PERSONAL

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STUDIO

theme: United Nations Environmental Council
teachers: Kees Kaan and Henri van Bennekom
studio: AR3MA030 Materialisation, SADD Q3 2012 - 2013
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studio choice: Learn to design in a sustainable way as preparation for the future as architect.

TITLE

project title: The United Nations environmental garden.
PROBLEM STATEMENT

The studio of Materialisation offers a Strategic Architectural Design Development (SADD) project for the United Nations in New York. In this course the student is asked to design a United Nations Environmental Council (UNEC) as an extension of the current U.N. composition, which contains The General Assembly, The Secretariat Building and a library. The assignment is to create a convenient work environment where important decisions will be made about our environment.

“The U.N. Environmental Council: More than ever, the world needs to be taken care of.”

Overview of the United Nations organization (source SADD Materialisation reader).

The actual problem statement for this project deals with the fact that in the field of the environment there is no coordinating organism like a UNEC. This results in a scattered way of dealing with the rules on sustainability and the environment.

How can the design of the UNEC contribute to the dissemination of knowledge and regulation?

Another problem statement for this assignment is that the project location deals with different characteristics which can affect the sustainability of the UNEC in several ways.

How to design a most sustainable UNEC with the use of local characteristics, and can be an inspirational example for future references in the field of sustainable buildings?

GOAL

The location for the graduation project is in Manhattan, New York and deals on one side with the dynamics of this metropolis and on the other side the quietness of the 600 meter wide East River. So the contrast on both sides of the project location is huge. Due to the master plan that is designed with the group, the intention is to bring midtown of Manhattan closer to the waterfront, where the U.N. one of the attractions is. In the future with the expansion of the UNEC this is a suited place to bring the people in contact with the conditions of the environment. So the goal is to trigger people to come to the United Nations North Lawn (garden) with the UNEC as recognizable element in de middle. Therefore the building needs to be easy accessible for the public and works as an extension between the city and the waterfront. This connection is made as an extension of the public strip on the 47th street Dag Hammarskjöld Plaza. On this location is now the Temporary North Lawn Building which plays an important role in the design for the UNEC, because of the re-use of the basement. This aspect is described in the architectural text.
PROCESS

METHOD DESCRIPTION
During the design process the following research is done
- Programmatic analysis;
- Urban analysis;
  - on the level of surrounding buildings;
  - on the level re-use of local characteristics;
- GFA/NFA analysis;
- Research on building position;
- Development for a first façade idea;
- Strategic models (find the right composition and proportions on the location);
- As a group the master plan and research booklet (start semester up to P2).

Besides this particular research, there were also some small assignments which helped the
design for the UNEC in the right direction like: writing an architectural text (which is included
in the graduation plan), design for a security box and a façade study.

LITERATURE
The literature that was used during the research is summed up in the position paper and
research booklet from the master plan.

REFLECTION

RELEVANCE
Like earlier described the project contributes to the establishment of a better condition of the
planet, by functioning as a coordinating organism in the field of the environment. So in this
case it is not only a building for its surrounding, but functions for the whole world. Therefore it
is needed that it becomes a recognizable element in the United Nations composition. With
for instance the broadcasting of a delegates meeting, every time the UNEC is the ‘face’ for
decisions making about the environment.

TIME PLANNING
In this part of the design process it is not possible to make a sufficient time planning. Up till
now the master plan and research booklet are finished as group work. The design for the
UNEC is at the P2 at the level of a definitive level, which means that the idea for the building
and the morphology is clear and solid and will be elaborated on after the P2 to optimize the
building in structure, installations and a deeper architectonical expression.
SOME DRAFT IMPRESSIONS OF THE BUILDING
The assignment for the Msc3 and Msc 4 Materialisation studio SADD at the TU in Delft is to design a sustainable environmental council for the United Nations in New York, abbreviated: UNEC. One side of the design location deals with the dynamics of Manhattan, while the other boundary is the 600 meter wide East River. Between these sides a sustainable environmental council for the United Nations has to emerge and communicate with the world.

On the plot are icons built by famous architects like LeCorbusier and Oscar Niemeyer right after The Second World War, which gives the United Nations a recognizable ‘face’. So the assignment in not to create another icon, (I personally believe that you can’t actually create icons, but that they emerge over a certain period of existence) but design an appropriate connection with the U.N. headquarters and a termination of the existing composition.

To make a sustainable start for the UNEC it would be smart to use the basement of the North Lawn Building which is placed in the U.N. garden and serves as temporary accommodation of the functions during the renovation of the several U.N. building. (Capital Master Plan). There are several reasons to use the basement. The first one has to do with the master plan for Manhattan, which was made as a group. The idea is to introduce a lot more public transport, which will reduce the care use (for the U.N. commuters) considerably and results in a partly empty car park underneath the U.N. plot. This area is particularly suitable to accommodate several functions of the UNEC. The second reason is that the soil temperature is way more consistent than above ground which will provide a lower cooling demand. In the third place is the soil quality bad and very difficult to dig in, so the more cubic meters are re-used, the more sustainable start can be made. Furthermore the building skin will be used as solar and rain water collector and gets voids to let daylight penetrate into the basement.

The expressions of the volumes which come out of the United Nations Lawn obtain environmental aspects like the globe and the wave. The globe expresses the space where the decisions will be made regarding the future of our planet. By sinking this volume party in the ground, it gives the expression of our control over the planet, which slowly seems to slip out of our hands if in the coming decades no concrete steps will be made around the environment. By giving the roof of the council a translucent material like glass, the main function of the building becomes also visible for the public who passes by in the garden of the United Nations. The biggest problem for the UNEC will be to avoid the aspect of global warming, which will result in melting ice caps and the rise of the water level all around the world. It is therefore of eminent importance that on this topic appropriate measures will be taken to avoid flooding. This aspect will be expressed in a wave shaped volume which accommodates functions like the several offices, spaces and library to let direct daylight in. If the shape gets a cantilever it has not only an architectural expression, but also an environmental one like imminent danger.

The whole composition of the UNEC and the expression of the wave is minimized as strict as possible to give the main function, the council, the most attention.
This position paper is part of the lecture series Research Methods who is given by Tom Avermaete and Henk Engel and some external teachers during the course. Every Thursday we followed as a group the different lectures to get discussions about research methods which can be used during the design process.

The course begun with an introducing lecture about the series by Tom Avermaete and Henk Engel. They try to point out what kind of subjects we could expect and how the course was built up. The lectures of the second week were about the Modus of Architecture given by Klaske Havik and Stefano Milani. The relation between drawing, building and text were explained, so in other words: how to convey your product. In the third week we were informed by Lara Schrijver about how to write a position paper. Which parts are needed to make your story complete and how you should take a particular position. The fourth week was about the difference between typology and morphology, here were the speakers Roberto Cavallo and Kees Kaan. Materiality and Perception were given in the lectures of week six by Christophe Grafe and Tony Fretton. They discussed the ‘longstanding’ tradition of investigating architecture from its material and perceptual characteristics. In the last week we were informed about the Politico- and Socio-Spatial we have to deal with as architects. These lectures were given by Deborah Hauptmann and Tahl Kaminer. Furthermore the leading teachers explained also the assignment and what they expect from us to hand in at the end of this Msc 3 course.

I want to thank the speakers from this position for their inspiring lectures and I hope this paper shows an good overview of my gained knowledge in the recent period.

The Hague, 17 January 2013
In this document I will try not only to point my view on the different epistemes, which were discussed during the lectures, but also how I can use them in my design assignment. But before I go into my opinion about the several research methods, it is good to already point out here that the different epistemes, during the design process, in most of the cases are not separate used, but can also work as a reinforcement for each other. So that doesn’t mean that for one specific assignment only one episteme can be used over and over again. For every design task we could use more than one episteme. The definition of an episteme is the following: the body of ideas that determine the knowledge that is intellectually at any certain time. It could be seen as some sort of frame work for analyzing, understanding and conceiving. During the introductory lecture by Tom Avermaete, four different epistemes were split up to get some grip on the terminology and to understand in which direction we can operate to analyze a certain design assignment. The four that were discussed are the following (described in own words):

1. Typology: the study of types to be able to place them in the right group;
2. Phenomenology: the study of perceptual experience;
3. Semiotics: analyzing of nature and the relationship with signs;
4. Praxeology: the study of human action and conduct.

### TYPOLOGY

Several architects elaborated on the epistemes to make them more obtainable for colleagues and students. The aspect of typology was already studied by Antoine-Chrysostome Quatremère de Quincy and Durand at the beginning of the 19th century. De Quincy tried to relate the concept of type towards a model. “With a model is everything accurately given in advance, with a type everything stays more or less indefinite”\(^1\). There were two main reasons for dividing buildings in typologies.

The first one is based on the need for classification and secondly because of the development of the architectural theory. Durand tried release the typology from the context in the following definition: “a set of characteristics and properties that a group, series or a class of buildings have in common and in that way distinctive in respect to other buildings”\(^2\). Furthermore the definition of typology helps us as architects to discuss and explain our projects towards colleagues and clients. We can say that a certain type can be used as the base for design experiences with a similar problem where we can be confronted with later on. In that case we can expect already in an early stage of the design process what kind of ‘challenges’ could appear. Other architects like elaborated more on the aspect of typology. For instance Bernard Leupen talks about analytical typology, which means that “a researcher must be able to appoint different elements of a building or a part of the city, and thereby to describe how these to each other have been composed”\(^2\). A generative typology is a term of Philippe Panerai and means “the description of the reproducible coherent system of design choices”\(^2\).

I think that detecting the term typology was a very significant moment and move in the architectural world at that time, because after that period a lot of different topologies came up. If the grouping was done later, it would be an impossible task to create a clear overview of all the different typologies that are emerged over time. So this classification was and still is an very important base for today’s architecture.

Related to my design project, where I have to deal with the dynamic metropolis New York, the main typology is high rise with in most of the cases an office function. But due to the project location and the huge variety of building dimensions in this city, you can’t ‘choose’ the right typology if you want to compete in building height and density. It is better to search for the right expression to reinforce the skyline of Manhattan and fit in the composition of the other United Nation buildings.

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1 Dictaat BK4010/8010 Architectonische Basisbegrippen/Gebouwenleer, page 8, Quatremère de Quincy;
2 Dictaat BK4010/8010 Architectonische Basisbegrippen/Gebouwenleer, page 9, Durand.
The second aspect deals with the study of perceptual experiences. This means, in own words, that it refers to the all the different elements that you notice when you for instance walk through a street. This aspect is very well studied by the American architect Kevin Lynch who worked as an urban planner. He is known for his work ‘The Image of the City’ which was published in 1960 after a study of five years on how we as people perceive and organize spatial information. In his book he talks about the ‘imageability’ or “that quality in a physical object which gives it a high probability of evoking a strong image in any given observer.”

The imageability is related to five elements he defined: node, path, landmark, edge and district. These aspects are visible any city and even better in New York.

I find a particular part of his study very intriguing, namely: perspective. It is element that would be experienced by everyone in his/her own way. Due to the five elements above we can say that for instance for one person his path is another person’s edge, but it could also be a landscape ore a node. With these kind of outcomes it delivers a very wide range of possibilities and especially a ‘new’ perspective on the design for an urban plan. Some elements are more flexible than others because of the difference linearity and spatiality, but it includes one important point about the imaging on a city: one perspective is never enough while multiple cab show an outcome that a designer never had conceived.

Perspective very good visible in the grid structure of New York, like the image shows on the right. In this longitudinal view through the 42th street we can see the sunset at the other end of Manhattan island. In that case your attention is sucked into the depth (more than three kilometers) of the island and the intriguing effect of perspective. This phenomenon is also used in our master plan at the waterfront of Queens to reinforce the relation between the two boroughs.

View through the 42th right next to the United Nations plot.

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3 Kevin Lynch, The Image of the City. (Cambridge: MIT Press, 1960);
4 http://www.flickr.com/photos/yukonblizzard/5819995909/
Semiotics is the study of signs, indication, metaphors, symbolism and communication, to find out what kind influence language has on human beings. A good example of semiotics is Las Vegas. It is clear that visitor is triggered there, on the basis of the huge signals, to enter the casinos, shops and horeca facilities. The study by Robert Venturi and Scott Brown made clear that there can be a difference in how to work with signs. They distinguish the following:
- building as a sign;
- or building detached from sign.

Images of Venturi and Scott Brown around 1971: the Duck vs. the Decorated Shed.

I think that with this kind of architecture you have to be very careful on what you want to express. It only works when you can attract lots of visitors, and if you have a program that can offer a lot of entertainment. In architecture we can use semiotics in different ways to express the feelings that we want to transfer with buildings. My opinion is that in every building we can trace some sort of sign in a greater or lesser extent. When for instance “the sign” is hardly visible, we can say conclude that the building fits in the urban structure and corresponds to the surrounding facades. When a volume is more out of the context designed, is attracts more attention, but one way or another, every building delivers a greater or lesser contribution to the architectural qualities of a city.

The image below shows my building concept. The expression of the building has as starting point two metaphors out of the field the environment. One is our planet (the council) and the second is result of the main problem in the coming decades, the rise of the water level due to global warming expressed as a wave.

5 Learning from Las Vegas, by Robert Venturi and Scott Brown.
PRAXEOLOGY

Praxeology was announced by architects like Bruno Taut and it is an aspect which deals with the study of human action and conduct. In other words, how people behave in on a certain location. These areas may differ from an urban environment to the surface of a kitchen. (Frankfurter Kitchen). Terms like ergonomics and spatial practice play an important role to optimize the ease of use and like the term suggest it is derived from the word practical.

If you analyze projects on aspects like traffic flows you can say something about the praxeology, but in a certain way the praxeology is always interrelated to a design. You want to optimize for instance the movement inside a museum in such a way that the visitors experience all the departments. A good example of this is the Guggenheim Museum in New York, designed by Frank Lloyd Wright. The journey starts at the top of the building and decreases slowly over a ramp to make the experience of art comfortable. But there is also a downside to the design, because when you want stand still for a piece of art you have to deal with a certain angle at which you have to place your feet if you want to stand vertically. This property of the building may also lead to a certain continuity in the visit.

REFLECTION

I choose to elaborate more on the different epistemes, because I hoped that they could contribute to a new approach of my graduation project. For all the different epistemes is true that you must be able to use them in the right way. You must be able to see what you can achieve, or what you provoke if you do research on the basis of a certain episteme of a combination of them. Like earlier described, Semiotics is the episteme which is the best visible in my design for the UNEC.

The idea is to give the building not a too literally expression of a wave which was actually present in the previous mass studies. During the design process the building volume is reduced to a minimal expression of a wave due to several reasons. The first one deals with visual attractions, by giving the building such a straight volume the attention lays on the council with the glass roof which is the main function of the whole program. Secondly the water problem is not the only world threatening issue which is being considered inside the UNEC when it is used, so in that case it becomes more an architectural expression than a direct translation of a wave. The third reason deals with the practicality to accommodate the different functions, which are of course better adaptable in a straight shaped volume, than a waving one.

So to round up, I can say that by looking with the help of these different epistemes to my design, it really helped me to come up with a clear expression for the United Nations Environmental Council in New York.

Amount of words based on the core text and reflection: 1584.