library helps to include them.

Secondly, the stress patterns are concluded from the spatial perspective, and there are still

lots of other aspects that they can not cover. We need to acknowledge that the spatial perspective is very important in the stress research as the physical environment imposes direct or indirect impact on the wellbeing of the inhabitants which contributes to the accumulation of stress, and the space is inter-related to the social interaction and behavior. This project provides a valuable spatial perspective in the discussion of the stress problem which is relatively lacking in the previous research. However, in a wider social context, it is actually a problem that is related to more other aspects such as isolation, affordable housing, social bond, social security and so on. Because of the limited time and the main focus of the research group, the social topics are only reflected on in the end of different parts of the research, but not involved directly in the discussion scope. The approach in the thesis can only positively affect these social factors to some extends, but it can not solve them in a comprehensive way. More researches can be done from these perspectives to contribute to the solution of stress problem.

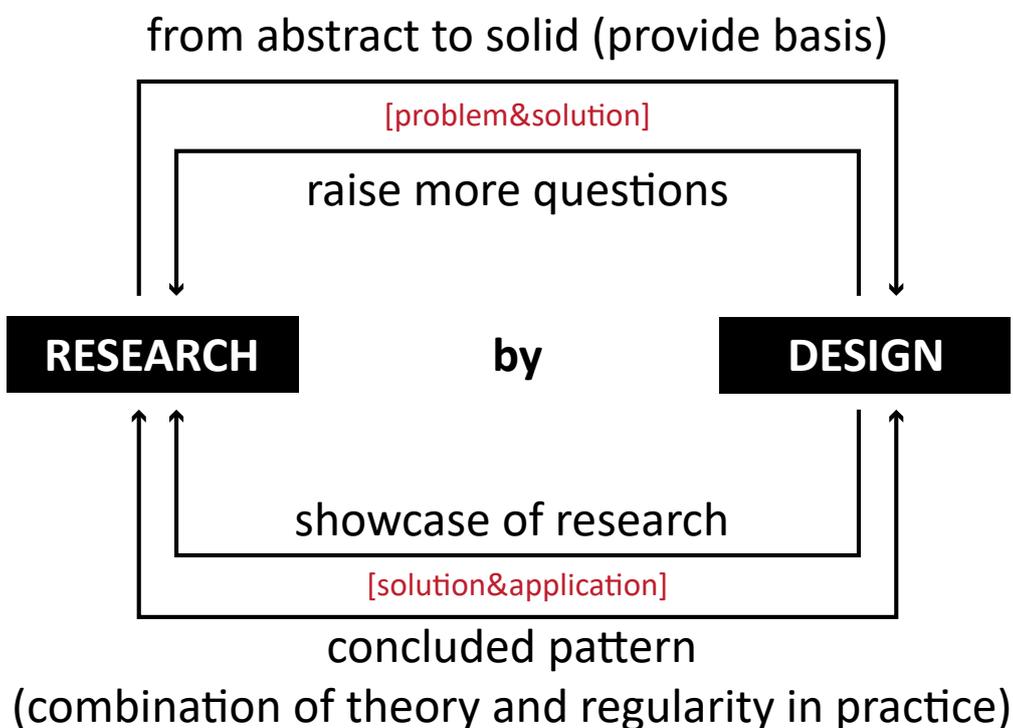


figure 15.1. Diagram of research by design, By author