Pictorial Genre and Discourse of Future in Digital Visualization of Architecture and Planning

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This paper seeks to outline a theory of pictorial genre in discourses of future at play in digital visualisation of architecture and planning for communicative purposes. It claims that pictorial genre is crucial to the way we understand depictions of future in architectural and planning communication. Accordingly, professionals dealing with communication matters in architecture and planning should yield for a sufficient awareness of the function of pictorial genre—not least as concerns the adoption of digital technologies for the modelling and presentation of spatial matters. This is urgent since these technologies (primarily Geographic Information Systems, GIS) and software systems for spatial modelling and presentation do not include any aspect of pictorial genre in their current state of development.

Keywords: *Visualization; planning information; pictorial representation; genre; planning*

Introduction

Digital, communication-oriented visualizations of change in architecture and planning are often difficult to interpret correctly and with the precision intended by the sender. Obviously, this goes especially for pictorial material that appears outside of its original context of presentation. Visualizations designed for communicative purposes are often anchored by words in order to capture the intention and focus the particular planning issue which is at stake. However, like most other pictorial media, visualization of change should in some respect be taken for a "language" with codes and laws of its own. Insight in this language would be important to practitioners who are involved in the planning and implementation of participative strategies as well as public authorities, independent interest groups, and lay-men becomes involved in public debates on planning issues.

This presentation seeks to demonstrate that:

1. visualizations designed for communicative purposes in architecture and planning could be divided into four persistent genres, i.e. visions, scenarios, prognoses, and plans,

2. these genres seem to be determined by dominant discourses by means of which we think of future.

In order to substantiate for this thesis, I would like to draw on Swedish futurist and landscape planning scholar Lars Emmelin, who has advanced a theory of "future discourses" (1995, 2000) based on numerous empirical studies of landscape planning and development in Scandinavia. In the first part of the paper I would like to lay out Emmelin's theory in order to apply it to the study of visualisations as a pictorial material. In the subsequent part I will dem-

onstrate how the four pictorial genres typically make use of various pictorial means of expression, that may be digital or "traditional" means of pictorial expression (i.e. photographic, by hand as in drawings and paintings, etc.). Finally, by means of conclusion I will discuss the result of the work and its possible implications on research and practice with reference to the use of digital tools in planning and architectural communication.

The present paper is the result of a minor postdoctorate study on pictorial genre in visualisation of landscape and urban space; a study which adds itself to the author's PhD thesis on pictorial representation and virtual geography in web-based visualisation of change in landscape and urban space (Johansson, 2003).

Discourses of future and their pictorial genres

Lars Emmelin has suggested the concept of future discourses to capture the way we think of futurity in respect of landscape change. Emmelin's work is motivated by what he identifies as a lack of precision in the conceptual foundation of the two dominant discourses of landscape research, namely the "environmental discourse" and the "antiquarian discourse".[1] Emmelin draws on Maarten A. Hajer's concept of discourse which has been developed from his analyses of public policy making and which designates "an ensemble of ideas, concepts, and categories through which meaning is given to phenomena." (Hajer, quoted by Emmelin: 27) To Emmelin, the dominant discourses of landscape research thus "have their scientific traditions, concepts and institutions but also ties to administrative institutions and instruments." (28) To Emmelin, as far as the dominant discourses of landscape research are concerned, "the underlying notions of planning and management of a cultural landscape are vague" (28). Further, he addresses "a basically unclear relationship" between the 'landscape discourse' which is dominating research and administration, and a 'futures discourse'", which Em-

melin constructs as a conceptually ideal philosophy of management, planning, and future. This construction is defined in the following terms:

"Any systematic treatment of the future, be it a scientific prediction or a utopian vision, will contain three elements: a direct or implied description of the present state of the planning object, a description of a future state of the planning object and an organising principle, binding those two together. The organising principle can be regarded as a narrative binding the present and the future state together." (Emmelin, 2000, p. 34)

This ideal conception of future discourses leads Emmelin to identify "four ideal types of futures", which I lay out in terms of pictorial genre: prognoses, plans, visions, and scenarios. For Emmelin, these four "types of futures" are characterised by each of its own (ideal) combination of present state, future state, and organising principle.

Prognosis
As a pictorial genre in planning information, prognoses, prognoses usually depict physical change as accurately and perceptually realistic as possible from relevant viewpoints. thus typically forms part of the so-called visual impact analyses, planning authorities usually are expected to carry through in connection with processes of decision making and public hearings as regards of planned change. In the field of landscape planning, prognoses is thus a well established genre that is met with various set of design guidelines (Sheppard 1989); guidelines that are supposed to be followed in order to optimise the prognostic effect. In Emmelin's terms, "The central aspect of prognosis is the narrative in that not only the connection between present and future, but also the selection of data and salient features in the present is organised in a model, which generates the future." (Emmelin, 2000, p. 36) In the actual design of prognostic visualization, this is usually being done by means of a 3D-model or a set of photographs which are realistic in terms of perception (relevant view-points) and perspective and thus representing "data and salient features in the present".

Change is depicted by means of adjusting the model according to mathematical measures. As Emmelin notes, as a discourse prognosis "is legitimised by the status of the relationships which generate the future state from the present." Prognostic visualisation is thus supposed to be based on correct depiction of physical change, that is, in terms of volumes, textures, interference on sunlight, etc. Obviously, this discourse is also legitimised in terms of correct data of the present. Whereas 3D-models typically are used in order to depict interferences on the horizontal line, sunlight, and sheer volume, that is, entirely geometrical matters, photographic material is usually used in order to simulate perceptual realism, whereas photography shares vision's properties in regards of texture and perspective.

Plan

According to Emmelin, "The central and organising principle [of plans] derives from the future state that the plan is to realise." (ibid. 36) In addition, as a pictorial genre, plans are typically designed with a instructive purpose in the sense that this genre usually imply information about its implementation. Emmelin notes that "It is the presence of [the] … instruments [of implementation] that legitimises the discourse." And, one may add, the realism of plans amounts to the degree of implementation. Accordingly, as a pictorial genre, plans are typically based on an abstract expression in terms technical, diagrammatical drawings—on paper, and of course by means of CAD or GIS-based software, which obviously may contain instrumental information.

Vision

To Emmelin, "the organising principle [of visions] is … a perception of the future condition which is described as desirable." (ibid. 36) In this respect, visions resemble plans. However, whereas plans are instrumental and thus typically of a technical character, visions seek to convince and are usually loaded with values and ideologies. Emmelin: "The claims of verity of a vision lie in its persuasive power: the future state

must appear as desirable and reachable; the consensus must appear to be likely." (Ibid.) One may thus say that visions as well as plans depict the future state in its becoming; a becoming in terms of implementation (plans) or within reach (visions). Prognoses, on the other hand, seem to be characterised by its amalgamation of a present and a future state; to show the future in the present as it were.

Scenario

As Emmelin notes, "The term originates from the theatre; a scenario is 'the complete plot of a play with details of scenes etc.'" (Concise Oxford Dictionary). So-called scenario methods are numerous, and the term scenario seems to address a number of very different phenomena and approaches. However, we may identify scenarios by their plural character: Unlike prognoses, plans, and visions, the scenario has typically been designed to contrast other scenarios. Further, Emmelin distinguishes between three fundamentally different notions of scenario: "It may start from the present state, extrapolating certain explicitly chosen features of the present—a trend scenario. It may work in a sequential fashion from the present exploring successive decision points—the exploratory forward scenario. It may start with a constructed future that may be likely, utopian, dystopian or have any other feature contrasting or retaining the present state. The narrative works back-wards exploring the connectivity of future and present—back-casting." (ibid., 36-7) Whereas scenarios based on forecasting and data-extrapolation can be associated with (American) computational traditions going back to the Manhattan project, back-casting scenarios may be associated by Michel Godet's work on scenarios as a management tool. Where Emmelin seeks to boil these three, very different concepts of scenario down into one, the "uniting principles [being] … that they are explorations of the logical type 'if … then'" (ibid., 37), I would like to maintain a conceptual division since scenario typically manifest themselves very differently in terms of pictorial representation. Back-casting scenarios thus usually set off from a depic-

tion of various, mutually alternative outcomes which typically are based on a particular ideology or set of values (landscapes being developed on the grounds of e.g. ecological, market liberal, antiquarian values and ideologies), and which thus often is made manifest in a symbolic fashion, e.g. by means of an artist's vision as expressed in a painting, a drawing, or the like. Forecasting scenarios are, on the other hand, usually based on the manipulative extrapolation of chosen features in a data set. Accordingly, forecasting scenarios are thus often based on given data systems, which make data modelling and data representation characteristic of pictorial expression based on forecasting.

It should be noted at this stage, that the choice of digital visualisation technologies play a crucial part to the understanding and design of pictorial genre. GIS-based visualisation systems typically distinguish themselves significantly from CAD-based systems in that GIS fundamentally bases itself on a positivist scientific world-view whereas CAD-based systems traditionally has been aiming at depicting a conceptual substance, that is the visualisation of ideas. CAD-based visualisations seems thus to be more characteristic of visions, whereas GIS seems to be dominant in the field of data extrapolation in forecasting trend scenarios.

Conclusion

This presentation has demonstrated that Emmelin's theory may well be applied to the understanding, analysis, and strategic use of pictorial representation in architecture and planning communication. Thus we assume that his take on discourse of future may contribute significantly to the way we think of the pictorial aspect in "communicating spaces". The paper has developed Emmelin's theory further by advancing a system of categories for pictorial genre in architecture and planning. This has been done by demonstrating how future is constructed in pictures depicting spatial change; an inquiry which were based on Emmelin's four types of future discourses, and which addresses the construction of future in digital imagery from the world of architecture and planning. Secondly, the paper has pointed at the significance of the formal aesthetic level of expression in models and presentations. This elaboration focused primarily on the function of photo-realism, abstract model, animation, and spatial information software (GIS/CAD). The paper should lead the author to advance a more comprehensive theory of pictorial genre where the construction of future should be seen as an outcome of the way (pictorially) communicating spaces make use of dominant technologies, discourses, and means of expression.

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Note

[1]   Whereas it is true that most of Emmelin's empirical work concentrates on landscape and regional planning, I do not see any significant problems in applying his concept also to the field of urban planning as well as the way we understand and depict change in terms of architecture.