

Reflection

Reflection of the graduation thesis of the Master Urbanism

Urban Stress

Urbanism – Design of the urban fabric

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Relation to urbanism and urban fabrics

The title and topic of this thesis is urban stress and stress might be considered more of a graduation topic for psychology students. Yet, this thesis certainly belongs to urbanism, because it focusses on finding or establishing relations between urban stress and urban design and then formulates ways to reduce urban stress through urban design. In the reflection on the methods it is described how, even though it is an urban design project and finding spatial relations and solutions are the main goal, it is sometimes hard to not get lost in the psychological theories and forget to keep finding spatial relations and to keep or start designing.

The studio or research group that has been chosen for this project is Design of the Urban Fabric. First of all, because health and growth are two of three main themes in the Urban Fabrics research group, and they are interestingly linked in the introduced topic, that addresses the issue of the larger amount of mental health issues (like urban stress) in the increasingly urbanizing cities. Moreover, stress is a human problem, which should be dealt with on a human scale. Therefore, it has been decided to address the topic of urban stress in the public space within the urban fabric. This directly links this project to the interest and scale of the Urban Fabrics research group.

Social and scientific relevance

Social relevance

Stress is very much a social or societal problem, since in the first place it affects people. Even though for the short term stress might only be uncomfortable, it can cause major health problems, like triggering heart attacks, arrhythmias and even death. Besides that, stress that is of long duration, raises the risk of mental and physical health diseases (Krantz et al., 2013).

The research in this thesis, into the topic of urban stress from a spatial perspective, has enriched the knowledge on stress in cities and contributes to a better understanding of how to design to reduce urban stress in cities.

Scientific relevance

Stress is often researched from a social, psychological or medical perspective. Even though it has been shown that stress and mental disorders occur more in cities, an actual spatial cause is not often given (Lederbogen et al., 2011). To have looked at this topic from a spatial (urbanist) perspective, find the relations between urban stress and urban environments and develop urban design approaches to reduce or relieve stress is an addition to the body of knowledge on this topic. It can be of great significance in trying to reduce or avoid stress rather than treat it.

Reflection on methods

Urban design using psychology theories

An important part of this thesis and one of the main methods is literature research. Because stress is often researched from the field of psychology, it turned out that a lot of information useful for this thesis could be found in journals related to psychology. Luckily, even in literature the relation between stress or mental health and the environment has occasionally been made. Still, it was sometimes difficult to stay within the field of

urbanism and it took quite a lot of effort to translate the theories into useful design approaches. To make the step from finding, understanding and writing the theory to actual design was therefore also quite difficult. However, it turns out that working on the different designs and trying to apply the theory into the space helps a lot in finding the spatial relations and seeing the theory in the perspective of the urban environments. This is where the relation between research and design has proven to be very important.

For this thesis, literature specifically related to urban stressors was very important. In some cases however, there was only literature available on a certain topic in relation to mental health and not to stress or urban stress. Although this is a bit of a shame, it does not mean that these things are not true or less true, because stress and mental health are so closely related.

Surveys

Surveys were used as one of the ways to determine urban stressors and how to reduce them. The surveys used for this thesis consisted of some open questions and some pictures that people had to compare according to a certain stressor. When in London, it turned out that people often did not understand how to answer the picture based questions. Apparently, they could not see the urban stressors in the shown environments and often answered that their experience in both environments would be the same. To not guide the people too much in their answers, the differences between the pictures were quite subtle, but without some background knowledge on urban design, these turned out to be too subtle. Urban design students were better able to answer the picture related questions than the local people in London for example.

To still get some insight in the experience of stress of the users of the public space, the survey was replaced by some open questions. This worked much better and confirmed some of the things that were already found in the literature research, in addition to providing some ideas for the design criteria.

Interview with expert

Just before the field trip, I came across a think tank concerned about the mental health in cities and how this can be improved by urban design. This topic, as well as what was written on their website, suits very well to the topic of this thesis. The information was unfortunately not very design oriented, so it seemed very useful and interesting to meet someone of their team to ask about the design implications. As it turns out, someone from the think tank is based in London and was available during the field trip. Unfortunately, she was not able to tell me much more than what was already explained on the website, and not a lot had been done with their information in actual designs.

Later in the process it seemed less important to meet with an expert again, meaning that this method has not been very valuable to this thesis.

Research, design and conclusions

The translation of the theory into usable design criteria has been done according to literature, but also by testing it in the different designs. This is also true for the conclusions, these conclusions are an outcome of the texts of this thesis, applied in the designs. In that way it was possible to say something about the different scales and the relation to the public space and to come up with 5 guidelines.

Reflection on the communicability of the topic

It has just been explained how the picture based survey did not really work. This raises the question whether this thesis is communicable to city users and city residents. Even if this thesis might not have to be completely understandable, the designs that might follow from it have to be. In order for the designs to work to their full potential, people have to understand that some choices are more stress relieving than others and the same goes for some environments. Therefore a recommendation chapter provides some examples on how to guide people, make them aware of stress and stress reduction in cities and 'promote' the idea of a calm city.

Reflection on ethics

Stress is a problem experienced by many people, for many different reasons. This project is only about urban stress and even though that is only a small part of all the types of stress, it is already impossible to find a solution for all urban stress. It should therefore be kept in mind that not everybody who is experiencing or suffering from stress is going to be helped. This project does however gather knowledge on the relation between urban stress and the built environment and uses that to create design criteria that can reduce, relieve or prevent urban stress. If this knowledge or these criteria are used in actual urban designs, then it can help users that suffer from urban stress in those areas. When creating the design criteria or making the design, the following things have been paid attention to:

- All users should be considered, in the case of this project: the city is not only for stressed people and stress could mean something different for everyone. This should be taken into account.
- It should be investigated to what extent the designs/design criteria are applicable/transferable to (other) urban environments and urban designs.

Krantz, D. S., Thorn, B., & Kiecolt-Glaser, J. (2013). *How stress affects your health*. Retrieved October 9, 2017, from <http://www.apa.org/helpcenter/stress.aspx>

Lederbogen, F., Kirsch, P., Haddad, L., Streit, F., Tost, H., Schuch, P., ... Meyer-Lindenberg, A. (2011). City living and urban upbringing affect neural social stress processing in humans. *Nature*, *474*(7352), 498–501.