

# Intuitive and rational ways of thinking in design process steps

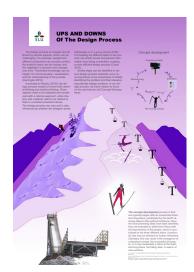
Petra Thorpert, Stefan Sundblad, Ivar Janson, Madeleine Mellby, Therese Malmberg Morales, Linda Sjöqvist, Sara Maksimov, Alexander J. Weisend, Eduardo Gómez, Lisa Jonsson, Alma Lindahl, Karoline Klingborg, Helena Gredvall & Takakazu Sonoki.

The transformation during the various phases in a design process may move from a broad context to detailed facts. According to Cross (2018), a frequent shift in attention or activity mood may influence the quality and overall result. By moving between rational/critical thinking and a flow of creative and intuitive flux, an essential give- and take approach for a successful design process arise (Murphy, 2016). This factsheet shows some essential phases of the design process, and focuses on intuitive and rational thinking as well as narrative design as a method for connecting essential phases in a design process (Lawson, 2005; Murphy, 2016).

The factsheet is the product of the students' work with *Procedural Theory* in the course Urban Landscape Design during the spring term of 2024. The aim of the assignment is to reflect on and communicate urban landscape design working processes, by studies of procedural theory. The assignment considers elements that, in various ways, affect the interaction between method development, analysis and conceptual statements, from sketching processes to the final design proposal.

The course Urban Landscape Design (LK0400) is an independent bachelor's level course focusing on design of urban green spaces, offered at the Swedish University of Agricultural Sciences, and run by the Department of Landscape Architecture, Planning and Management (LTV faculty). The course considers elements that, in various ways, affect the interaction between analysis and development of methods and concepts through studies of design theory, from sketching and doodling to the final design proposal. Landscape visualisation is an important theme throughout the course, and helps to increase the student's awareness of the interplay between contextual relations and concept development. The students are encouraged to apply experimental approaches, where analyses and evaluation are mixed with theoretical reasoning. The main aim of the course is to use different ways of working with design in the urban environment, and - supported by design theory and good examples - apply, document and present design processes, both individually and in group work.

The following abstracts and poster presentations present the students' thoughts and reflections through visualisations and descriptive text, and show an attempt to verbalise the sketching and doodling steps/phases and related mental activity during the design process. The assumptions made and described in this factsheet are based on literature studies of procedural theory, as well as on the students' previous experiences of the design process and through individual and group reflections and discussions.



# Ups and Downs Of The Design Process

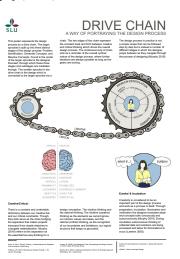
By: Ivar Janson, Madeleine Mellby, Therese Malmberg Morales & Linda Sjöqvist

The design process can take different shapes from person to person and varies depending on the number of participants involved. The process is complex since it is affected by several

aspects which can provoke conflict. Therefore, it is important to have theoretical design knowledge to use as a tool for communication and visualisation and to favour comprehending the process. The designer often starts with a structured approach, while the design process may begin with adding solutions to the problems. The design process can be decomposed into stages to highlight the problems and important information while making it efficient.

The two more significant stages are analysis and concept development. The analysis includes, amongst other things, function and user. This essay will focus on the concept development.

The concept development incorporates brainstorming, sketching, ideas, evaluation, developing the chosen idea, and details. Every stage in the concept development ought to be relevant to the analysis. The process is rarely followed in a straight line, rather, it alternates back and forth between the different steps. For example, brainstorming is a free flow of ideas without obstacles. After or even during the first stage, the sketching process starts, used as a tool for communication and visualisation. During the sketching, several ideas start to take form. Before going any further, a comparison between the analysis and brainstorming is necessary before evaluating the ideas. After evaluating the combination of the ideas with the problem that needs to be solved, the next step is to choose which idea is good enough to continue to develop, compare it with the previous stages and analyse it to mirror the requirements. The concept will be made more detailed in the last stage before it is finally finished and presented. As there are no right or wrong answers, it is more efficient to develop partial solutions rather than start from scratch. This is called the strategy of gradual development. Ideas may occur at any time. The accumulation of concepts, examples and discussion can result in what seems like 'creative leaps'. Supportive references: Cross (2018); Herrington (2016); Murphy (2016).



### **DRIVE CHAIN**

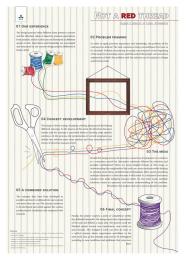
A way of portraying the design process By Sara Maksimov, Alexander J. Weisend & Eduardo Gómez

The design process can be described as the logical sequence of principles that serve as a methodological and therefore reliable application of knowledge. The academic scope has helped develop pro-

cedural theories to facilitate the work of designers, thus equipping, and providing them with guidance, preventing designers from finding themselves rolling dice especially when it comes to conflicts in the landscape. Procedural theory helps us understand the landscape, its functionality and how we can provide the most suitable means to realize them. Nonetheless, design realization can seldom be achieved by contemplating traditional and rational trails of thoughts. They provide logical progression and guide a designer toward a design conclusion. But in order to achieve avant-garde, thorough and long-lasting outcomes, the design process must include, besides the rational analysis, an intuitive analysis. This intuitive analysis comes within the designer, and it is characterized by the assembly of our thoughts and ideas, our cultural heritage and upbringing, but also our moments of incubation and illumination. These moments, which occur both consciously and subconsciously, are instruments to evaluate and reform the gathered information as well as solutions to the problem at hand. Incubation provides clarity and it also allows for new ideas to emerge. Illumination seems to happen during incubation and how and why illumination occurs is unclear, but some state that it has to do with the brain's ability to reorganize and reframe the data collected during the more intense working period.

The design process is represented here as a drive chain, just like the one we see on bicycles. It consists of a larger sprocket containing, the Problem Identification, the Generation of Concepts, and the Resolution of Concepts. Within the larger sprocket sits the designer, through which connections between the surrounding stages are formed and appraised. The smaller sprocket represents the Design. The stage where everything ends but also begins, the outcome and the culmination of the issue. The design, although illustrated in a smaller size, is an essential part of this cyclical development, inherently and infinitely connected to every other aspect of the larger sprocket. And the chain, the linking mechanism between the two sprockets, embodies the alternating and often ambivalent process of the designer whose way of thinking shifts between creative and critical. The continuous loop of the chain portrays the repetitive nature of the design process.

Supportive references: Cross (2018); Hoffmann (2019); Murphy (2016); Lawson (2005).



### **Not A Red Thread**

By: Lisa Jonsson & Alma Lindahl

The complex problem
The design process is an important method for several professions, including landscape architects. Landscape architects strive to solve complex problems that include both social and ecological issues that the society faces (Milburne and Brown, 2003). The relationship between

research work and design is considered important for the successful solution of complex problems. It is therefore important not to apply simple solutions but to develop methods that involve creative thinking and scientific research. Complex problems require creative solutions and adaptations to specific problems. The design process can be easier to define than the research work itself because the reacher work includes both experiences that may include previous projects, but also more difficult to define impressions such as an everyday walk (Milburne and Brown, 2003).

The design process - not a blank piece of paper A project usually has a start and end date, but there is a time before and after. No project starts as a blank piece of paper; all places have a history and consist of different relationships between the land and the people who used the place in the past (Lawson 2005). After a design project is completed, the further design of the place depends on its use and other external conditions. Landscape architects thus need to understand and appreciate time cycles and the timing of activities in public spaces. The environment also changes over time, which must be

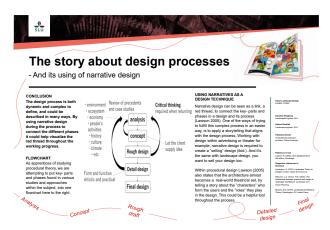
taken into account (Camora et al 2010). That being said, all projects are rather about redesigning a place and being flexible to future changing conditions (Herrington 2016).

What happens in a design process can be described in different ways. An analysis of the site, problem description and concept development. How it is visualized and which approach differs between different people and also in the literature (Milburne and Brown, 2003). Architects and landscape architects usually avoid presenting multiple options to a client because it will result in a disjointed and messy design that lacks integrity (Lawson 2005). On the other hand, multiple solutions create transparency and involve the clients perspective and to get more information (Lawson 2005). The multiple solutions that have been developed in parallel can be combined into one concept and create new experiences for the next project.

### Experiences

To summarize, a design process can be very diverse, as everyone has different experiences and preferences. There is no right and wrong. In a design process, it is important to constantly maintain a balance between being critical and realistic but also daring to be creative and try wicked ideas. The final design left behind continues to evolve over time and new experiences are added. New experiences, new threads, create other preferences for the next project. Studying design theory can give a better understanding of your own design process and allow for development through knowledge of other approaches.

Supportive references: Carmona et al. (2010); Cross (2018); Herrington (2016); Hoffmann (2019); Lawson (2005); Milburne and Brown (2003).



## The story about the design processes

By Karoline Klingborg, Helena Gredvall & Takakazu Sonoki

### Procedural design

As students in landscape architecture and landscape engineering, in this assignment we really got to experience the complexities of this dynamic field. The design process consists of various complex phases and steps, which could start with a problem statement and where the procedural theory is used to guide the designer towards the best solution. Procedural theory may not fully represent the true reality of the design process but can be used as guidance without constricting creativity.

Flowchart of the design process

A flowchart is included which for us synthesizes keyparts and phases from various procedural design studies. The flowchart we made includes the steps analysis, concept development, rough drawing, detailed design, and final design. The design process begins with a thorough analysis of the site, including its physical characteristics, historical context, climate and existing ecological systems etc. This analysis guides the development of a conceptual framework that establishes the goals and principles of the design, including the clients input and collaboration. The implementation phase of the design process involves translating the conceptual framework into a first rough design proposal. When you move the first draft into the detail design phase, the balance in the design between form and function begins, and where management and maintenance must also be implemented. Through all these phases, critical thinking is important in making the right choice of design by re-analyzing the steps various times to arrive at the final design.

### Narrative design

In this assignment the role of adding narrative design is explored in the overall design process. We argue that narratives can bring depth and meaning to designs, helping to convey a story and establish an emotional connection with the users. Narrative design allows designers to create a cohesive and engaging experience for both users and the design team by integrating storytelling principles into the design process. The storytelling within a design practice also seems to help cement the design team together around this shared world and story. By integrating storytelling principles, landscape architects can create designs that not only respond to the functional requirements but also engage and resonate with the users on a personal level. The narrative design can help evoke emotions, create memorable experiences, and communicate the intended message. As they also do in advertising and on theatrical sets for example.

For example, a landscape architect working on a project can incorporate a narrative design that tells the story of the park's historical significance or cultural heritage. By creating a design that reflects the site's narrative, the architect can foster a sense of place and cultivate a deeper connection between the users and the park. This narrative can be conveyed through various design elements such as interpretive signage, thematic planting, and spatial arrangements that reflect the historical context, or the cultural values associated with the site. This integration of narrative design into the design process could enhance the overall quality and impact of landscape architecture projects.

# Supportive references:

Herrington (2016); Milburne, L-A. (2003); Murphy, M.D. (2016); Lawson, B. (2005).

### Conclusion

In various forms of site design, designers must identify effective methods and tools that serve the goal of creating meaningful solutions for both people and the environment. The students' exploration of the processes they navigate around, while tackling design tasks across different courses, contexts, and scales has resulted in a diverse range of approaches.

It is intriguing to delve into the students' varied methods of describing intricate mental processes, where they emphasize strategies to foster creativity and personal expression. Each group has attempted to construct a model, drawing from literature and personal experience, generating generalized statements about different phases in the design process to varying degrees. However, there is a risk in articulating the design process in overly defined steps, as this may create unrealistic expectations for a universally functional model. Each mission and location is unique, necessitating partially distinct processes, as emphasized by all the abstracts in some way.

A common thread among all the groups is the recognition of the iterative nature of working, where the described phases interact. They all highlight the importance of evaluation not only after completing work but, more crucially, throughout the process. This underscores the design process as inherently iterative.

This factsheet emphasized that both rational and intuitive approaches play significant roles in the design process. However, to enhance the possibility of creating an 'avant-garde,' one must allow the intuitive segments of the mind to be an integral part of the process. It also stress the importance of finding a balance between creative and critical thinking (Murphy 2026). Furthermore, the potential of using a narrative approach to evoke emotions, create experiences and as a communication method is highlighted. This offers an interesting means of communication with a site, stakeholders, and users to create places with unique meaning and experiential value.

In summary, the students show a nuanced view of the complexity of the design process, were both an intuitive, creative and rational approach is an important tool in the journey to find their own unique working process. From the perspective of a group activity and the task of

working with a personalised process, the students have performed well and been successful in demonstrating the ability to extract the principal ideas of Procedural Theory. The presentations in this factsheet show the students' increased understanding of their own assumptions in the design process, and development of their critical approach. We, as teachers on the course and practicing landscape architects, would also like to take the opportunity to thank the students for interesting and fruitful discussions about the mental progressions, sketching and drawing procedure during the design process.

Further information about the course Urban Landscape Design, see <a href="https://www.slu.se/en/education/programmes-courses/course/LK0400/30239.2122/Urban-Landscape-Design/">https://www.slu.se/en/education/programmes-courses/course/LK0400/30239.2122/Urban-Landscape-Design/</a>

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