Constructing Sites on a Large Scale –
Towards New Design (Education) Methods

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Introduction

In recent years creative site survey has been a much debated issue within the spatial design disciplines and, in particular, within urban and landscape design, where we deal with design on a large scale (Tietjen 2009; Seggern et al. 2008, Corner 1999 and many others). In this context, the potential of site analysis for ideas development has gained recognition. At the same time, the potential of site-thinking as a form of knowledge production has often been emphasized.

The contemporary emphasis on the site as key to the development of design strategies seems to echo a post-modernist call for site-specific design in search of genius loci, i.e. the ‘spirit’ or the ‘identity’ of a given place. This concept has been particularly influential in the northern countries due to the work of the Norwegian architect Christian Norberg-Schulz (1980). On the other hand, the current focus on the capacity of design to embrace and produce knowledge, recalls modernist attempts to inscribe design into a positivistic tradition of science. As is well known, these efforts have lead to the structuralist planning approaches of the 1960s based on functional zoning, traffic separation and the like. And finally, urban planning became largely separated from design-based approaches to the organization of our urban landscapes. While urban planners focused primarily on two-dimensional land utilisation plans, urban designers were more or less reduced to the development of design solutions for predefined programs on a priori delimited sites. For several decades urban design bore a quite marginalized existence. Only in recent years large scale design and planning approaches are once more converging.

Yet, we will argue that we are currently witnessing the development of a new site-based design approach which cannot be grasped by the conceptual apparatus of neither modernist nor post-modernist design and which thus requires a new conceptual apparatus and, not least, new design (education) methods.

Both modernist and post-modernist design approaches were centred on an understanding of design as a production of objects within a dominant practice of urban extension. Contemporary urban designers; however, increasingly conceive design as spatial interventions. Since the 1990s the regional scale has regained importance in urban and landscape design. In parallel, the focus in design tasks has shifted from master plans for urban extension to strategic urban transformation projects.

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1 A most influential work within this tradition is the Bauentwurfslehre developed by the German architect Ernst Neufert back in 1936. Neufert developed design standards for an immense range of possible design problems based on the concept of type.
A prominent example of a contemporary spatial development approach is the IBA Emscher Park in the Ruhr area in Germany. The Ruhr area had long developed into a continuous urban region both physically and with regard to the inhabitants’ daily practices. The IBA project enabled the 17 involved municipalities to develop a common regional vision and to cooperate in its realization. Over a 10 years period (1988-1998) more then a 100 local transformation projects contributed to the transformation from an industrial to a post-industrial region. Regional identity development was written large in order to turn the site into a competitive location in a European and global context. A central project was thus the restoration of the piped river Emscher together with the construction of a regional park. Remarkably, the Ruhr area is the first urban region to be celebrated as European culture capital in 2010.

The IBA Emscher Park is paradigmatic for a general shift in planning practice in the old industrialised countries. The greater aim of much contemporary urban development is less the organisation of urban growth but rather the continuous qualification of existing urban landscapes with regard to contemporary needs and development trends. At the same time, contemporary urban development has entrepreneurial objectives with regard to national and international competitiveness. And finally, the regionalisation of living contexts redirects attention to the regional scale.2

In this context, urban design projects are expected to create a strategic impact on economic, social and not least environmental development within and beyond the borders of a given development area. In other words, present-day urban design is concerned with the enhancement of existing relationships across multiple scales. Urban designers thus increasingly ask what design can do rather than what it should look like: They conceive design as an intervention.

The current paradigm of planning by projects reinforces the role of the design disciplines within the development of our urban landscapes. At the same time, urban designers are confronted with new methodological problems. Within a continuous transformation perspective site survey is not only a precondition of design action on a large scale; the formulation of the design task or brief becomes an integrated part of the design process (Sieverts 2008:12, see also Braae 2007: 22).

"Design issues and relevant areas of design intervention emerge first from site survey. In other words, site survey is rather a process of active site definition than a comprehensive analysis.” (Tietjen 2009: 96)

Weaving back and forth between observation and design, contemporary urban designers must simultaneously unfold local design issues, i.e. the design brief and possible design interventions. This means that contemporary design processes not only depend on knowledge production they become a form of action-oriented, situational knowledge production (ibid: 129). It also means that contemporary urban designers conceive and produce sites as relational constructs.

The increased focus on mapping in recent years design discourse attests the above outlined changes in design objectives and methodology. Yet, surprisingly little has been written on the connection between observation, mapping and the formulation of design issues. As Hille von Seggern (2008: 73) has put it “the new cartography relies,  

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2 In Denmark, thus, about three quarters of current urban development takes place within existing urban structures. Moreover, regional development plans such as the revised Fingerplan for the Copenhagen area (Ministry of the Environment 2007) or the development vision for East Jutland (Ministry of the Environment 2008) are once more an issue.
to put it simply, on the appearance of an idea.” She quotes James Corner to underpin that the ways in which design ideas emerge through mapping for the most part remain relatively vague: “By showing the world in new ways, unexpected solutions and effects may emerge” (Corner quoted by Seggern, ibid).

Questions on what and how to map urban sites and situations have taken up much room in recent years design debate and not least in the education of future urban and landscape designers. The fact that maps are never an objective account of a given situation but always hold a moment of interpretation has been stressed to the extent that maps almost have been acknowledged the status of projects. Mapping seemed to be the way to teach designers not only how to make knowledge on an unknown situation but also how to develop design visions. We have, however, experienced that precisely the link between knowledge making and problem formulation needs more attention. Design issues more often than not do not appear just like that.

**Towards new design education methods**

In the following, we will strive to unfold an approach to the formulation of design issues in the initial design phase. This tentative draft of a design method is based, on the one hand, on our common teaching experience and, in particular, on a 2007 design studio for third to fifth year students at the Aarhus School of Architecture. On the other hand, it relies on the conceptualisation of site-based design processes by means of actor-network-theory undertaken by Anne Tietjen in her PhD thesis (2009). In connection with the post graduate master studio *Appearing and Disappearing Landscapes: Jæren 2* at the Oslo School of Architecture and Design in spring 2010, we had the occasion to make an initial step into formulating our approach which in the following is presented in a modified form.

First some words on the conceptual basis of the approach we are proposing. The non-linear explorative proceedings site construction processes in contemporary urban design are similar to what researchers in science and technology studies have described as translation. Translation is the central concept within actor-network-theory (ANT). It describes how complex relationships are built and how they are maintained in order to achieve a particular goal, for example the development of a new product. Transposed to urban landscape design, it allows us to conceive site and design in terms of active relationships between multiple heterogeneous actors. Hereby, it is crucial that an actor is what it does to other site actors. An actor can thus be any thing, idea or person that has an effect on the site; from the topography of the landscape over current development plans to significant stake holders in a given development area. Throughout the translation process these effects are both studied and rearranged through design. In this way, the identities of the involved actors, the possible forms of interaction as well as the scope of interaction are negotiated and delimited.

“The first decisive moment in a translation process is called problematisation, when the design task – or rather “series of negotiable hypotheses” on a given situation

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3 A well-known Danish example is the H-city project by Transform architects (1999). Here, a map shows Denmark as one large city mounted by the motorway network and realised by individual mobility. The map is presented as both an account of the current situation and a future vision. Thus the difference between map and project, inventory and intervention becomes blurred.
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– is formulated. At the same time, relevant actors are identified, i.e. actors who are concerned with the identified issues. In the following, the formulated task functions as the primary actor for the actor-network under construction. Through mapping and diagramming possible forms of interaction are tested and negotiated. ANT calls this moment *interessement*. In the form of a design project the gathered actors are then *enrolled* into a preliminary network. On this basis, the network is negotiated to full performance in real life. New actors are introduced, for example in the form of design interventions. Relationships are further articulated and eventually reconnected in different ways. Finally, the innovated actor-network is activated. This final moment is called *mobilization of allies*. It occurs when all the gathered actors are made to act as a whole.” (Tietjen op. cit: 109)

![Figure 1: Translation (diagram by Anne Tietjen (2009))](image)

A translation process is not a linear and logical process from survey over mapping to project development. It rather takes on the form of a dynamic actor-network in which the involved actors continuously transform each other during the course of the entire design process.

In the following, we will focus on the initial design phase and the formulation of the design brief, i.e. on the moment of problematisation. To this end, we developed a 4 step proceeding starting from the nomination of actors, over the staging of relationships, to the identification of conflicts and possible new alliances and finally the formulation or setting of a design brief.

**Step 1: Nomination**

As outlined above the moment of problematisation holds two interrelated steps. On the one hand the identification of relevant design issues and on the other hand the identification of actors that are concerned with these issues. Here, mega trends such as urbanisation or climate change can be helpful but they also risk jumping to conclusions. Our initial idea is that the identification of actors who are involved in current local transformation processes can help us unfolding site specific challenges and potentials.

To this end we propose to look for changes and instabilities between physical aspects (e.g. climate, landscape, and urbanisation structures), local practices (people’s
usages of the site) and discourses (e.g. development plans, political agendas, media images). In this way, things, people and ideas that affect the site can be found and named. As a result of this first step we propose asking each student to nominate three vital actors that she has observed on the site.

**Step 2: Staging relationships**

In the first step we started gathering the actors. Now it is time to describe the identity of the gathered actors. In this connection, we are not as much interested in how the different actors look but in what they do to each other. As urban designers we are particularly interested in how actors become manifest in space. In step 2 the task is to stage relationships in space between different site actors. By means of their interaction they create patterns of spatial relationships in which we have interest. In the case of the Jæren region in Norway, for example, the built structures of the oil industry in and around the city of Stavanger, the forthcoming oil peak, as well as the international crowd of highly educated oil industry workers point simultaneously to possible sites of intervention, as well as to local challenges and potentials. The result of this step can be maps, drawings, models, story boards that articulate the agencies of these site actors. The interest of these representations is twofold; by describing their interaction they simultaneously geolocate the nominated actors. We thus propose to depict the site as a gathering of multiple actors that define different margins of interaction. At the same time, design attention should be directed to conflicts and inconsistencies between different site actors.

**Step 3: From conflict to alliance**

We know from our experience as designers and design teachers that conflicts and inconsistencies make things move ahead. They hold an inner dynamic, energy, possibilities of change. In short, they hold potential for development. In some situations, one actor will come to dominate the other(s) and thereby decide upon future development. In other situations, compromises might be negotiated. And in yet another situation, competition might lead to cooperation on the basis of common goals. In short, the outcome of conflicts is not given.

In step 3 we turn attention from the description of actors and design issues to the development of first design ideas. How can the earlier staged relationships be enhanced? At this point the task is to speculate upon what would happen if... conflicting actors were made to act as a whole. What kind of new relationships or alliances between the identified actors are possible? And what kind of desirable new spaces, new programs and new ideas of the area can be imagined on this basis?

**Step 4: Setting the brief**

To develop a design brief from and for a given large scale situation is a complex task. There is no definite solution to objectively ‘right’ design issues. Yet, we can make development possibilities probable through articulation of existing site relationships and testing of possible new interactions – as in the preceding ‘what if’ experiment.

In continuation of this experiment, we propose to draw and/or write down the developed initial design ideas in the form of a story board for future development. Helpful questions in order to come up with a plot, i.e. a connecting narrative, are for example: What or who is involved in your design vision? Why do these things, people and ideas work together? In this way, we get back to our initial task of problematisation. Yet, we do not strive to single out one question or design issue but to develop a basic set-up which outlines a plot, main actors and settings that will be
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further investigated and developed throughout the design process. On this basis, design issues can be further articulated, new relevant actors can be identified and design ideas can be specified and tested.

Teaching frameworks

The above outlined 4 step proceeding has been developed to help the individual student to push her project forward in the initial design phase, i.e. to move beyond mapping and formulate a concrete design brief.

In the context of the master studio Appearing and Disappearing Landscapes: Jæren 2 at the AHO Oslo, we entered the design process about a month after the start of the term. By then the students had been on a 2 days field trip to the Jæren region, and had worked on two mapping assignments in order to get acquainted with the site. We could thus assume preliminary knowledge of the site and first ideas on design issues. The concrete teaching situation was a two days workshop for post-graduate students in urbanism. Almost in parallel, Ellen Braae introduced some of the basic methodological ideas to her master students in landscape architecture at the University of Copenhagen. Based on these still sparse experiences, we wish to share some of our reflections on the teaching framework.

The run-through of the 4 step proceeding can be organised as a two days workshop, as we did in Oslo, or the individual steps can be introduced stepwise over a longer period of time. The latter allows for more intensive individual supervision. A workshop framework, however, sharpens the focus on the methodological aspects and stimulates the students to enter the process as a time limited experiment. Ideally, each student will end up with a formulated plot, clearly defined main actors and settings for further design intervention. Depending on individual progress, however, some students might end up with first mappings of relevant actors and initial ideas of design issues. Yet, what we found most stimulating was that the conceptual framework of the developed approach provided all workshop participants with a common language to discuss and exchange ideas, as well as to evaluate their own design progress. A relational understanding of the site in terms of interaction between things, ideas, and practices proved fruitful both for the development and the communication of maps, models, and story boards.

At this point, some words on site survey techniques seem appropriate. Although we focused on the formulation of the design brief and not on mapping techniques as such, it arises clearly from the above, that site survey is absolutely crucial for the success of the proposed approach. A common understanding on what and how to map is a precondition for successful story board development. Thus the teaching of site survey and mapping techniques should ideally be integrated with the introduction of the 4 step proceeding for problematisation.

Establishing a common conceptual ground becomes ever more necessary in urban design education in the light of an increasingly internationalised context. Today, the student profile in urban design courses is influenced by the fact that urban design usually is taught at master level and that the Bologna Declaration promotes a high student exchange level among the European design institutions. The students various national and professional backgrounds require much teaching effort on the development and communication of design methodologies and on meta-level aspects
such as the present role of the urban designer within contemporary large scale
development.

**Perspectives**

Why then is it relevant to conceive a design brief in the form of a story-board? And why, actually, should designers conceive the topography of the landscape, local stakeholders and development plans as dynamically interrelated site actors? In conclusion we wish to present three arguments why an actor-network approach to site thinking can be productive for contemporary design on a large scale.

The first argument touches upon concepts of site and scale. Urban designers have long conceived design on a large scale in the same way as building design: Since the times of Alberti, the city was conceived as a house, and vice versa; a body of integrated parts (Alberti 1996, esp. note p. 421). This concept has lead to a nested and hierarchical model of scale (Kahn 2005:291). Moreover, it has lead to a design ideal of congruence between the different parts of the city and the whole. Contemporary large scale design questions our notions of site and scale. As we have argued in the introduction to this paper, contemporary urban design projects are expected to create a strategic impact on economic, social and not least environmental development within and beyond the borders of a given development area. This is not necessarily a matter of designing on a regional scale but of affecting relationships within a regional framework through local interventions. In a relational perspective, the site is understood as a matrix that frames and sums up multiple heterogeneous actors defining different margins of interaction (Tietjen op. cit: 135). A relational understanding of the site thus provides us with an alternative notion of scale in terms of site related processes. In this way, it becomes possible to study and develop a site across multiple scales.

The second argument touches upon relationships between design and knowledge production. In contemporary spatial development processes design increasingly plays a mediating role in long-term proceedings that involve many different people (Prominski 2004: 123f). In this context, communicability and connectivity of urban and landscape design has gained in importance (Tietjen op. cit: 104). The above outlined actor-network approach enables designers to develop site and design relationships in specific, traceable ways without reducing the design process to a scientific method in the positivistic tradition. In this way – such is our hope – it becomes possible to share and further develop design knowledge among designers and other participants in design processes.

The third argument touches upon design instruments in contemporary large scale design. The design of a story-board makes it possible to grasp both the complexity and the specificity of a large scale design situation. At the same time, it offers a design instrument for articulation, speculation and invention that reaches beyond mapping. A story-board as developed on behalf of the proposed method connects empirical observations to strategic considerations and spatial interventions. Due to the embedded narrative it is easily communicated, since the plot not only identifies mutual conflicts or inconsistencies but also proposes possible enhanced future relationships. It is worth noticing that the rhetoric gains importance when the
development of design issues becomes an integrated part of project development and thus also must be argued for.

With this paper we present and argue for a first tentative draft of a new design (education) method based on a relational concept of urban sites and design processes. Thereby we wish to engage into a contemporary professional endeavour to reframe urban design as a relational practice of continuous transformation. As argued in the introduction, a concept of design as intervention requires new conceptual frameworks. In this connection, we have found actor-network-theory highly productive with regard to reframe concepts of site, scale, design instruments as well as relationships between design and knowledge production.

We look forward to discuss and refine our preliminary insights with engaged teachers, researchers and practitioners in the framework of the As Found conference.

REFERENCES


