## 1. ABSTRACT

Urban Planning is traditionally seen as an expert discipline with little room for 'soft' values and concerns based on feelings rather than fact. At the same time the final product of the planning process, the built environment, is a habitat for a wide variety of people with equally diverse wants and needs. The question is, how does planning incorporate the needs, wants and visions of existing and future inhabitants while at the same time raising awareness of the often complex issues and wicked problems involved in urban development?

In this paper we discuss a case-based strategy for utopiatyping, i.e. using imagined futures in a structured, iterative process as a way of incorporating narrative elements into the urban development process. Utopiatyping can be used both as a communicative as well as a participative strategy either helping raise awareness of future planning initiatives or actively involving citizens in the vision formulation stage.

## 2. INTRODUCTION

In 1973 Rittel and Webber made a statement (1973, p. 160), which still holds true today:

> "The kinds of problems that planners deal with – societal problems – are inherently different from the problems that scientists and perhaps some classes of engineers deal with. Planning problems are inherently wicked."

In many ways we are still no closer to solving wicked problems today and when it comes to urban planning "[...] in a pluralistic society [...]"(Ibid., p. 155) there is still no common frame of reference, no "[...] undisputable public good" (Ibid.), and no joint vision on which we can build when initiating participatory urban development processes. Conklin (2006) claims that one of the main features of wicked problems is that they involve actors with conflicting views

of the world. What makes many problems within participatory urban development even more wicked is that many actors have views of the world that are not entirely based on fact – and in most planning processes feelings and soft values are not normally welcome. Based on our experiences in a Scandinavian setting this makes it difficult to a) keep actors interested in urban planning processes, b) create a common understanding of the complex issues involved in urban planning, and c) create tangible and usable results from participatory urban development processes. In many parts of the world, Scandinavia in particular, participatory urban development processes are growing in number and scope, and politically there is a lot of focus on challenging existing strategies and methods of planning, but often these challenges are based on outdated concepts of communication, ad hoc process models, and simplistic views of how to identify, define, and solve problems that are already there and the ones that will surely emerge during the process.

To solve wicked problems within participatory urban development processes we must first create strategies, methods and tools to deal with conflicting world views, help build the capacity of participants and empower them to make informed decisions – while at the same time allowing feelings and values to play a role in the process (Author A1 2005; Author A2 2008). While we cannot claim to have overcome the wickedness of urban development problems, in this paper we propose a strategy and present some preliminary tools for dealing with one of the fundamental aspects of wicked problems; fragmentation and the lack of a common vision.

## 3. WICKED PROBLEMS IN URBAN DEVELOPMENT

Rittel and Webber (1973) presented ten distinguishing properties of wicked problems in their original paper (fig. 3.a).

1. There is no definitive formulation of a wicked problem
2. Wicked problems have no stopping rule
3. Solutions to wicked problems are not true-or-false, but good-or-bad
4. There is no immediate and no ultimate test of a solution to a wicked problem
5. Every solution to a wicked problem is a "one-shot operation"; because there is no opportunity to learn by trial-and-error, every attempt counts significantly
6. Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan
7. Every wicked problem is essentially unique
8. Every wicked problem can be considered to be a symptom of another problem
9. The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution
10. The planner has no right to be wrong

*Fig. 3.a: Rittel and Webber's (1973, p. 160-166) "ten distinguishing properties" of wicked, planning-type problems.*

We will not discuss all of them in this context, but some of them are central to an understanding of why the process model, the strategy and the tools presented later in this paper might be helpful in urban planning. We will get back to these in due time. First we would like to supplement the properties mentioned in fig. 3.a with an aspect not explicitly mentioned, but identified by Conklin (2006, p. 3-4) as a major constituent in wicked problems, which he describes as follows;

> "Fragmentation […] is when the stakeholders in a project are all convinced
>
> that their version of the problem is correct. Fragmentation can be hidden, as
>
> when stakeholders don't even realize that there are incompatible tacit
>
> assumptions about the problem, and each believes that his or her
>
> understandings are complete and shared by all."

In an urban planning context fragmentation comes in variety of forms: from the politician who promises cheap housing in the heat of the election process, over the architect who envisions the project, to the civil servant who knows that the project is in conflict with

existing plans, the developer who wants to make money, and to the local community who wants to keep their soccer field. As the Crimson Architectural Historians (1999) put it in a Dutch context:

> "Dutch city planners complain that 99% of their time is spent meeting people: trying to get the highway people to talk with the sports centre people; trying to get the railway people to stop their vendetta against the vegetable-garden people; trying to convince the Shell refinery people that they should stop protesting against the McDonald's drive in being built in front of their installations; convincing the Telecom corporation to get a really good architect to build something spectacular in the middle of the city, etc."

Fragmentation is among other factors influenced by the fact that there is, according to Rittel and Webber (1973, p. 161); "[…] no definitive formulation of a wicked problem." Which means that just to define a problem (or set of problems) we need to think through all possible outcomes, and "[…] develop an exhaustive inventory of all conceivable solutions ahead of time." (Ibid.). Of course this task grows increasingly unfeasible as the wickedness of the problem escalates, and with every possible solution another layer is added to the description, which means that the stakeholders will either have to keep track of all strata of the definition or risk fragmentation in the understanding of the problem. Another reason for fragmentation is exclusive processes, i.e. when certain stakeholders are not involved in the decision-making, as Conklin (2006, p. 6) states;

> "[…] it is not whether the project team comes up with the right answer, but whose buy-in they have that really matters. […] without being included in the thinking and decision-making process, members of the social network may seek to undermine or even sabotage the project if their needs are not considered."

In urban development different mental models are also one of the reasons for fragmentation. We all have different views of what the 'good life' should be like and how to furnish the habitats supporting this life. And as we have stated earlier (Author A2 2008, p. 2);

> "[…] while two people with divergent mental models of the 'good city' might live in the same neighborhood for a lifetime without conflict, it is obvious that participatory planning processes increase the risk of controversy just by bringing these two people together at the same workshop table. And when you add a planner with factual knowledge of how the city ought to be, then the mix becomes explosive."

So how do we avoid or overcome fragmentation in urban development? One way is to map and track all views and accommodate wishes and demands from all stakeholders – another, and perhaps more viable path is to create a common frame of reference and combine this with an ongoing dialogue with all potential stakeholders from the very beginning and make sure that they understand both the problem and each other. Basically we have to create ownership, build capacity among the participants, and empower them to help select among the myriads of possible solutions that can help us define and (re)solve the problem together.

## 3.1 Wicked problems, empowerment & capacity building

Capacity building and empowerment have at least two things in common: both notions are in widespread use today and both are rather loosely defined. We are not intending to explain the terms fully in this context, but a preliminary definition of the basic notions is necessary. It is also worth noting that there are both practically and theoretically a world of difference between addressing issues of capacity building and empowerment in e.g. developing countries on one hand and Scandinavian welfare states on the other. The cases presented later in this paper exclusively deal with the issues seen from the latter perspective. And while we make

use of definitions from e.g. the World Bank, aimed at third world countries, we will try to explain why we believe they are applicable in a Scandinavian context as well.

To define capacity building in an urban development context we first have to agree upon whose capacities we are talking about. Basically the subjects in participatory urban development are all relevant actors (stakeholders); from the top-level politicians, experts, planners, and developers to NGO's, interest groups, local communities, and individuals. Chaskin defines community capacity – in its broadest sense – as follows: (2001, p. 7);

> "Community capacity is the interaction of human capital, organizational resources, and social capital existing within a give community that can be leveraged to solve collective problems and improve or maintain the well-being of that community."

Even though this definition raises further questions such as how to characterize human and social capital, how to measure organizational resources and how to define – typically wicked and consequently indefinable – collective problems and how to reach a common understanding of what the well-being of a community is, we will take this definition as a starting point. Sidestepping these questions, capacity is an interactive collection of resources/capital that can be used to solve problems and improve communities. So, in order to build capacities we have to refine either the interaction, increase resources, support problem solving or come up with measurable improvements to the well-being of the community – or all of the above. To address these issues we need to empower the actors in the community and make them an integral part of the capacity building team. Alsop et al offer a definition of empowerment (2006, p. 10);

"Empowerment is defined as a group's or individual's capacity to make effective choices, that is, to make choices and then to transform those choices into desired actions and outcomes."

So, empowerment is about supporting effective decision making and improving upon existing conditions. Even though Alsop et al (2006) defines empowerment as capacity, thus making our argument that empowerment can help capacity building seem somewhat circular we propose instead to see them as dependent, more or less parallel approaches: capacity building, in our definition, is a process initiated by what we could call capacitors, i.e. actors who store information and discharge it when needed in an urban development process. These actors could be planners, experts, politicians, local NGOs, community groups etc. To stay on the same metaphorical track, information discharged by the capacitors should run as a current empowering the other actors to take actively part in the urban (or community) development, providing them with strategies, tools, and information that will help them make informed decisions. Some of these empowered actors will over time start acting as capacitors themselves, discharging relevant information about desired actions and outcomes, feeding it back to both other capacitors and the community at large in an iterative process. At least this is the ideal model. But as suggested above a main characteristic of wicked problems, according to Rittel and Webber (1973, p. 162), is that; "[…] the process of solving the problem is identical with the process of understanding its nature […]". In participatory processes this means, that any hope of (re)solving a given problem hinges on the ability to facilitate understanding among all participants, not just the experts, planners and politicians. To do this we need the original (discharge of) information – and all subsequent information – to be noticed by all relevant actors, seem worthwhile, provide the right amount of knowledge, make the actors want to influence the process and finally stimulate the desired actions.

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**3.2 The AELIA-model**

To address these needs we propose a model for participatory urban development based on previous experiences with participatory urban development processes. This model we have named the AELIA-model (Author A2 2008):

> "Our model is originally inspired by the well-known, but rather dusty and simple marketing effect model, the AIDA-model traditionally ascribed to Elias St. Elmo Lewis in 1898 […]. Basically the model describes how to grab the customers' Attention, awaken their Interest, stimulate their Desire and goad them into Action […]"

In its present form the acronym stands for Attention, Experience, Learning, Influence, and Action. We will not describe this model in any great detail in this context, but a brief overview is in order as a framework for understanding our notion of utopiatyping and then we will return to a discussion of our cases in relation to the model in section 7. The AIDA-model and the AELIA-model are at their core communication process models; they are all about discharging the right amount of information, to the right people, at the right time. But where the AIDA-model belongs to a more linear, and transmission based notion of communication (as described by Shannon & Weaver (1949) as the linear transmission of messages), the AELIA-model is better suited for dealing with communication in a wicked context, as we will try to argue when discussing utopiatyping as a part of an AELIA-process. Communication models, which take into account that the interpretation of information is dependent on a large variety of factors, can be found within what Fiske (1990) calls the semiotic school. A relevant approach within this school can be found in Umberto Eco's Role of the Reader (1979, p. 5);

> "[…] the standard communication model proposed by information theorists (Sender, Message, Addressee – in which the message is decoded on the

basis of a Code shared by both the virtual poles of the chain) does not describe the actual functioning of communicative intercourses."
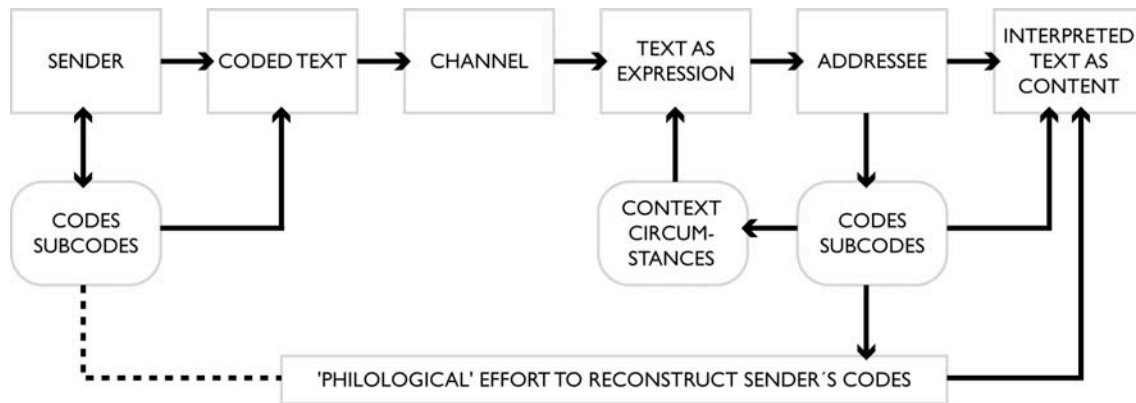


*Fig. 3.b: Communication model (Eco 1979)*

Instead Eco (fig. 3.b, Ibid.) proposes a model of communication that – in our reading – takes into account the fundamental wickedness and fragmentation in communicative intercourses, i.e. the fact that every communicator/actor brings a set of presupposed codes and sub codes to their reading of any given text (Ibid.) which determines their sense-making and eventually shapes the way they perceive the subject at hand. The reason for putting so much emphasis on the communicative aspects of capacity building and empowerment in an urban development context is, first of all, that this is where a great many urban development processes are currently lacking the most, and secondly communication is basically what powers the interaction in the capacity building process. To make sure everyone is on the same page, and reading from the same text, so to speak, in an urban development process, we need both communication process models that are iterative and allows for interpretation, as well as strategies and tools that help participants share visions and debate possible outcomes. Some of these strategies and tools allow us to see beyond and engage possible futures in meaningful ways.

## 4. SEEING BEYOND

As defined earlier community capacity was the ability to use various forms of resources to solve problems affecting the community and consequently improve upon existing conditions. This ability was, in our point of view, closely connected to the capabilities of the empowered actors who are able to make informed choices and, according to Alsop et al (2006, p. 10); "transform those choices into desired actions and outcomes." In many ways these definitions are related to the activity of designing as defined by Simon (1996, p. 111):

> "Everyone designs who devises a course of action aimed at changing existing states into preferred ones."

But changing existing states into preferred ones sounds very much like a wicked problem; how do we analyze existing states in sufficient detail to determine what parts we want to change, and – even more wicked – how do we decide on which states should be the preferred ones, how do we, as Rittel and Webber (1973, p. 159) ask; "[...] effectively narrow the gap between what-is and what-ought-to-be." Often forecasting the future is done by extrapolating what we already know, but this approach has some deficiencies, as we have identified in another context (Author A2 2008, p. 5):

> "A well-known problem in involving users in any kind of innovative processes is that you run the risk of just perpetuating already existing ideas – without proper inspiration and well-planned processes most users will just want more of the same […]"

In a utopian context Jacoby (2005, p. 32) phrases it somewhat more eloquently; "In outfitting utopia they order from the catalogue of their day." Within the realm of strategic management Mintzberg et al (1998) have termed this part of the strategic process, "seeing ahead", and identified this activity as an integral part of the strategic process, but an activity which needs

to be supplemented with another dimension as well. As Mintzberg et al (1998, p. 127) formulate it;

> "[…] strategic thinkers have to see beyond. Creative ideas have to be placed in context, to be seen in a world that is to unfold. Seeing beyond is different from seeing ahead. Seeing ahead foresees an expected future by constructing a framework out of the events of the past – it intuitively forecasts discontinuities. Seeing beyond constructs the future – it invents a world that would not otherwise be."

When planning for the future we might just want more of the same; if our cities are already perfect in every sense, we might just need them a little bit bigger. But more often than not planning emerges from our need to solve very real problems such as poverty, disenfranchised citizens, ghettos, conflicts of interests, issues of public good versus private ownership etc. If these problems are always solved by trying to see ahead, by constructing a framework out of the events of the past or the present, people with analytical skills will come out on top every time, while people with a more creative mindset will be left out of the process. This might seem a small price to pay for many planners to keep doing what they do best, but the real cost is prohibitive when dealing with wicked problems, especially if we keep in mind the distinguishing properties of wicked problems, number five, six and especially number ten according to Rittel & Webber (1973, see also fig. 3.a):

> (5) Every solution to a wicked problem is a "one-shot operation"; because there is no opportunity to learn by trial-and-error, every attempt counts significantly

> (6) Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan

We cannot rebuild the built environment just because we made a mistake. Of course this is sometimes possible by performing the planning equivalent to an extreme make-over of housing projects gone bad, or by demolishing industrial harbor areas to make room for high-rises. But still, every attempt counts significantly. At the same time no amount of analysis of the past or present will allow us to thoroughly map all the elements needed to accurately forecast which solutions will work best in the future. If we couple these observations with Rittel and Webber's (1973, p. 166) property number ten – "The planner has no right to be wrong." – it is obvious that if we only 'see ahead' we will get into trouble. As planners our actions have very real ramifications and our job, according to Rittel and Webber (1973, p. 167);

> "[…] is not to find the truth, but to improve some of the characteristics of the world where people live. Planners are liable for the consequences of the actions they generate; the effects can matter a great deal to those people that are touched by those actions."

One way to address these issues is to create strategies and tools that support seeing beyond – and not just for people with creative outlooks, but for all relevant actors in the process as a way to build capacity and empower potential participants. This leads us to our notion of utopiatyping.

## 5. UTOPIATYPING

Utopiatyping is at the same time a strategic way of thinking aimed at creating urban development processes that inspires participants to see beyond and a collective term for various tools and methods which are designed to facilitate communication in various parts of an AELIA-process. Utopia as a notion has been an integral part of western cultural history at least since Thomas Moore's book, Utopia, was published in 1516. According to Jameson

(2005) what characterizes most utopian accounts are that on the one hand they are fictional and meant for entertainment and on the other they are often dead-serious political tools. Utopianism is a way of thinking aimed at expressing dreams and wishes for a better future – or used as a warning against things to come. And sometimes they have served as roadmaps for change, as Toffler (1978, p. 557) puts it:

> "Contrary to popular misconceptions, utopian proposals are not necessarily impractical and useless or a waste of time. Presented either in fictional form or in a program for action, utopias have often served as designs for actual reform, as blueprints for new societies, or as beacons to guide human affairs."

Utopian thought has often been reviled as being idle daydreaming based on feelings rather than fact; in Gilison's (1975, p. 23) words; "Utopianism is based on sentiment, not reason […]", while others criticize utopianism for not being able to solve problems in the 'real' world but only in far-away, typically fictitious lands or areas which, for some reason, are tabula rasa. As Kateb (1972, p. 21-22) notes;

> "It is certainly true that much the greater number of utopias in literature have arisen in virgin lands or have emerged on the ruins of a convenient war. These seem to be the most promising conditions."

But even if true, these conditions need not necessarily trouble us in an urban development context; maybe unrealistic, sentimental daydreaming is just what we need to address some of the wicked issues that analysis and reason cannot fully encompass. In the very early stages of an AELIA-process it is sometimes better to let actors concern themselves with tearing down some of the preconceptions and 'graven images' (Jacoby 2005) in an iconoclastic approach instead of letting them blueprint their future society (Author A2 2008), and – as mentioned

before in the words of Jacoby (2005, p. 32) – risk letting them "[…] order from the catalogue of their day."

We need to get the attention of potential actors first, then we need to give them a novel experience to keep them interested, provide them with the information needed to make informed choices, and let them influence the possible solutions and problem definition – all this before allowing anyone to take action or actually remove, change or build anything. From a strategic point of view utopiatypes are political tools aimed at engaging various actors in the very early stages of urban development where possibilities, concepts, and visions are still in their infancy. As such they are meant more as beacons than as blueprints, as tools for capturing sentiments instead of just reason and facts, and as devices allowing us to see beyond our present circumstances, into possible futures and virgin lands that can be populated with novel ideas. But how do we put these high-minded ideals into practice?

## 5.1 Practical applications of utopiatyping

Utopiatyping tools can take on a variety of forms – we will describe two of them in section 6. But for now we will try to give a very brief overview of some of the more practical aspects that most, if not all, utopiatyping tools have in common; the notion of prototyping and the use of scenarios.

As already stated urban planning and development is typically one-shot, meaning that we cannot recall a faulty city, the way a faulty mobile phone is recalled, or issue an update to our flawed neighborhood in the same way that software updates for operating systems are released on a regularly basis. But what is curious in this comparison is that the phone and the operating system have both been extensively tested through an iterative process involving experts and end users – even though the product is much easier to update and much cheaper to

replace than most built environments or social systems. This is off course done through what is known as prototyping. We have defined prototypes as follows in another context (Author A2 2008, p. 6);

> "[…] prototypes are early, more or less functional versions of a future system or product with a degree of complexity which makes it feasible to spend time and money on testing and evaluating many iterations instead of just putting it out there and let it float or sink."

While we cannot build fully functional versions of our future cities just for testing, we certainly can present, test, evaluate, and discuss many of the issues that are not directly related to the bricks and mortar of the built environment. We can, for instance, produce visions of how we think life ought to be on the new town square, how people should act in the local community, and how different kinds of infrastructure could become conducive to social interaction, business, and relations to the outside world. A way to prototype the issues mentioned above is through the use of scenarios. In short form scenarios are narrative accounts of realistic, but fictional events used to describe e.g. actions, atmosphere, possible conflicts, positive aspects, and experiences of actors – often seen through the eyes of the actors themselves (Nardi 1992; Kuutti 1995). Scenarios allow us to describe the future and imagine how diverse actors should experience different features, and how different views of this world might affect the perception of the proposed future. As in any utopian account we can furnish our future scenarios with more or less detail; we can choose to describe the political framework, the social interactions, individual experiences, detailed descriptions of design – or we can describe a sequence of simple actions. In the following sections we will try to illustrate our points about scenarios through a description of two related cases from the field of utopiatyping.

## 6. UTOPIATYPING CASE STORIES

In this section we present two different cases representing utopiatyping tools, one primarily addressing the communicative aspects, another focusing on the participative possibilities of utopiatyping. The communicative tool is Koege2027 – an installation created for and in collaboration with the municipality of Køge, Denmark as starting point for an ongoing planning process, which runs from 2007-2027. The participative tool is City Voices, a tool for actively involving citizens in the vision formulation stage of the new Multimedia House at the municipality of Aarhus. While Koege2027 is a 3D-based application based on the commercial game engine Virtools, City Voices consists of two prototypical interactive, mobile tables placed in different localities but interconnected through a web-based interface.

### 6.1 Koege2027

In the summer of 2007 the municipality of Køge, Denmark commissioned the authors and a company partly owned by us to create an exhibition about the future of Køge. It had been decided to create a large landfill in the bay of Køge and move heavy industry from the existing harbor to this new area to free up space for other purposes in the old harbor, which is much closer to the city center. The landfill was already underway at the time, and the project as a whole is scheduled for completion in 2027. The municipality wanted an exhibition that would both communicate the basic facts about the landfill and create awareness about some of the possibilities that the project created for the city as a whole. There is as yet no master plan for the areas and nothing have been decided concerning concrete projects, but some of the visions for the areas include housing, small businesses, recreational areas, and cultural projects.

Our task was to communicate both the facts and the visions – and at the same time make sure that every actor knew that nothing had been decided and that the exhibition was an early step

in a much longer participatory urban development process. Early on we opted for utopiatyping as a primary strategy, using interactive scenarios to communicate some of the possibilities and visions combined with a more traditional approach, i.e. posters and a large floor map/orthophoto (Fig. 6.a), to communicate the basic facts and give the actors an overview of the areas as a whole.



*Fig. 6.a: visitors at the exhibition, Koege2027, using the floor map as a way to understand the scope of the project.*

The interactive part of the project consisted of an installation with a large 52" screen showing a 3d-model of Køge. In this model a number of scenarios where placed, represented by orange boxes. To open a box the user controlled a 'gizmo' on the screen by using a joystick mounted on a box in front of the screen. When a box was approached it would open, revealing a person who would then tell a story about how life could be in that part of Køge in 2027. The scenarios focused primarily on activities, functions, and ambience – not on concrete projects, form or facts. A scenario could sound like the following where a young girl tells of her experiences on the new recreational pier (Fig. 6.b):

> "The best place in Køge is the very long path along the water where I can
> roller skate really, really fast. My dad says it's called the boardwalk but that

sounds like that funny little animal from Africa my grandfather told me about. My friends and I call it Roller Skate Lane and as long as we don't get too close to the water we can go there on our own, my mum says. In the afternoon there's always lots of people down there, eating and drinking beer and we also meet a lot of people we know. When I grow up I'm going to be a roller skate princess, my dad says. But that isn't true; I'm going to be a lawyer just like my mum."

This scenario is told by the voice of a young girl and in the box graphics of a girl on roller blades on the waterfront (fig. 6.b) coupled with sounds of kids playing, people talking, and waves breaking supports the focus on the softer values, possibilities, and visions of the future Køge.
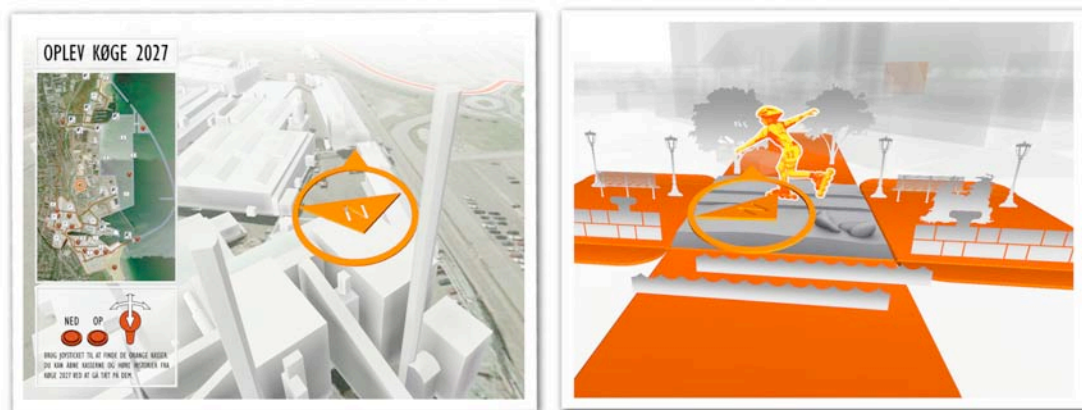


*Fig. 6.b: Birds-eye-view of Køge in the interactive 3D-world of the installation (left) and an open orange box containing a scenario (right)*

The exhibition is currently placed in a museum, Køge Skitsesamling, but was originally designed for and placed in the ferry terminal at the harbor. The terminal was open for the public on most days and the municipality also arranged a number of guided tours during the exhibition period. According to the municipality the exhibition has been a success. Groups wanting to take the tour have been wait-listed, school classes have used the exhibition as part

of their curricular activities, and the exhibition have generally been favorably mentioned in the local media. Many of the tours and sessions have led to debate among the participants – both about the main subjects of the exhibition, the future of the harbor areas, and about other areas of the city that participants have had a special interest in.

Through interviews and observations we have found that the interactive part of the exhibition mostly attracts younger people, this, obviously came as no surprise. What was more surprising was that when no young people were present, elderly people also gravitated towards the interactive installation, sometimes after considerable hesitation, but when they finally got to use it they found it very interesting. Most users found that the scenarios were a good way of presenting the possibilities and they liked the interactive aspect of the exhibition, which, according to the users themselves, made participating a novel experience. We also observed that visitors of all ages used the large floor map as a reference point. Most people tried to locate their own home, and then used that spot as a marker for exploring the rest of the area. The floor map also turned out to be an eminent catalyst for debates about the area in general, as it provided an excellent overview of all the areas in question.



*Fig. 6.c: visitors using the interactive installation (left), visitors listening to a scenario (right)*

Input from the guided tours concerning actual ideas and visions for the future of Køge have not been recorded. So far observations and interviews have focused on interaction use, and reactions to the exhibition as such.

## 6.2 City Voices

In the spring of 2006 the authors as part of a larger project group were invited to give a solo exhibition about space and interaction at the contemporary art museum; Aarhus Art Building. Shortly after receiving the invitation, we were also commissioned by the Aarhus Municipal Library Services and the New Multimedia House Secretariat to conduct a citizen participation process, which should also use innovative interaction design to invoke curiosity about the future 28.000 m2 Multimedia House at the harbor of Aarhus. The two projects called for a unique solution and proposed a rare opportunity to combine two seemingly unrelated contexts and audiences into one project - for two different clients. The outcome was the project Byens Stemmer, which translates into City Voices, but also means City Votes. This ambiguity in the title refers to the fact that the purpose of the project in the library was to create a tool and a process for a citizen participation process for the future Multimedia House in 2012. The key idea of the interactive tool was to record citizen's voices in form of comments, ideas and suggestions.
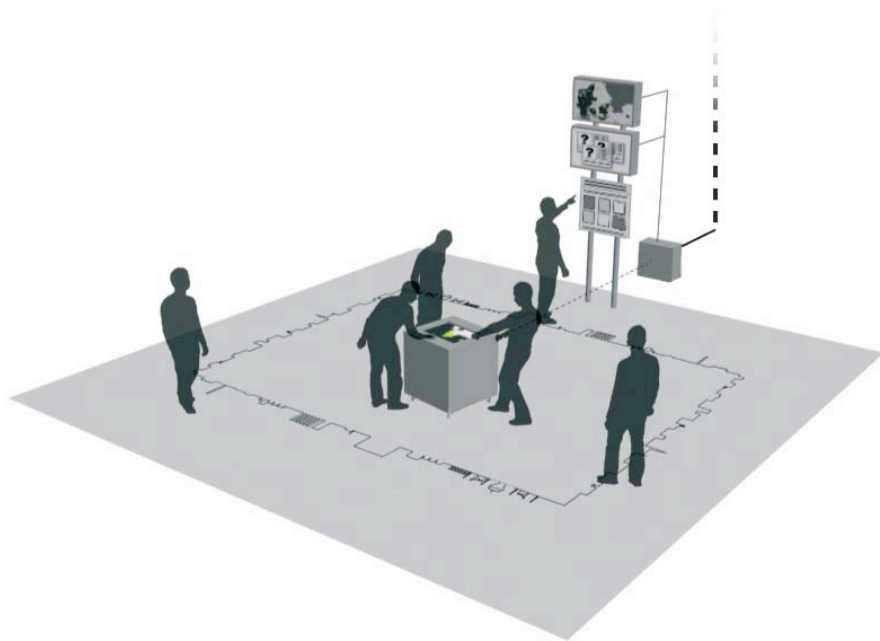
*Fig. 6.d: The setup of City Voices in the lobby of the main library of Aarhus with the*

*interactive table in the center and additional screens mounted behind*



*Fig. 6.e: pictures from the Aarhus Art Building (left) and the lobby of the main library (right)*

Basically the project consisted of two interactive tables (see fig. 6.e), which could be pushed

around on a virtual, invisible map in either the Aarhus Art Building or in the lobby of the

main library in Aarhus. On this map – which could only be seen through a 'peephole', i.e. a

flat panel screen embedded in the table, a number of scenarios where placed for the citizens to

find. Each scenario contained a 'voice' from the future, e.g. a little girl telling us about her trip to the future Multimedia House with her kindergarten, or the bum spending his days outside in the garden close to the building. The scenarios where placed on three different maps; a map of Aarhus, a map of Denmark, and a map of the world. The user of the table could access each of these maps by turning a button, and each map represented different aspects of the project and its relation to the outside world. A scenario from the world could, for example, concern itself with the municipality's goal of creating a Multimedia House that would become an international landmark;

> "We went to Bilbao last year. And I was very impressed by the museum. Daring architecture and novel content. This year my husband suggested we go to Aarhus to see the MMH. Some of our friends went earlier this year and told us it is well worth a visit. At the moment there's a theme exhibition regarding the past, present and future of urban planning. So I get to see both the building and learn something new about the science of planning. Let's see if it can compete with our Bilbao-experience…"

*Fig. 6.f: Photos from sessions in the main library*

The aim was to give the citizens an idea of what the future Multimedia House could be like – and allow them to comment on this future, by recording either a statement related to an existing scenario or come up with an inspirational scenario of their own. All scenarios or statements where then recorded for the next citizen to visit the table to find. Our hope was that this would spark a debate among the citizens which would surpass the traditional discussions about form and function and enter the realm of utopia by allowing them to describe atmosphere, experiences, content – and generally focus on the softer values of the future institution.

The two tables did not attract too many what we could call 'casual' users, i.e. citizens passing by, getting their attention caught and then deciding to participate by using the table on their own. But we held a number of structured sessions using the tables as a tool for debating the dreams and wishes of e.g. interest groups, students, elderly, and disabled people (Author A4 2006). These sessions proved very valuable and the input that was recorded was used afterwards in a report that was recently included in the competition material for an international architectural competition for the Multimedia House (Multimediehuset 2008). The two tables gathered a total number of 842 voices during the 35 days the exhibition ran.

44% of the voices were in relation to the map of Aarhus, 29% to the map of Denmark and 27% to the world map, which indicates that the more local a utopiatype is, the easier it is to relate to.

## 7. UTOPIATYPING IN PRACTICE

In this section we will discuss how the two cases relates to the AELIA-model, how – and if – they helped reduce fragmentation, iconoclastic utopiatyping, and support common visions, and finally what to make of the cases as instances of utopiatyping in relation to questions of capacity building and empowerment.

### 7.1 The cases and the AELIA-model

As practical tools for utopiatyping the two projects have some similarities; both use scenarios as a way of communicating about the future possibilities, both focus on values, functions visions, and ambience instead of facts and form, and they both use relatively innovative technologies to get the point across and give the participants a novel experience. But where Koege2027 focuses primarily on communication in the three first stages of the AELIA-model – Attention, Experience, and Learning – City Voices takes another step up the ladder and uses the installation as a two-way medium, allowing participants to influence each other and leave their statements, visions, and comments as a part of an ongoing dialogue concerning the new Multimedia House.

In relation to the first step in the AELIA-model both tools have attracted attention as new ways of engaging participants in urban development processes and it is very probable that they have also attracted more users to the processes than would have been possible by more traditional means and methods. In the case of Koege2027 the exhibition, as a communicative tool, has also resulted in an increased focus on the municipality's visions for the city and

helped create a greater awareness of the future possibilities among the various actors in the municipality. A similar thing happened in the City Voices process, where the technological setup in itself became part of the story about what kind of institution the new Multimedia House should be in comparison with the more traditional existing library.

As mentioned earlier both tools were also favorably evaluated when it comes to giving the participants a novel experience. The innovative use of technology at a relatively early stage of the processes meant that the participants were left with a positive impression of both the process and the intentions of the 'senders' if we stay within the lingo our communicative framework.

As tools for learning you have to balance the complexity of your syllabus, so to speak, with the skills of your audience – you have to support their learning within a realistic zone of proximal development (Vygotsky 1978). To achieve this balance in participatory processes the authors have previously devised a model for designing participatory tools (mostly games) called the scale of realism (fig. 7.a, Author A3 2003), which can help define how multifaceted a material you can hope to present to any given target group.
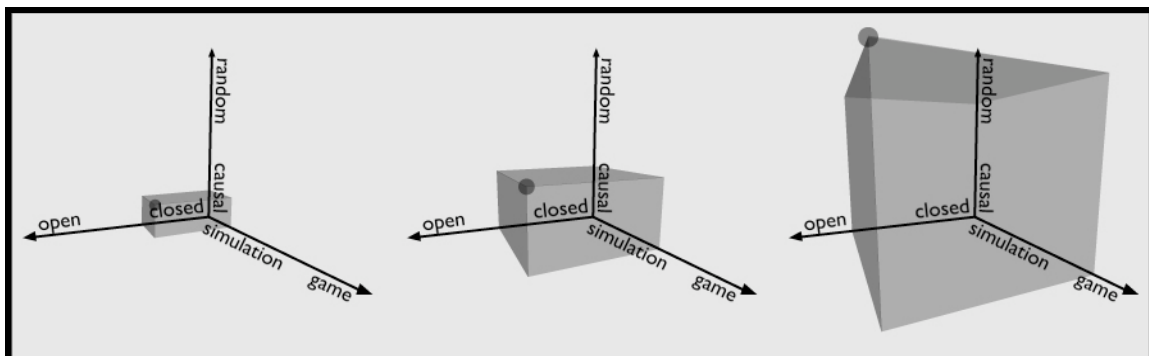


*Fig. 7.a: The scale of realism (Authors A3 2003).*

Originally the scale of realism contains three axes; open//closed, game//simulation, and random//causal. Basically the model postulates that if you raise the parameters along one axis the others will follow. So if you create a very realistic simulation, such as a flight simulator, you have to base it on fine-grained causality, and in this process you also create a somewhat closed tool in the sense that it will only be usable by experts. On the other end of the scale you can create a very open tool, which allows for more, unskilled, participants – but to do this you have to create a tool that can be used without prior knowledge and where you cannot have too many causalities – or rules – but instead have to rely more on chance. On the extreme end of this axis you find a simple game like flip-a-coin. To successfully design tools for processes that engage a large variety of participants while at the same incorporating a body of knowledge, which is relatively substantial, you need to find a balance between the two extremes. In the case of City Voices the scenarios were based on values, statements, and ideas collected through an in-house participatory process, coupled with the political ideals and practical constraints, which were then translated into a language easily understandable by a larger variety of participants through the use of simple, engaging scenarios, or utopiatypes. In Koege2027 the scenarios were thought up by the authors in collaboration with the municipality and meant to inspire while at the same time communicating some of the political visions for the areas in question. Based on interviews and observations it is our clear understanding that most participants in both structured sessions (City Voices) or guided tours (Koege2027) found the projects easily accessible while at the same time being sufficiently informative.

Even though the guided tours of Koege2027 led to participants discussing the future of the town and presenting ideas and visions themselves, none of this has been recorded, as mentioned earlier. Consequently we cannot treat Koege2027 as a project with an influence

phase according to the AELIA-model. But City Voices was, as also mentioned earlier, a project aimed at supporting participant influence in the development process. A number of statements, comments, ideas, and visions were accumulated during the process and has since then been integrated into the official competition material for the Multimedia House. Of course it is too early to evaluate how the various actors' input will affect the course of action and the project as a whole, but so far the municipality of Aarhus has taken the input very seriously.

## 7.2 Fragmentation, iconoclasm & common visions

Whether or not the two cases have reduced fragmentation among the participants, effectively removed preconceptions, and supported the creation of common visions is obviously difficult to ascertain with absolute certainty at this relatively early stage in the processes. In the case of Koege2027 the positive responses from both participants and municipality makes it very likely that involving users in this very early stage of the process gives all participants a better understanding of what is at stake. It also helps eliminate some of the misunderstandings that urban development projects of this size invariably runs into by informing the participants in the very early stages, while the level of detail and the complexity is still rather low. This also makes it easier for participants to ask the 'stupid' questions, because no question is too stupid, when nobody knows the answers anyway. In this sense the exhibition supported iconoclasm because visitors found out that no definitive answers were given, nothing was decided, and no images were canonized. Consequently Køge municipality alleviated possible causes for fragmentation by giving the participants some general ideas of possible functions and activities in the future. As this project was initially not designed to encompass the influence stage of the process, we cannot say anything definitive about how it will work as a framework for creating common visions. But it will be a quite straightforward task to augment the

existing exhibition and the interactive installation so they can support structured sessions and record input from various actors.

If we turn to City Voices the main focus here was on letting actors express their own thoughts and, by recording these in the table, share their visions with other actors. Seeing that we had very few casual users, this did not work quite as we had hoped. Even though all comments were also published on a website, very few actors will have heard what a previous user had to say about the new Multimedia House. During the structured sessions we reset the table from session to session so the participants in these sessions were not systematically introduced to the input from previous participants. Still, all input were collected, analyzed and communicated afterwards in the report which is publicly accessible on the official website of the project. The data and conclusions in this report have also been presented to officials at the municipality and – hopefully – been thoroughly scrutinized by the teams competing to build the Multimedia House and the surrounding areas. Consequently the ideas and comments from the participants in the City Voices process are now part of the official common vision for the project as a whole – and as such it will hopefully also help prevent fragmentation in the long run. The process and the results also helped break down some prejudices about what a library is – and should be – in the future. And it is our hope that actors accessing the results at a later stage will be inspired by the many ideas and visions presented during the structured sessions.

## 7.3 Capacity building & empowerment in relation to the cases

We observed that the form of the exhibition in Køge allowed for a large degree of interaction among the participants. Some people remembered how things had been before; some had special knowledge of e.g. currents in the bay and how the new piers would affect these, while others had qualified suggestions as how to solve traffic problems in the new areas. All of these experiences where shared among the participants and in a sense became part of a

dynamic exhibition where the participants became exactly that instead of just visitors. Consequently the idea of using an exhibition to create awareness and build capacity turned into a forum for empowerment where people of all ages could contribute with their own ideas and knowledge in a risk-free setting since nothing was decided or recorded.

City Voices was more of a controlled environment. A representative from the Multimedia House and/or a representative from the project group facilitated the structured sessions. Of course the participants discussed among themselves, but the facilitator made sure that debates were kept on track according to the open interview guide that was prepared for each session. As these sessions were also part of the official participatory process and know one knew how or when the next steps in this process would be taken, participants also had to make their attempt count significantly, so to speak. City Voices in this respect was not so much about empowering the actors, as it was an occasion for the actors to exercise their power and influence the project. On the other hand many of the ideas discussed in these sessions were about long-term capacity building and empowerment; from novel ideas about how to involve actors in the ongoing process, and creating advisory boards populated by users, to visions of events and networks supporting intercultural exchange and citizen participation in public decision making on a more general level. In many ways the participants were inspired by the process to think in new ways that would help build capacity and empower them in the long run. It will be interesting to follow the process in the years to come and see if and how these suggestions are implemented.

## 8. CONCLUDING REMARKS

Seeing that participatory processes supporting long-term urban development are often very protracted, we cannot conclusively state that the strategies and tools presented in this paper will help alleviate wicked problems. But it is our firm conviction that addressing the issues of fragmentation, promoting iconoclasm in the early stages of an urban development process, and supporting the formulation of common visions is central to successful participatory processes. And without a large degree of participation from a wide variety of actors, wicked problems will more often than not become downright fiendish in societies where citizens are increasingly used to having a say in almost everything concerning their daily life.

Trying to see beyond and collectively imagine a future that we, as a society, can strive for has the potential to be a rewarding supplement to the more analytic, expert-based approach of seeing ahead. Projects supporting the ability to see beyond can also be used to raise the awareness of the complex issues involved in most urban planning projects by allowing the participants to discuss best (or worst) case scenarios without the constraints imposed upon non-experts in traditional planning processes.

We also hope we have succeeded in arguing for the use of utopiatyping as both a strategic approach and as specific methods for engaging actors in processes aimed at seeing beyond, but we readily admit that more experiments are needed to support this claim irrefutably. It is our goal to continue refining the methods and tools mentioned in this paper, as well as develop new ones that can better address all the complexities of wicked problems in an urban development context. Specifically we plan to focus on creating tools better suited for the creation of content by the participants as a way of further empowering the actors. We are also working on tools that are more robust, meaning they will be able to function without supervision in public spaces for longer periods of time. We also hope to be able to support a

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greater freedom within a single tool when it comes to the scale of realism, i.e. allowing participants to adjust the level of detail making the experience – and the outcome – more or less realistic. If we were to achieve this we could accommodate both the needs of experts and laymen within the framework of the same tool. Better ways of collecting various forms for data and storing them in a collective 'memory' could also greatly enhance the value of the proposed tools.

On another level it is our hope that the idea of using utopiatyping, as a way of addressing central issues of wicked problems will be tested by others – especially within other communities of practice, subjected to different challenges than the ones we are trying to address in a Scandinavian setting. If and how it is possible to (re)introduce utopiatyping as a way to build capacity and empower participants in for instance developing countries with other traditions and practices of planning remains to be seen. But we are confident that utopiatyping as both a strategy and a tool can help us see beyond and construct the futures that would not otherwise be.

# 9. LITTERATURE

Alsop, R., Bertelsen, M. F. & Holland, J., 2006: Empowerment in Practice – From Analysis to Implementation. The World Bank, Washington D.C.

Chaskin, R., Vidal, A., Venkatesh, S. & Brown, P. 2001: Building Community Capacity. Aldine Transaction, New York

Conklin, J., 2006: Dialogue Mapping: Building Shared Understanding of Wicked Problems. John Wiley & Sons, Ltd. England.

Eco, U. 1979: The Role of the Reader: Explorations in the Semiotics of Texts. Indiana University Press

Fiske, J. 1990: Introduction to Communication Studies. Routledge, London

Gilision, J. M., 1975: The Soviet Image of Utopia. Johns Hopkins University Press, Baltimore

Jacoby, R. 2005: Picture Imperfect. Utopian Thought for an Anti-Utopian Age. Columbia University Press

Jameson, F. 2007: Archaeologies of the Future – The Desire Called Utopia and Other Science Fictions. Verso Books, London

Kateb, G. 1972: Utopia and its Enemies. Schocken Books. New York.

Kuutti, K., 1995: Work Processes: Scenarios as a Preliminary Vocabulary. In: Carrol, J. M. (Eds.), 1995: Scenario-Based Design: Envisioning Work and Technology in System Development. John Wiley and Sons, Inc., New York

Nardi, B. A., 1992: The use of scenarios in design. SIGCHIBulletin, 24(4), pp. 13-14.

Rittel, H. W. J. & Webber, M. M., 1973: Dilemmas in a General Theory of Planning. Policy Sciences 4 (1973), p. 155-169. Elsevier Scientific Publishing Company. Amsterdam

Simon, H., 1996: The Sciences of the Artificial. MIT Press. Massachutes

Toffler, A. 1978: Philosophy and Utopian Thinking. In Richter, P. E. & Fogg, W. L. 1978: Philosophy Looks to the Future: Confrontation, Commitment, and Utopia. Waveland Press, Illinois

Vygotsky, L. 1978: Mind in society: The development of higher psychological processes. Harvard University Press, Cambridge, Massachutes

Weaver, W. & Shannon, C. E. 1949: The Mathematical Theory of Communication. University of Illinois Press

*References by author(s) are enclosed on a separate sheet

**Internet references**

CRIMSON 1999: Org Wars - Posturban strategies. [internet] Available at:
http://www.crimsonweb.org/spip.php?article52 [accessed August 24th, 2008]

Aarhus Kommune 2008. Mediaspace Competition Brief. [internet] Aarhus. Available at:
http://www.multimediehuset.dk/sw1296.asp [accessed August 24th, 2008]