A Pragmatist Theory of Design
A Pragmatist Theory of Design

The Impact of the Pragmatist Philosophy of John Dewey on Architecture and Design

Leif E. Östman

PhD Dissertation
School of Architecture
Royal Institute of Technology

Stockholm 2005
Abstract

This study is an inquiry into design-theoretical aspects of architectural design in Finland based mainly on the pragmatist philosophy of John Dewey. The study comprises two case studies. The first case deals with a young family designing their future home – a detached house built from prefabricated components – in cooperation with an architect. The second case deals with the design process of a leading Finnish architect, Professor Ilmari Lahdelma, as he prepares his proposal for an architectural competition for a new city library in Lohja, a competition he eventually wins. The case describes and interprets Lahdelma’s design process, the processes of other competition entries made by the office staff, as well as the process of the jury’s evaluation of the competition entries. The two cases are analysed and interwoven with aspects from three different theoretical perspectives: existing design theories, Pierre Bourdieu’s field theory and John Dewey’s thinking regarding art and research. In the study I argue that Dewey’s philosophy can provide a framework for a design-theoretical epistemology. I also arrive at conclusions regarding the interpretation of some key design-theoretical concepts and the position of design theory and its structures. I further argue that the Finnish architectural competition system is a strong tool for generating developments in the production of the architectural avant-garde, which acts as the leading light for the rest of the field of architecture. The present study also highlights the gap between ‘high’- and ‘low culture’ in the field of architecture, yet points out that the design of a simple family house – assumedly a case of ‘low culture’ – is by no means trivial to the family itself, and is indeed filled with moments of aesthetic experiences, which is a central issue in Dewey’s description of creative processes.

Key words: design, design theory, design knowledge, avant-garde, pragmatist philosophy
Abstrakt


Sökord:
design, designeori, design kunskap, avantgarde, pragmatisk filosofi
For Carina, Lina and Filip

Preface

This inquiry into pragmatism and design theory has been a most interesting experience and am thankful to all those that have helped me in the enterprise. I am especially grateful for the advice from Professor Jerker Lundequist at the Royal Institute of Technology, Stockholm. I would also like to thank architect Gareth Griffths for the critical comments he made when proof-reading the text.

I am also grateful for the financial support I’ve received from the Anja och Karl-Erling Nymans stiftelse and the Svenska Kulturfonden.

Maxmo, January 2005

Leif Östman
PART 1: Introduction

1. INTRODUCTION
THEORIES OF DESIGN 5
    Positioning design theory 8
    Design Theory and pragmatist philosophy 11

THE ORGANIZATION OF THE TEXT 14
    An overview of the content 14
    Conclusions 17
    About the title, and what it is not about 21

2. POSITIONING THE RESEARCH
RESEARCH IN DESIGN PROCESSES AND COMPETITIONS 29
    Single-family houses and client participation in Finland 30
    Architectural competitions 30

INVESTIGATING DESIGN RESEARCH 34
    Influences from Wittgenstein 36
    Pragmatist research strategies 39
    Methods 44
    CONCLUSIONS 47

3. ASPECTS OF DESIGN
INTRODUCTION 51
    Design history 56

DESIGN KNOWLEDGE 58

MODELLING 64

DESIGN REASONING AND RATIONALITY. 68

AESTHETICS AND AESTHETIC QUALITY 71

ARCHITECTURAL DESIGN AS A PROFESSION 77

4. DEWEY AND THE PRAGMATIST TRADITION 83
INTRODUCTION 85
    Pragmatist philosophy 88
    Dewey 90
    Later pragmatist thinkers 93

DEWEY’S THEORIES ON CREATIVE ACTION 95
    The process of research 95
    Dewey’s theories on art 99
    A classification of experiences 101
    Aesthetic experience in design 105
    Rationality 107
    Popular art and criticism 109

OUTLINING A THEORY OF DESIGN 114
    CONCLUSIONS 117
5. BOURDIEU AND THE AVANT-GARDE
INTRODUCTION 121
THE FORCE-FIELD AND ITS CONCEPTS 126
The avant-garde 134
Economic capital 136
SCIENTIFIC INVESTIGATIONS OF ARTISTIC CULTURES 138
BOURDIEU’S PERSPECTIVE AND DEWEY’S PRAGMATISM 139
DESIGN CULTURES 142
THE MATURATION OF THE FIELD OF ARCHITECTURE 145
CONCLUSIONS 150

PART 2: Case studies

6. CASE 1: The Client as Designer 157
INTRODUCTION 159
Method 160
The parties in the design process 161
PREFABRICATED CONSTRUCTIONS 163
The manufacturer of components and the assembly 165
THE SITE 167
The history of the site 167
The family’s journey to acquiring a plot 170
THE DESIGN PROCESS 172
Professional design support 172
OTHER FACTORS 202
Influences of society and authorities 202
Urban planning 203
Building permission 203
”A BREATHING SPACE” 204
INTERPRETATIONS 209
A comparison with the pragmatist theory of design 209
Modelling and testing 211
Reasoning 212
The client and aesthetics 215
Shortcomings in the design of owner-occupied houses 217
Differences between the architect and client 220
The client as designer — A crisis of the architect’s identity 222

7. CASE 2: THE DESIGN COMPETITION 227
INTRODUCTION 229
THE ARCHITECT’S OFFICE 233
A day at the office 236
The architecture of Lahdelma & Mahlamäki 237
Johdanto – The winning entry 240
THE DESIGN BRIEF AND THE JURORS 246
THE DESIGN PROCESSES 251
The design process of Ilmari Lahdelma 252
PART 3: Conclusions

8. THE IMPACT ON ARCHITECTURE 313
   INTRODUCTION 315
   THE CASE STUDIES 315
   THE AVANT-GARDE 319
   A PRAGMATIST THEORY OF ARCHITECTURE 323
      A comment on the development of current research 326

9. A THEORY OF DESIGN 329
   INTRODUCTION 331
   STRUCTURING THE DESIGN FIELD 335
      Design knowledge 339
      Concept interpretations 341
      Some proposals and problems 345
   RESEARCH IN THE FIELD OF DESIGN THEORY 348

10. CONCLUDING REMARKS 353
    DEWEY’S PRAGMATISM 355

References 359

List of illustrations 363

Appendix
   1. Aesthetic Quality in Project Management.
   2. Architectural Competitions in Finland 1-2003 (Kilpailuliite)
Part 1:
Introduction
INTRODUCTION
THEORIES OF DESIGN

Sorting out some distinctions

Design theory is regarded as a marginal discipline and has always been under pressure from design practice, resulting in the many attempts over the last 40 years to justify its existence. Design theory has had little influence on design practice and has received little attention from the other high-profile research communities. However, I think this latter situation is coming to an end. Design theory is in a state of change – including the potential for a big change in epistemology. In recent years there has been an increase of interest in theory, due mainly to the emergence of new parties interested in design, seen by them as a process creating innovations. Innovation plays an important role in the current theories of macro-economic growth and successful business performance. New research communities, such as management science and marketing research, have taken a keen interest in design. For instance, there is currently a very strong interest in “consumer interests”, upon which design is seen as dependent. Consumer desires are seen as one of the most important agendas for design research. I am reluctant, however, to accept such a simple picture. On the other hand, researchers in the field of management are not known for asking advice from the scholars of design theory, but rather focus their research efforts on looking for new knowledge. The design communities are obsessed with the question of praxis and its relation to research, and we are often caught in the question of whether there is any potential usefulness in design research or even whether design itself can be seen as research. Most practitioners aren’t interested in design theory. They want useful information. They want to try out new ideas, to focus on design problems, potential objects and their qualities. They know the design process. They know how to design. Most scholars agree that it is very difficult to improve the skills of the design practitioner by teaching design theory. On the other hand, there is a need for a theoretical understanding of design. We need to discuss it, to manage it, and to develop it. Design is important in many different processes. An understanding of good design practices reduces potential negative effects, creates added value and meaning, and promotes aesthetic experiences and cultural development. Design research and theory are tools for improving the understanding of these issues. The theoretical findings of design research can be useful at the abstract level of discussing design problems, methods and the organisation of design processes. In the long run, it will also influence design practice. Science in general is seen as efficient, but said to have a delay of 30 years before it enters into practical implementation. I think this is true in the design field, too.

Design is a core element of human culture and its development throughout the history of man. Instead of seeing science, culture or art as the most significant expositions of human culture, we could pick out design as an distinguishing trademark of human cultures. By design I here include all kinds of creative action, changing something into something better or preferred. It should be mentioned that the word ‘design’ is charged with a narrow meaning in the Scandinavian languages: ‘design’ is interpreted as industrial design, denoting an emphasis on good taste.
In this study, however, design is interpreted as a universal concept, including all types of creative action, including industrial design, engineering design, software design, organisational design, architectural design, and many others. I use the word ‘innovation’ as a neutral word for notably new design; that is, that which clearly includes new features or breaks with tradition, regardless of whether it is in the artistic fields or some other design field. One of the basic assumptions behind the present study is that design is a common competence, with some basic shared features when applied to different fields. One such feature is aesthetic experience, or the capability to distinguish aesthetic quality as a central vehicle in design work, regardless of which sub-discipline we are discussing. This is an idea that I have picked up from the pragmatist philosophy of John Dewey, which functions as a founding theoretical framework for the present study. But before we go any deeper into the subject, I think it’s necessary to clarify certain issues. The distinctions I pick out are only general observations without relying on any deeper theoretical analysis or literature-based survey. Still, I think they can provide a basic orientation and prevent mistaken assumptions.

The meaning of the word ‘design’ is ambiguous, and can denote various things. First, it denotes both the process and the object. As I see it, there are at least three other potential interpretations of the word:

- Design is a professional activity – largely executed as technology-oriented design professions.¹
- Design is a basic type of knowledge, and necessary in all professional activity or intelligence in action² applied in all sorts of developmental activities.
- Design is a distinctive type of knowledge, a type of knowing in creative action.³

The characterization of “good design” also varies. As I see it, the expectations can be characterized as:

- An unproblematic process, producing rather predictable results.
- To create objects seen as desirable by the consumers.
- An innovative artistic production celebrated by the critics.
- The generation of innovations.
- An interesting process and result, important to the designer’s personal individual development.

These are only preliminary sketches, simplified interpretations which I will attempt to differentiate and explain in the course of this study. The aim here is only to show the variety of interpretations. Also in this study I will claim that designers of a field don’t have a hegemony on taste. What is ‘good’ is determined by the client, the designer, the audience and the elite of the field, and they will not always agree. I rather prefer to see it as typical for design that there are a multitude of opinions and evaluations. Design is produced in a social fabric of designers, users, critics, clients, buyers, consumers and dealers, yet largely influenced by the ideas of the elite or avant-garde of a field.
Design practice and design research have many things in common. Both design and design research incorporate knowing, and include the use of research and research data. Reliable facts are rare in both design and design research. From a pragmatist point of view, research itself is a kind of design – a way of constructing an understanding. In order to avoid confusion, I think it’s necessary to make some distinctions between design practice and design research, and, as I will propose, between design research, criticism and design theory. These distinctions basically stem from the pragmatist philosophy of Dewey, but are my own interpretations for the field of design theory. In a simple manner, I think we could take the outcome of these processes as the distinguishing feature:

- Design practice primarily aims at producing something, an object.
- Design research primarily aims at producing knowledge and theories.
- Design theory aims at producing theories of features of design, shared with various design disciplines.
- Design criticism aims at supporting the experiences of design.

It’s evident that these activities often produce more than one outcome. Design practice and criticism will produce knowledge and theories. Design research will produce objects and experiences alongside knowledge and theories. Still, I think the distinguishing outcomes listed above can at least provide a provisional categorization of various practices related to design. I think the separation of different realms in design-related actions provides a better starting point than claiming that there is no need to differentiate, for example, between design practice and design research.

You must keep in mind that philosophy doesn’t provide any prescriptions on how to design. Neither can a theory of design provide this knowledge: indeed, it would be against the innovative and creative nature of design. Philosophy and design theory can only provide simplified guidelines for understanding and actions. The outcome of a design process will always, to a large degree, be dependent on how we act and react in particular situations. The particularities of a design process can never be fully addressed in theory: if that were possible, then it would not be a design process. A lack of definitions or definitive descriptions doesn’t preclude the possibility of showing, articulating or potentially knowing and understanding features of design. It is also possible to express some parts of this understanding by means of theory.
Positioning design theory

In order to create an understanding of the field of design research, I would like to divide the field into a number of categories. This categorization will not provide a full picture of the field but a support, nevertheless, for my introductory reasoning. I would like to distinguish between research into design processes and other issues concerning design, for example research with the focus on consumer markets, design management, and other various influencing factors. I pick out the design processes, as a specific category, with a focus on the creative processes. Within this area, I distinguish at least four different traditions towards the study of design processes:

1. A scientific approach, where the design process is taken apart and explained, by means of models, definitions and theories.
2. A systems design approach, with the main goal of constructing new and more efficient systems for problem solving and systematic design.
3. The methodology approach, with the goal of finding and developing design methods, as step-by-step prescriptions.
4. The partial perspective, where the goal is to articulate aspects of the design process, but where we assume that we cannot fully explain it.

The fourth approach is applied in the present study. The perspective stems from the analytic philosophy of Wittgenstein, but it’s by no means in conflict with the pragmatist philosophy of Dewey. Dewey was interested in improving problematic situations and in development generally. He had little interest in explaining or even defining the world and its problems. For him, the most fruitful research approach is not to describe the world but to provide people with means to manage their problems (Hickman 2001, 182). One tool of the research and philosophy is theory – seen not as fixed truths but as means to grasp the situation and to enable a fruitful discourse on the matters. The theories in a pragmatist-perspective should be stringent, but need not aim to be eternal theorems. A theory should be a productive proposal on how things are, and how they could be improved. The strength of a theory is not necessarily its correctness or a fixed truth. Its value lies, above all, in its potential for triggering new insights and development.

Design has its own history based on art, crafts and technology, which is problematic due to the diversity of the epistemological world views, where the epistemologies of technology and science dominate today’s research communities. Neither the crafts nor art has had any pronounced epistemology, whereas technology entails a distinctive epistemology, due to its pre-established relation to research and knowledge. Technology is generally seen as the application of the knowledge generated by scientific research – applied to the real life problems. By science I here mean the natural sciences, within which there exists a strong viewpoint that the scientific way is the only true way of knowing or understanding the world. Things that cannot be explained in a scientific way are not interesting and have to be left without consideration. The scientist thinks, nevertheless, that we might eventually find a way to describe these matters in a scientific way – and they would have to be described in a very precise way, as a theorem, based on exact
definitions and validated through reliable experiments and logical reasoning. The means of science are deductive or inductive reasoning, providing definitions and a reduction of complex problems into relations and manageable pieces. Pragmatist philosophy doesn’t deny this, but sees it as only one way of studying and knowing the world. It doesn’t deny the necessity of rigorous and systematic elaborations or the need to express the relations and findings in an explicit, logical reasoning. Still, one demarcation line between pragmatism and traditional scientific thinking lies in the understanding of reasoning itself. In the former, reasoning is not to be reduced to pure mathematical reasoning. The logic of scientific reasoning has a very strong validity and should be applied – if possible. But most problems aren’t that simple: most problems are very complex and cannot be reduced without losing too much of their properties. A second demarcation line is found in the epistemology, or world view. For the pragmatists – in the tradition after Dewey – technology is the reigning problem-solving method, and science is only one of its applications. This turns the scientific world view up-side-down, but in doing so liberates a lot more power of investigation, thus bringing many more subject-matters into the discursive treatment of the scientific methods. The pragmatist view of research provides means for explaining the complexities of the world, and constitutes a basis for a different research strategy, one which could be fruitful for design research and design theory.

The present study is an exploration of design processes at a philosophical level – i.e. based on reasoning – but also at a basic level of design practice – i.e. with a regard for creative actions. It’s an attempt to both articulate concrete aspects of design and creative processes and to lift the findings and research discourse to a philosophical level. Part Two, dealing with the two case studies, articulates the design processes and their contextual settings, interpreting them by means of existing design theory as well as other theories. In doing so, I try to put into words my own reflections concerning the case issues, while at a meta-level I try to sort out the most distinctive ideas found in the cases. I also address the contradiction in current design theory, in trying to be both a theory dealing with the rather limited number of shared subject matters of the design fields and an all-enclosing academic design research field, integrating the large variety within all design fields. What design theory needs is at least some clarification of concepts and positions.

We also have to reconsider the state of the art of design theory. What is design theory? What is its aim? There is a general acceptance of the idea of design as a universal type of knowledge inherent in many different professions and activities. Many authors refer to Herbert Simon, who defined the discipline of design as “the science of the artificial” (1969). Simon made a relevant assertion, and argued in an appropriate manner about the subject. However, his main interest was artificial intelligence, which makes his further explanations rather poor regarding the issues of basic design theory, because they aim at a systematic explanation of the process. I do have some answers to my own questions about design theory and its aims – answers dealing with design theory as a research discipline. Design theory is a philosophical discipline, a reflective discourse on design issues. It is a meta-discipline integrating ideas and findings from many different fields. Design theory focuses on the shared stock of knowledge, reflecting on similarities and differences.
between different theories, models and design fields. The approach is integrative, striving for shared theories on the basics of design processes, on a purely theoretical level. The various design research fields, on the other hand, deal with both empirical and theoretical issues, and thus diverge. They are bound by the traditions of their own fields. This creates a dilemma! Design theory aims at integration, while design research has to be specific, dealing with the particular – increasing the knowledge of particular processes in specific fields. My answer to the dilemma is that we have to accept the pluralism of the fields, yet also continue to process the information gathered in design research, sorting it, classifying it and comparing it with other theories. The goal in design theory is to ascertain a stack of consistent and generally shared theories of design, explaining the most crucial aspects of design. The goal of design research, however, is different. In design research we focus on issues of a specific design field and investigate it according to the traditions and methods of that specific field. This research will result in field-specific theories and explanations and will inevitably increase the distance to other design disciplines.

These ideas pose new questions: What should we do in design theory? If it is a philosophical discipline, should we put the real issues aside and restrict design theory to basic theoretical reasoning? No, I think this would be wrong. It is appropriate to reflect and apply the methods of philosophy on different aspects of the design process on a theoretical level – to criticize and test ideas and theories by logical reasoning – but we still need some kind of input. I detect three potential types of input:

- Borrowing theories from philosophy or other disciplines.
- Absorbing findings from empirical design research.
- Combining empirical research with philosophical reasoning, lifting the research findings from an empirical and specific area to the shared area.

I think it’s reasonable to think of design theory in this way – as a theoretical discipline separated from the pluralism of the various design fields, with their strong relation to design practice. I think design theory might be beneficial to the structure of the design field at large and this demarcation need not prohibit the mutual infusion of ideas. The difference in aim might help clarify the structure of the field at large and the output could provide the design fields – especially research, management and administration – with a more distanced and clear-sighted perspective on design. We can have a continuous exchange with the design research of different fields, both as input but also as an output to these fields. One should, of course, not be too optimistic about the potential of the output; but, if we believe in the idea of a shared common ground, it seems reasonable to think that an exchange would be fruitful. The reason for my desiring a distinctive separation of design theory from the various fields of design research is that it would be more clear-cut and distinctive, and could thus provide design theory with a clear mission and a lucid structure and, furthermore, potentially allow for a more productive communication across the borders of the design field. The advantage of pragmatist philosophy is that the border lines erected must not be seen as barriers. It’s still possible to cross over to the other side and look for new angles of approach.
The task of philosophy is also a ‘designerly’ one; in Dewey’s philosophy, in Hickman’s words: “to provide fresh ideas so that specialists in these fields can determine whether their cherished ideas and values are in fact appropriate to their changed and changing circumstances” (Hickman, 2001, 25). In the field of design – due to the *art of knowledge* in the design fields – it’s appropriate to turn this the other way round. The knowledge is closely connected to design practices, which means that it’s very difficult for a non-designer to have a deeper understanding of the issues in the design fields. I think we need designers that can lift the understanding to a higher level of abstraction, providing the theoretical framework that produces the new insights Hickman talks about. Designers are good at generating new ideas, but there is a specific dynamic in processing ideas on a theoretical level through a reasoning that is more explicit than the reasoning included in design in general.

**Design theory and pragmatist philosophy**

Starting from Simon (1969), several authors have proposed that design must be seen as a different type of knowledge and scientific enterprise – different from what we normally see as knowledge. Lundquist cites Pelle Ehn and states that this perspective is combined with an interest to prohibit the tendency to monopolize one perspective on design knowledge (1995, 76). Design theory has its origins in the engineering sciences, but it is not like the natural sciences, nor is it a social science. I have chosen the pragmatist philosophy of Dewey as an appropriate philosophical foundation for design theoretical reasoning, as it includes a distinctive theory of knowledge and research. It can integrate both the scientific methods, the reflective and interpretative methods of the social sciences and the humanities, but it cannot be fully understood in the light of one of these. It needs its own paradigm or epistemology. Dewey saw the scientific method as the method *per se*, in the sense that it’s explorative, experimental and focuses on real life problems (1958, 36ff). Dewey’s philosophical theories, both on research and art, are theories of creative action, exploration and development. He made no definitive distinction between artistic, scientific or professional knowledge (Dewey 1934). All this seems adequate in an approach discussing design on a philosophical level. It seems possible that this philosophy – with its broad view of research – would allow for a closer study of design knowledge and processes, despite the tacit and intuitive proceedings embedded in design methods. As Detlef Horster puts it: ”Die Denkweise des Pragmatismus eröffnet einen Weg, die Kluft zwischen Theorie und Praxis zu verringern” [The pragmatist way of thinking opens a new road that can reduce the gap between theory and practice] (Horster 1991, 56). Dewey’s *pattern of inquiry* (1934, 101ff) presents a research approach that can help bridge the gap between theory and practice, which seems necessary in design research. Furthermore, the current design theory based on Schön’s ideas about professionals’ actions and thinking inhibits concepts derived from this philosophy (Schön 1983, 1987). A closer examination of Dewey’s philosophy allows for a better understanding of design. Schön was foremost interested in the thinking of professionals in general,
not in exploring design as such. I find his attempt to change the understanding of
design knowledge agreeable. Dewey and Schön both attempted a change in the
paradigms of knowledge. They wanted to change the attitude towards knowledge,
towards an acceptance of design thinking and a pluralism of knowledge.

Dewey’s philosophy is *de facto* a theory of design in a broad sense. It is, of course,
not written as a theory of design but primarily as theories for promoting better human
action and life. One of the implications to be found in Dewey’s theories, in addition
to his theories of creative action, is an interest in development, research and ethics –
providing means for controlling actions in an insecure world. Here it’s important
to notice that design is about creating something unknown, creating something
preferable and responding to expectations. The only way we can know something
about the future is through modelling. We cannot really know it, but we can create
a reasonably reliable understanding of the future through skilful modelling. Theory
is a tool for reasoning about the future and controlling it, which is a central aim in
Dewey’s theories — with inquiry as the very means for controlling the changes and
processes, producing favourable outcomes. Dewey claimed that we have lost our
authorities (religious faith and other authorities), and for that reason we have to try
to recreate a compensating state of security (Campbell 1995, 81), which is done
through experimentation and reasoning. This stands in contrast to the presumptuous
view that we already know enough and that we are in full control of life and society.
Dewey’s philosophy includes a great deal of ethical convictions, which he saw
as grounded in logical reasoning rather than moral imperatives (Ibid., 122ff). The
application of Dewey’s theories on design theory produces a new perspective on
design and design research. This I use as a means for interpreting some central
design concepts, and in doing so it creates new insights.

Dewey’s philosophy of art also tries to dissolve the hegemony of fine art. Fine
art is only one type of artistic or design production and its way of interpreting
design is only one of many perspectives. In the pragmatist perspective, it’s natural
to see the design process in a broader perspective and to recognize such different
ingredients as the situational context, artistic traditions, values and power relations.
We can avoid the reductive perspective that focuses mainly on object qualities or
simple step-by-step methodologies. When it comes to aesthetic principles, Dewey’s
perspective presumes a multitude of influences; they can be seen as influenced both
socially and individually, and design can be both commercial and artistic at the same
time. The aesthetic experience is still the core element in the design production.
This stands in contrast to traditional aesthetic theory, with its interest in only fine
art production and its consumption by an educated audience. Traditional aesthetic
theory has great problems in interpreting the tastes of other audiences — not to
mention interpreting the very process of having an aesthetic experience, which
normally is ignored because it’s seen as too fuzzy to fit the clear-sighted language
of philosophical reasoning. In Dewey’s way of interpreting philosophy, aesthetic
experience is not reduced to concept clarification and reasoning on an abstract
level, but can and should touch real life problems and actual situations, lift them to
a higher degree of abstraction and elaborate the issues to logical conclusions, thus
producing changes in our thinking and a development which is then brought back
to real life for verification:
“What empirical method exacts of philosophy is two things: First, that refined methods and products be traced back to their origin in primary experience, in all its heterogeneity and fullness; so that the needs and problems out of which they arise and which they have to satisfy be acknowledged. Secondly, that the secondary methods and conclusions be brought back to the things of ordinary experience, in all their coarseness and crudity, for verification.” (Dewey 1958, 36)

Another important issue that is often excluded from design research, and always excluded from scientific research, is emotion. In Dewey’s theory of creative action (1980), emotion is the fusing power, turning divergent ingredients of the design process, such as form, values and facts, into a unified whole – creating a synthesis out of something that we cannot successfully combine in any normal additive manner. Emotion is not to be excluded, and indeed forms an integral part in Dewey’s theory of creative action. It turns out to be a manageable unit in the understanding of the processing of design problems. Also, emotion is linked to our exercise of value judgement, which is central in successful design operations. We have to take this issue seriously and design theory has a special responsibility to criticise ethical statements and assumptions, or hidden or tacit ethical agendas, often used as foundations in design thinking.
THE ORGANISATION OF THE TEXT

An overview of the content

The present study is divided into three parts. This first part constitutes a background for the case studies discussed in the second part and for the interpretations, proposals and conclusions in the third and final part. In the first part I explain different aspects of design, in particular approaching the issues of knowledge, research and artistic production in relation to the writings of American pragmatist philosopher John Dewey (1859–1952), as well as other later pragmatist philosophers. In this study ‘design’ is seen mainly as a professional practice. One cannot avoid thinking of design as a universal capability – the creative action – but the target here is the professional design process. The study starts with an introduction to design theory. This takes the form of a presentation of different aspects of theory, while avoiding the idea of design as a simple step-by-step process. I refer mainly to the thinking of Swedish professor of architecture Jerker Lundequist. Though few of his writings are published in English his ideas still relate to the tradition of the Anglo-American academic world, with references to names like Nigel Cross and Bill Hillier, and to the ideas of Donald A. Schon, Peter Winch and Ludwig Wittgenstein. Most of Lundequist’s ideas can be found in the writings of these authors, even if some of them aren’t directly related to design theory.

I support my presentation of pragmatism with ideas from Richard Shusterman, Philip Jackson and Larry Hickman. I have also supplemented my argument with a brief discussion of the ideas of French sociologist/philosopher Pierre Bourdieu. My aim has been to make the ideas of the above thinkers available to the audience of design theory, where, as far as I know, they seem to be rather unknown. My aim, with the philosophical discourses (to which I also count Bourdieu’s writings) is not to provide a full philosophical investigation, but rather to introduce a different understanding of creative action and some central epistemological issues attached to it, and to construct a theoretical framework that could change the thinking in the design fields and provide implications for design theory and architecture.

Architecture is the ‘home’ of my own design knowledge and the context of the two case studies included in the present study. The study thus lies within the field architectural research, but also within design theory. I claim that design theory is a philosophical enterprise, from which follow certain implications, and especially from my chosen pragmatist point of view. My understanding of philosophy is rather limited, and I cannot execute any deeper philosophical dissections or referential feedback of concepts or ideas, though I find the ideas in these philosophies remarkable and powerful. I’m also aware that my presentation of Dewey’s philosophy lacks a deeper investigation of challenges made by his major critics. My answer to this is that the approach has been very productive and for that reason I have found that it is better to leave out certain aspects. Similarly, the productiveness of my two case studies made it unnecessary to include a third case study that was initially planned. I think the critical voices could provide a deeper understanding of Dewey’s philosophy but partly I also think there is little later criticism available, and that it
might be more useful to investigate how, for example, the philosophy of science in the analytic tradition is presently dealing with these issues. I still think it’s difficult to bridge from analytic or continental philosophy to the pragmatist tradition without deeper knowledge of the pragmatist tradition. My intention has, however, been to remain within the design-theoretical discourse. What I have done is to discuss the contradiction between Dewey and Bourdieu which is based on their different understanding of art and the art of living. Dewey’s *Art as Experience* (1934) includes an agenda for a well-rounded life as a kind of artistic experience and process. It also includes a democratic agenda, asking us to promote the potential of aesthetic experience that can be lived or had by all people. Bourdieu claimed, however, that the possibility of life as a form of art is possible only for the elite. I would argue that if the perspective is individual, rather than social, then there will exist space for the agendas of Dewey. We cannot, of course, escape the social perspective and it impregnates our lives, but we can still act on behalf of Dewey’s agendas, despite the current truthfulness of Bourdieu’s descriptions of today’s societies as divided into classes.

My initial target, in a simplified manner, is the division of design knowledge into artistic and non-artistic design, and the division between “fine art” architecture and the commercial and popular forms of architecture. On the other hand, my focus is on the early design stages, with an emphasis on ”disinterested” design processes. By this I mean the processes that are not driven by an (external) interest such as money or business profits but by a major interest in the design process and its cultural impact. As I see it, the early stages of design are bound to take their energy from interests other than money. I explore Dewey’s concepts of “aesthetic experience” and “having an experience” in regards to design processes in architecture, yet propose that aesthetic experience is an important feature in all kinds of design processes; for example, in engineering or organisational design – indeed, in all developmental processes. I have included in the appendix – as an ideational sketch – a speculative essay discussing the idea of aesthetic experience as an important feature in project management (Appendix 1).

Many design professionals react negatively when I spell out the word ‘aesthetic’, instinctively refusing the idea of aesthetics as a fruitful concept in design theory or design. I think they react against the idea of aesthetics as a canon – a set of explicit rules, guiding the design of beautiful objects. I share the conviction that aesthetics is very problematic as a canon, in the sense of determining what is beautiful. In this dissertation aesthetic quality is a central concept and the basis for much of the judgements in design processes. I accept Dewey’s interpretation of the concept, as a quality, based on human senses and experience, as a holistic and rather intuitive design judgement, combined with cognitive processing. It’s to a large part a non-conceptual, intellectual process, fusing the ingredients of a situation by means of emotion and cognitive processing. There is also a danger of confusing aesthetic quality with the idea of fine art. In Dewey’s interpretation, aesthetic quality by no means denotes solely the judgments made in fine art. It’s the basic human capability to judge aesthetically and to grasp a quality occurring in a process. Aesthetic quality is not a quality of an object but a quality occurring in an interactive process, with interaction between the emerging object, the context, the designing agents and their cultures.
Dewey’s theories and writings are rich and touch on many areas traditionally central to the Western intellectual tradition; but it is, of course, not complete. I would argue that Bourdieu’s writing are central to an understanding of the avant-garde and the relation between the designer, his/her consumers and other agents in the broader design community. These are not issues specifically discussed by Dewey. Bourdieu provides a structure, or a map, for the social context of the avant-garde, including convincing reasons behind it. Basically, designers don’t act in a broad homogeneous social space of designers and consumers, but in various distinctive social contexts. Designers are part of the “game”, and their clients, users or readers are part of the same game, though it is not a universal game in which everyone participates. Each game is unique. In reading Bourdieu’s book *The Rules of Art* (1996) one gets an understanding of the class division, the distinction between high and low art, and why it’s not possible to claim that one is producing designs matching the design interests of *all* people. There are different degrees of links to the economy, the avant-garde and the audience. This is important in design research, because professional design – different from art production – has a client, and professional designers work for money. Bourdieu’s text contributes to the understanding of competences, the professional codes and their relation to the consumers. During my research, my understanding of the codes developed through reading ideas about the architects’ profession (Spector 2001) and finally, when reading Stevens’ (1998) exploration of the culture of architecture I realized that it’s important to see the relation between design knowledge (or competence) and cultures, where the cultures or subcultures and their elite provide a set of codes for design work, especially at the top level. Accordingly, I think we should avoid defining the design fields by means of professional codes. These are only one limited part of the cultural codes.

Bourdieu’s ideas surprisingly often conform to the ideas of Dewey, but sometimes they are also in conflict. Bourdieu wanted a distanced, historical study of the social processes that contribute to the creation of the work of art. He was afraid the researcher would drown in the illusions of the field if s/he studied it from the inside. Dewey accepted various ways of studying processes, and had no angst for an immediacy to the ongoing processes or artistic fields. He even emphasised that good research primarily has to have a connection to real life situations. I have chosen the latter strategy, as I think it’s more fruitful in design research. I also think Bourdieu to some degree fell into his own much feared trap, and was blinded by the closeness to his own field — seeing his approach as the *only* true approach — implying that the sociologist’s perspective is the only legitimate (true) one. A pragmatist would be reluctant to accept anything that is presented as the *only* truth. For a pragmatist, there are many possible perspectives, and we should select the most promising ones.

The present study is a mixture of architectural research, design theory, philosophy and aesthetics. If we look at the various disciplines I touch upon, they have actually rather little in common. In architecture the focus is mainly on the objects and their qualities, in design theory the focus is on the processes, and in aesthetics on art criticism and interpretation. In the analytic tradition of philosophy, aesthetics has often been seen as a language-based meta-criticism. The intention of the later pragmatists — primarily Shusterman (2000, 2002) — in regards to issues of
aesthetics, has been to show the importance of art experiences, despite their linguistic inaccessibility. As I see it, this can potentially release the theory of aesthetics from its limitations. Aesthetics can be broadened to other non-linguistic issues, for example processes and practices. This would bring aesthetic theory closer to design theory and potentially stimulate a method of reasoning for design theory.

Dewey argues for a broader understanding of art and aesthetic experiences. Schön, who I see as a central theoretician in current design theory, has proposed that investigations into design practices should be made (1983, 308f), most appropriately as case studies (1995, 122). Thus it seemed reasonable to conduct contrasting case studies on design practices: one with a layman – a “novice” designer – and one with a top professional designer. In choosing a layman as designer, one could explore whether the non-professional design process can be seen as design at all, and trace whether any of the aesthetic experiences Dewey has written about are present. After commencing the first case study, I realized that there is something important and puzzling in the finer art of architecture, something that restricts my own design thinking – as a trained architect and researcher – making it virtually impossible to identify with the aesthetic codes of the lay designer. It thus seemed necessary to explore the higher level of design with a successful practicing architect as the central designing agent. This raised the questions: What is the avant-garde? And why are the codes of the profession so important? By ‘code’ I imply the living rules of a community, as established through actions and more or less unspoken social agreements. As an answer to this, I chose to conduct a case study on the subject of design competitions, comprising an exposition of competing talented designers together with a professional judgement on what is regarded as good design. Design competitions are held in high esteem among architects, and in Finland this has been even more accentuated, with competitions being run since the 1860s, and formulated by the Finnish Association of Architects (SAFA) since 1893. The span between the above two case studies is immense. However, the intention was not to compare these processes as such, but to use them as a means for illustrating some important features of design – seen as a process – including the peculiar experience called by Dewey ‘aesthetic experience’.

**Conclusion**

In the final Conclusion, I will push some of the ideas presented in the earlier chapters to new conclusions. One result is a conceptual framework generated from the pragmatist theory concerning the central vocabulary in design. The pragmatist philosophy of Dewey basically provides a theoretical model of creative design actions, with experimentalism and evaluative steps as the core elements – but due to a capability that one has to learn by training in an adequate design community. There is no simple truth or model that would provide a shortcut to successful design work, and the present study provides no methodological answers to this problem. Dewey’s theories allow us to comprehend the complexity of influences in design.
processes – instead of just noticing the qualities of the object or the lonely designing hero. In a way it puts us into the situation where design must be seen as, in Hirn’s words, a heterotelic activity, where artistic intention is only one purpose or goal among many other influences.

In the light of Bourdieu’s field theory we must differentiate between different designers and their aims. For those fighting for a position among the elite – the consecrators – design can have only one major purpose: art for art’s sake. As I see it, the historical development into this separation from the real task of architecture – to combine both artistic and utility goals – has been indirectly explained in an eloquent yet populist manner in Tom Wolfe’s critique of the introduction of the International Style in the USA, in the book *From Bauhaus to Our House* (1999). Architectural design has a complicated relation to commercial interests. The architects at the highest level of the architectural elite neglect the normal interest in commercial profit and endeavour primarily for an improvement in their own status within the profession and in the sub-culture devoted to the production of architecture as a fine art. However, at the top level there is also potential to make a lot of money. Artistically successful architects are often also commercially successful. This ignorance of commercial interests is repeated outside the elite, but remains mainly a rhetorical gesture, because in their position they seldom can afford to ignore the interests of the clients and profit.

From Dewey’s pragmatist perspective, the design problem is not a single issue, but a complex situation where designers want to make some improvements or changes. Aesthetic experience cannot be defined, yet can be said to be a positive, bodily-anchored response based on sense impressions, emotions and cognitive processing, all of which can guide actions and judgements. In the sense Dewey intended, aesthetic experience is not a canon of taste, nor is it a quality of an object. It stems from the human interaction with objects and situations in relation to a social situation. My initial aim in the present study has been to explore the concept of aesthetic experience and its application in design processes. One could conclude that I have not been very successful, in the sense that I cannot provide the reader with a concise theoretical description of aesthetic experience. I still hope, however, that I can touch the reader’s imagination and memory, in so far that s/he can grasp what aesthetic experience might be about. It’s not purely a theoretical concept, but needs the support of the bodily memory to be sufficiently understood. With his advocacy for development, Dewey’s intentions stretch much wider than what we normally count as design. As I see it, Dewey’s philosophy constitutes an appropriate epistemological theory for design research and design theory, but we have to draw some borderlines for design research and design theory, which I think should encompass only the practices of professional designers and adjacent skills, contextual conditions and influences. It’s important to recognize the implications of these ideas. One extreme implication is that design could be a “way of living”. The object of design shouldn’t be isolated as a piece of art to be displayed. Design as a “way of living” can provide a means for enhanced experiences in all areas of life.

Architectural competitions function as a process, creating the new codes of the architectural design field, and with the remaining architects as their major
consumers, and the major powers in society as their trusty buyers, trusting the superiority of the jurors’ taste. One can similarly conclude that design can be seen as a mainly collaborative process, in which the client plays an important role. There is always a specific audience, which also contributes to framing the production. In the interpretation of the second case study, I relate to the theories of Bourdieu, in which the impact of social position and power is stressed. His ideas don’t exclude the importance of skills, but rather stress the importance of the social context. One distinctive feature of his theories is an interpretation of the avant-garde as a group of aggressive artists attacking the ideas of the established consecrators, yet still very well acquainted with the ideas of the establishment and, furthermore, careful to break with the conventions in an appropriate manner. The avant-garde is thus not defined by the use of revolutionary methods, though this is often the case. Rather, it’s defined by its attacks on the existing codes, and is taken notice of only if successful in the eyes of the artistic elite.

Architects generally tend to have an unreflecting attitude and a simple perspective towards both their role and their audience. Architects argue that they defend the interests of the general public, but in reality they don’t. In reality, architects design for a given audience, reflecting expectations and promises of profit. The case studies demonstrate the gap between the fine art of architecture and more ordinary aesthetic values. There is a larger public, but this claim – to defend their interests – is primarily a rhetorical concept tied to the codes of the profession and modernism. It’s part of the tacit agreement between architects and the larger public, that the former, as trustworthy professionals, should defend the interests of the latter, while simultaneously providing the architects with support in their striving for artistic freedom. Spector (2001, 11) sees it as an agreement where the architects take responsibility for some complicated questions and then receive a monopoly and status; though, with reference to Larson,6 he also states that they see no contract between society and the professionals. If architects can neglect the real audience they have greater artistic freedom. However, the production of that small group of artistic elites considered the avant-garde functions as a guiding star for the rest of the field. I tend to think that architects are bound to their interest in avant-garde production and the rhetoric of the field. The architect is tied to a complex system of cultural and professional traditions and ideas, which makes it very difficult for him/her to identify with the ideals of the layman. The professional architect doesn’t represent the ordinary person. The architect can claim that s/he represents some universal idealistic human values, but this posture is combined with specific cultural and professional values that clearly aim at an acceptance by the person’s leading artistic colleagues. I think architects clearly exhibit an elitist, but also a particular educational attitude towards others. According to Bourdieu (1984, 230ff), one could claim that they aim at expressing their distinctively better taste and at distancing themselves from the larger public. On the other hand, this notion of “better taste” is one reason why clients commission architects to design buildings – and particularly so via architectural competitions. They have a desire for fine art architecture. The synergy between the clients and the architect in design competitions is advantageous to both parties. The architects have a forum for their internal artistic struggles and ideational development, and where the clients provide funding through their interest in buying fashionable top-level architecture, acting as
protégés of fine art culture. The art of architectural design is to balance the tension between various cultural expectations: between client interests and the individual interests of the architect for professional and cultural values, and between lower and higher cultures.

The case studies make evident the gap between high and low culture, but also that the “trivial” taste of the client is by no means trivial to the individual and his/her culture. I think Dewey, too, accepted the existence of different audiences. To Bourdieu, the tastes of the non-elite audiences are indeed trivial (Ibid., 199). But for Dewey, the aesthetic experience of all men was the main point of interest. The aesthetic experiences of the clients and users aren’t less important than those of the professional designer and the professional elite audience. For the professional, designing a house is an everyday design experience, whereas for the clients designing their own future home is an extraordinary situation, one providing an extraordinary aesthetic experience and a framework for their future life and way of living. One significant distinction between the novice or lay designers and the professional architects is the amplitude of design methods or design repertoires. The young family that constitutes the major group of clients building detached houses in Finland has few methods to illustrate their ideas. It has few options in managing the design process and has to rely on the support of professionals. The successful architect of the second case study bases his design efforts on the help of others – his employees and other consultants – but he also has his own methods and a repertoire promoting the development of the design. In both cases design activity is a collaborative process, and in both cases there is a leading agent making the final judgements and decisions, thus exercising aesthetic judgement on the basis of aesthetic experience, as described by Dewey.

Sometimes the discussion regarding the question of ‘What is Architecture?’ concludes that not all buildings are architecture. Also, sometimes people claim that most buildings cannot be seen as architecture. I myself think the field or concept of architecture could be expanded. Today the task of the architects’ profession is limited to the professional design of buildings, and in reality to a very limited area of exclusive building design. The professional field of architecture could be extended to an elaborate discussion and constructive criticism of our environment, supporting the thinking about architecture to include a wider field than the ten or twenty per cent that presently constitute the space of opportunities for architects. I also think it possible that the field as such would benefit from a separate branch of architecture –separate in the sense that not all interest in architecture should be devoted to designing and design practice. The design/architectural profession could profit from an extended branch of architects, basically trained as designers, but with the capability to process design knowledge and knowledge about design at a more abstract level, for example in administration, research and design management.
About the title, and what it is not about

I think the title of the present study requires further explanation, in order to exclude some misunderstandings. First of all, one has to consider its structure. The study consists of two case studies in the field of architecture, interpreted in relation to Dewey’s philosophy, Bourdieu’s field theory and other theories concerning design processes. The study is about design processes and their relations: it is not about architecture, but it would not be possible to write about design processes and design theory without the starting point in (architectural) design. The study is not complete without an elaborate inquiry into the subject. Thus it’s constituted as a combination of architecture and design theory, and as a combination of particularities in the field of architecture with its devotion for objects and the generalized theories concerning the field of design. The study picks out Dewey’s writings on aesthetics and their implications as a point of departure. A potential alternative title could have been “The Impact of Dewey’s Aesthetics on Design Theory and Architecture”. Though Dewey has only one work devoted entirely to aesthetics, *Art as Experience* (1934), the idea of aesthetic quality as a concept denoting our experiences of situations, solutions and objects comes out also in many of his other philosophical writings. I think it’s even easier to understand his explanations of the creative process in his major work on research *Logic – The Theory of Inquiry* (1938) than in *Art as Experience*. I prefer to also include Bourdieu’s theories here, because they cast light on the context of the design process, and because I see them as an improvement of some ideas in Dewey’s thinking. Bourdieu is by no means a pragmatist philosopher, nor is he specifically influenced by pragmatism. On the other hand, Bourdieu himself admitted that he had detected an affinity between his own ideas and those of Dewey – a reaction against the intellectualism of many European philosophies (Shusterman 2002, 215).

The second case study deals with the finer art of architectural design. I draw the conclusion that the avant-garde is the battlefield where architects compete for a position among those with a right to judge, in accordance with Bourdieu’s field theories. I am a Finnish architect writing a dissertation at the School of Architecture in Stockholm in Sweden. Interestingly, Swedish architects tend to dismiss this conclusion, whereas most Finnish architects, at least so far, seem to agree with it. It is important to realize that Bourdieu has a specific interpretation of the word ‘avant-garde’, which doesn’t fully match the common usage of the word. I agree that the competing architects in the case study don’t explore too many novel or extreme ideas or apply unorthodox methods. They are skilful and explore design ideas in a rather conventional way, yet producing new solutions. For the present, as far as I’m aware of what’s going on in “Finnish Architecture”, there doesn’t seem to be any considerable occurrences of extreme methods or explorations in Finnish contemporary architecture. I realize, of course, that there might be some attempts – e.g. extreme solutions among the competition entries, which are dismissed because they haven’t been adequately developed – but these cases seldom reach the audience, in terms of being published or built.

Some readers of the present study from within the field of architecture might be inclined to think that the word ”Impact” in the title implies a historical survey of the
impact of Dewey’s philosophy on architecture – as we know it from architectural theory, where there has recently been an increased interest in pragmatist philosophy, for example with recent seminars (Ockman 2000, ARCH+, 156). I think this increased interest is interesting as an attempt to generate some kind of prescriptive or supportive theory of architecture. And yet, as I see it, the gap between Dewey’s idea of art as experience and the object addiction of architectural theory is difficult to bridge. My implications are options for how one can see architectural design processes and architecture in a different light. The pragmatist theory is hardly suitable as a theory of architecture as we presently know it. A pragmatist theory of architecture is prominently concerned with the process and experiences, with an emphasis on the influence it has on the life of all people – and not only seen as a field of fine art architecture.

Notes:
1 Here I stress the notion of profession: See also Spector (2001).
2 This is the interpretation of Simon (1969) and Schön (1983).
3 There is a tendency or tradition to distinguish artistic design as something different than engineering or organisational design.
4 Schön (1987, xi) specifically mentions in the Preface of his Ph.D. the connections between his own ideas and Dewey’s theory of inquiry.
5 This concept is used by Yrjö Hirn to describe the combination of both utility orientation and artfulness in the artistic production of primitive tribes, and he poses the question whether it maybe possible in the fine art too, to see the inclusion of a similar utility orientation - in a socio-historic analysis - the wish to learn and understand our reality in areas that are difficult to penetrate.
6 Magali Larson is an emeritus professor of sociology, who has written extensively about professions, including the architect’s profession.
2

POSITIONING THE RESEARCH
INTRODUCTION

The following chapter has emerged out of a need to clarify the position of my research approach, in both disciplinary and philosophical terms. The chapter thus consists of a brief introduction to some earlier investigations of design processes and architectural design competitions. The presentation of these investigations is brief, except in the case of design competitions as described by Wærn (1996), which I see as a description of the history of architectural design competitions and their basic characteristics. The second part of the chapter is a presentation of two different perspectives on research, that of the later Wittgenstein and that of Dewey. Wittgenstein is used because his perspective on knowledge is central to my interpretation of design knowledge, in combination with the ideas of Dewey. My understanding of design knowledge is not exclusively based on the ideas of Dewey, and many of the ideas about knowing in action in design practice stem from Wittgenstein’s ideas. They have also passed through some refinement and an adaptation to design theory through the influence of other authors.

My research approach has shifted during the actual research, from a rather science-oriented attitude — i.e. hoping for clear answers and validated findings — to an acceptance that I have carried out case study research, producing rather interesting results but with a complexity that is difficult to manage and reduce to any simple conclusions. One strength in this research undertaking has been the guidance offered by the philosophy of Dewey; for example, that we should concentrate on problems, that we shouldn’t aim at an absolute truth but rather at productive theories, or that there is no isolated event to observe but rather “a field in which observation of this or that object or event occurs” (Dewey 1938, 67). One goal is to find the “pervading” quality of a phenomenon: “Discourse may, however, point out qualities, lines and relations by means of which pervasive and unifying quality is achieved” (Ibid, 70). Research in Dewey’s sense includes the necessity to call upon aesthetic experiences as a means for grasping the important qualities and features of the situation (Ibid).

I think it’s necessary to clarify the use or meaning of design theory. As I see it, very many design processes will be as successful as they are without any basis in theories about design. On the other hand, I think there are areas where a theoretical understanding and models of design processes and influences are important. This is the case in areas of design where it’s necessary to have an outside perspective on the design process. To start with, this is advantageous in educational professions. Secondly, it’s clear that people attempting to do research in design and design processes need a theoretical understanding of design. Theories are the proper tools for communicating research results but also for developing the thinking and reasoning about the ideas generated in the empirical research phases. Thirdly, the design processes are becoming more complicated, in terms of the competences involved and the means of administration. Also, the designed objects themselves are becoming more complex. Few persons today can design on his/her own. They are far more often projects stretching over several years, including collaboration between different professionals, researchers, consultants, external subcontractors,
etc. Those administering complex design processes have to work on a more theoretical level and need good theories about design processes. I could also accept the idea of design theoretical research for its own sake, but as a final statement I would like to argue for the idea of criticism. I think we need more design criticism if we are to have better designs. The important aspect of this approach is that we need criticism of design processes and the assumptions on which the design methods and traditions are based. Much of the design knowledge is based on tacit knowledge, which means that it’s only in the final stage, when the product is already complete, that we can really see what’s coming out of the design process. Due to the large amount of evaluative steps included in a design process, I think it’s important to direct criticism towards various aspects of the design process. The only reasonable method is theoretical reasoning, targeting assumptions, values and reasoning that constitute the foundations in the design context. I think these are important issues, establishing the motifs for strengthening design theoretical research and also explaining the reasons why we need a consistent stock of shared theories about design, thus providing some secure ground for further investigations. Furthermore, I assume that the different fields will profit from an interdisciplinary approach, which will always provide perspectives on design different from those long seen as the only realistic and established ones in each discipline.
I will give a brief survey of recent research in the Nordic countries related to the substantial issues presented in the present study. There have been a few attempts to study design processes and the design of single-family (detached) houses in Finland. Most research of design processes has been done in the field of planning, but because they refer mainly to the process of citizen participation and the preparation of urban master plans, I have not taken them into consideration. To my surprise, I haven’t found any relevant research concerning design competitions in Finland.¹ Architectural competitions are held in high esteem among architects and among certain groups of clients in Finland, and for this reason one would expect this issue to be of great interest. There has been no thorough examination of the proposals made in architectural competitions in Finland, or of the influences and organisations behind them. Still, it’s very common to refer to competitions in biographies and in architectural history. The case studies of Riitta Kuoppamäki often have competition entries as their target, but the subject is not studied any closer. Her main object of research is the process and the culture of architecture, seen as a configurational epistemic culture (1999, 2001). I have found a few studies focusing on architectural competitions in Norway and Sweden (Wærn 1996, and Tostrup 1996). Rasmus Wærn has studied the competitions held in Sweden during the 19th century, and Elisabeth Tostrup the competitions in Oslo in 1939–1990 with regard to their rhetorical devices.

Figure 1.
Competitions in Finland 1972 - 2003, according to statistics from the Finnish Association of Architecture. Open competitions to the left and invited competitions to the right.
**Single-family houses and client participation in Finland**

Riitta Kuoppamäki (2002, 2001, 1999) is one of the very few researchers in Finland investigating design processes. She has described and analysed these in two small books (in Finnish), one as a description of the process (1999), the other as an interweaving of theories of design and interpretations of the design processes (2001). These are the two final books in a series of four books. She has also conducted three case studies, studying the architects’ sketching process. The chosen designers are a student and a professor, both of them preparing competition entries. Kuoppamäki sees the architectural drawing as constituting architectural knowledge, which is constructed during the design process. One of the conclusions she draws is that architecture has its own epistemic configurational-oriented culture (Kuoppamäki 2001, 164). According to her, the designers act in a modernistic culture, which is a culture of continuously changing interpretations of the world (Ibid., 158). This culture frames the potential actions of the architects and provides the setting for the shared understanding of the designs produced, where knowledge and data is transformed into a shape.

Another Finnish example of case studies concerning design processes and the integration of the clients in the design process (of single-family houses) is Liisa Horelli-Kukkonen’s study of a group of families actively participating in the design of their future homes (1993). Her conclusions are that the designed homes develop into a psycho-social environment filled with meaning, and that the participation can provide a means for the family to express their individual and psycho-social aspirations.

Isto Maarttola has made a study with a design-theoretical approach, focusing on problem solving, knowledge and decision making (1998). His study focuses on the laymen’s acquisition of apartments and single-family houses. Maarttola draws the conclusions that: the decision making is based on values; that the laymen don’t act according to the ideals of rationality of the Age of the Enlightenment (Ibid., 130); and that the laymen want to be active in the process, to participate, experience and, moreover, be in charge of it (Ibid.). According to Maarttola, the residence constitutes a core element in life and in social existence (1998, 129).

**Architectural competitions**

Elisabeth Tostrup studied architectural competitions in Oslo from 1939 to 1990 in regard to the relation between rhetoric and architectural expression (1996). Her study is based on a hermeneutic approach, where the tectonic principles of the buildings are identified and expressed. The aim was to stay close to the designer’s position and to promote a pedagogical understanding of the competition material (Tostrup 1996, 11). The contextual setting for the design processes and competitions aren’t addressed any closer, except in the sense of general stylistic tendencies. One of her
core findings was that the competitions and the associated publications sustain a hegemonic understanding of professional codes (Ibid., 174):

“The competitions sustain the core value orientations of the prevalent energies in the profession, which they (the competitions) serve by a continuous publication of the ideas and codes that are being developed. The competition architecture reflects a certain hegemony, a certain layer of these codes.”

Tostrup concludes her study with a critique of the often vague ways of talking about architecture and the tendency “to leave the core professional values open to mystifications and prophetic pretensions”, saying that it doesn’t “advance the authority of architects in a world that is constantly subjecting architecture to ever more complex, demanding and stringent conditions” (Tostrup 1996, 176). This I would interpret as seeing a need to respond to the rationality of the economic and technical reasoning of the clients – a demand which the artistic rhetoric is not fit to meet. Tostrup has a vision of enhancing the capability of expressing the architectural reasoning in a more precise manner (Ibid., 176) and this is her method of analysing the competition entries, too.

Rasmus Waern has studied the architectural competitions held in Sweden during the 19th century. He starts by stating some of the motives for the interest in competitions: they are fair, public and an efficient way of finding alternatives. The golden period for architectural competitions in Sweden was between the years 1853 and 1917. The motives of the architects and the clients differ. For the architects, competitions are a potential means of promoting their career. They are also a way of testing ideas and solving the client’s problems, and the public, too, is not excluded from experiencing and commenting on the emerging design. For the client, competitions are a way of getting an acceptable building at the lowest price or, the other way round, the best solution for an acceptable price. In the early days the competition might also be combined with bids for the cost of the construction. Competitions can also act as a contribution to public debate (Waern 1996, 13). They are a hybrid between the market and academic ideals (Ibid., 16) and a rational selection of the fittest – a kind of elite examination (Ibid., 31). Waern also states that the competitions set the standards for their own proceedings and evaluation. In the academies the competitions used to be purely “academic exercises” and not actually built. The bait the academies could offer the entrants was the honour of winning and possible publication (Ibid., 27). The academy competition introduced certain rules: entries had to be anonymous, competitions were executed in two stages, and the judgement was professional (Ibid., 61). Waern also finds that bourgeois values lay behind these competitions, with the idea of the cultivation of public taste and, through the building type particular to the competitions, the advancement of educational institutions (Ibid., 34 and 46ff). Public institutions have always been the flagships of the bourgeois system and the competition process aims to be a replication of the democratic process itself (Ibid.). The competitions were not presented or thought of in terms of finding solutions to specific needs, such as housing or prisons, but as the design of public buildings and for improving the public good.

Waern finds that a breakthrough in the system took place in 1880, with very many architectural competitions organised that year (Ibid., 43). The change that took place
was a shift from an individual social relation between the architect and client to a system organized as a contest (Ibid., 47). However, there arose an internal problem among the architects. They had to deal with and organize the competition rules, despite their rivalry (Ibid., 59). Another important feature of the competitions was that they had professional juries, which are strong enough to keep the contractors at a distance, despite the latter’s important position in those days. There was also a disadvantage with having non-professional majorities on juries (Waern 1996, 89f), in that they were unpredictable: one couldn’t know how they would judge. In those days the system was not stable, but developed over the years. Also, there were competitions held that were not accredited by the Association of Swedish Architects (SAR). The contractors wanted a free market and the architects wanted to have it regulated and to include professional selection. The inclusion of clients in the juries was seen as an important issue and as a sophisticating measure – they became acquainted with subtle values in architecture (Ibid., 90ff). It was also important to have well-reputed jurors, chosen for their artistic merits (ibid.). These, in turn, were – and still are - important steps in the development of the profession itself. One disadvantage for the well-reputed architect in a non-anonymous architectural competition was that he would be risking his prestige, because if he fared below his reputation it would bring bad publicity (Waern 1996, 68). But the competitions also offered space as a creative challenge and even a hobby for an architect. To the contractors or clients the architectural competition was an opportunity to escape an unsatisfactory relation with an architect. The building contractors were also asking the architects’ to participate in competitions for their projects, so called grynderprojekt. One of the changes the competition system brought was that the status of the master architect was no longer due to his master architect’s licence: the real mastery had to be continuously proven.

The history of architectural competitions in Sweden in the 19th century includes certain stages of development: they become experimental, rules are formulated, and a stage is reached where there is a balance between the various parties and an acceptance of the rules (Waern 1996, 72). The competitions – still today – consist of four steps towards the selection of a scheme:

1. Writing the design brief.
2. The competitors’ sketching.
3. The submission of presentations.
4. The evaluation by a jury.

The design brief remains a means for setting out the competition expectations and claims, which can either limit innovation – when written in too specific terms – or enhance it (Ibid., 79). A bad design brief will not produce good results; that is, too many specifications will limit the potential for creative new solutions, while too vague specifications will produce results that might be too far from the initial expectations. Waern finds that it was seldom that the clients specified any characteristic style (Ibid., 80). He claims that competitions produced “wordless expressions of ideas”
One central part of the system has been the presentation technique and press coverage. The press has taken an interest in the competitions and has tended to reinforce the impetus of the ideas (Ibid., 86). In particular, young winners have always been interesting to the press. Waern also finds that the treatment by the press has turned a competition into an educational process, yet the criticism expressed by the press often diverges from that of the professional juries.

Odd solutions have seldom won competitions, and have had a better chance of being given an honorary mention or some lower prize (Ibid., 91). When stylistic changes have occurred, there have been disputes among the juries. Waern also finds that autodidacts have seldom succeeded in competitions (Ibid., 99). On the other hand, for the unemployed architect a winning entry might be a starting point for commercial success (Ibid., 101f). Winning has also been a confirmation of competence. Among the competitors, Waern distinguishes three types: specialisation in certain building types, competing as a matter of routine and those with an occasional entry (1996, 98). Competitions for large projects, taking a long time to prepare, are a risk to both clients and architects (Ibid., 101f). For the architects, the competition system offers a dream of success, which means a breakthrough in their career, independence and freedom. Waern takes the example of the Swedish architect Gunnar Asplund, who had won three competitions before he was thirty years old.

Waern concludes his investigation by stating that there is no better way of promoting or achieving good architecture than by means of architectural competitions. They generate new ideas and a forum for debate (Ibid., 148). A successful competition outcome necessitates a good design brief, as well as the participation of many and good architects (Ibid., 130ff). The competition system contributes to the spirit of the architects’ professional association and has gained a position in the democratic society as a means for promoting democratic decision making in an artistic setting. The pluralism also supports the modernistic idea of debate and openness (Ibid., 146), as well as being also a target of particular interest for those interested in architecture generally (Ibid.). Waern further finds that the more avant-garde solutions are to be found among those who got a prize but didn’t win first prize (Ibid.). This is partly a question of what to ask for – architectural quality or originality?
INVESTIGATING DESIGN PROCESSES

Trying to get an overall picture of the field of design theory can be rather confusing. There is an epistemological confusion of languages. Depending on whether the authors are in the field of software design, architecture or management, they use different expressions and references. We are also confronted with an alienating shift in thinking; setting the pure scientific approaches aside, researchers and scholars are trying out a number of approaches: e.g. design as a form of research. One may be satisfied with one perspective and concentrate on the ideas that seem appropriate according to that one worldview. On the other hand, I think it would be helpful for each of us to express how s/he sees her/his own position. I am critical towards design-theoretical reasoning that lacks any kind of epistemological statement. If design theory is a pluralistic and discursive discipline, aiming at integrating the multitude of ideas of the various design fields, I think it’s necessary to try to state where one stands, and accordingly, I think we have to accept a multitude of approaches. You don’t have to exclude others from the project of developing design theory because they take a different starting point. It’s possible to shift between perspectives and, of course, to argue that some approaches and perspectives are more promising than others. The audience can more easily comprehend the reasoning put forward if they know the author’s epistemological position and, furthermore, it gives the reasoning a philosophical (i.e. logical or reasoned) framework. It’s also interesting to reflect on the opposite view: if we argue that there is only one acceptable perspective – i.e. that the others are wrong or without value or interest – it would seem important that the author should clearly state what his/her position is, and provide reasons why s/he thinks this is the only way of understanding design. Presumably we will have more clearly stated epistemological schools of thought in the future, competing but also providing guidance to design research.

One basic assumption in design theory is that design knowledge is to a large degree tacit (Cross 1984, Lundequist 1995). This may be often seen as an excuse for not entering into this area, leaving the processes and knowledge of the successful designer mythical, secret and unapproachable. Research, however, shows (Nonaka & Takeuchi 2001, Schön 1983, Dahlin 2002, Brandt 1998) that this area is accessible, even if we cannot distinguish and pin down any simple description of it. Then it’s more likely one of those perennial questions of whether all thinking is potentially accessible or whether there are areas that we cannot express in any way. My current understanding of the potential of attempts to penetrate the areas dominated by tacit knowledge is based on Schön’s and Lundequist’s assumptions that description and analysing case studies contribute to our understanding of design processes and can contribute to the common body of design theory, but that design knowledge is embedded in particular situations, with a large number of influencing aspects, thus making simple descriptions inappropriate. The understanding will always be dependent on detailed descriptions and the particularity of the situation, but the human understanding can bridge this and construct syntheses and general conclusions applicable in similar situations. We interpret the cases by seeing them as something (Lundequist 1999B, 226). Concepts enable us to think and communicate

34 POSITIONING
According to Lundequist, based on the thinking of Peter Winch (1998), new concepts transform our thinking, and scientific progress is partly a question of addressing conceptual poverty by clarifying concepts (Lundequist 1999B). One approach in design research is to articulate design processes, thus passing the borderline of tacitness, producing concepts or conceptual descriptions that open for communication, criticism and reflection. The description need not be a clear-cut definition. According to Nonaka and Takeuchi (2001), even inadequate and insufficient expressions promote reflection and interaction. This process is the key to the production of explicit knowledge, typical for the scientific community: but this kind of study doesn’t necessarily produce that kind of final knowledge typical in the field of the natural sciences. It’s a tool for articulating tacit processes, thus generating material for further development through criticism and logical analysis.

Finally, I think it’s also necessary to position the researcher in the field s/he is investigating. I realize that my own thinking is influenced by my career as an architect and the context in which I practice. Yet I don’t think I am derailed from an appropriate understanding by my position, but rather I think the background of the researcher provides one positioning piece within a larger contextual background of the research. The background matters, but it’s not vitally important. It should nevertheless be spelled out, because a perspective stemming from, say, working in the top level establishment would provide a different perspective than my own as an outsider. Or if, for instance, one had been sacked or treated unfairly (seemingly or not) by one of the key institutions, that might provide the basis for a biased perspective in explaining the background. I don’t think one can be fully distanced from what one is doing, and this, indeed, provides a richer background for the reader. For this reason, I feel it necessary to give a brief survey of my own position in the field of architecture and among other architects. To begin with, I have a diploma in architecture from a German university (Rheinisch-Westfälische Technische Hochschule, Aachen). My introduction into the world of architects was a big step, from a rural background into the world of engineers and architects at a very big technical university in a foreign country. However, I think this cultural background is not untypical among Finnish architects – the number of architects coming from families with parents or close relatives as architects is limited. Neither is it any big obstacle to come from a lower social class. During my studies in Germany there was a large number of students coming from very different classes and families with traditions of occupation. I have been working as a practicing architect in Finland since 1987. I have been employed as a practicing architect in different small private architects’ offices in the provincial Finnish town of Vasa, and which rarely compete in architectural competitions. Due to my education abroad, I have always felt myself an outsider among Finnish architects, who seem to know each other and know well-known architects from their student days. Still, there is a certain number of architects with a degree from a foreign university working in Finland. In my professional career I have been working with both urban design and architectural design, which is common in the Finnish context (as there is no separate university degree in town planning offered in Finland). I have always lived in a small town, where the distance to the capital of architecture (Helsinki) is significant, both in physical and cultural terms. During my years as a student of architecture in Aachen, architectural style was no big issue, whereas environmental and social concerns
were important in the local community of architectural students. In recent years I haven’t made any great efforts to follow the debates of architectural theory in the architectural press. Alongside my teaching and research, I have tried to stay in touch with design practice, but mostly as an outside observer in committees and in the office of a friend. My distance to the high culture of architecture was increased by my appointment as a lecturer in a polytechnic, teaching building and urban design to engineers, though this distance has decreased in recent years due to my deeper involvement in architectural research and contacts with colleagues at the “true” architectural institutions.

**Influences from Wittgenstein**

Despite the obvious linkage to pragmatist philosophy in this study, it will be noticed that it’s linked to another important philosophical tradition. My basic assumptions about knowledge stem from the analytic tradition stemming from the thinking of Ludwig Wittgenstein, as filtered through the writings of Lundequist. It’s largely a position where design is seen as a social practice. This need not, however, necessitate the positioning of the present study in the social sciences. I think design theory must be seen as a distinctive scientific field, albeit using methods and strategies from other scientific fields. It is not totally separate from the latter, but due to the nature of design it’s more fruitful to see it as a field different from the natural sciences, social sciences or humanities. According to Lundequist, Wittgenstein offered no real method or theory, but “a strategy for how we ought to look at a phenomenon that interests us” (1999A, 14). “We ought to try to understand what a phenomenon is: what people actually do and have done in the contexts, the language games, where the phenomenon belongs” (Ibid.). We have to study the phenomena in their context, but we must also be aware of the fact that the concepts we use are historical and social constructs.

Lundequist takes Peter Winch as a starting point for his reasoning about the relations between architectural research and philosophy (Lundequist 1999A). Winch was a philosopher, well-known for writing a programme for research in the social sciences. Lundequist doesn’t see architectural research in this contextual and process perspective as a social science, but puts the emphasis, like Winch, on conceptual development (Ibid., 17). Key concepts are: form of life, rule, praxis and language games – all concepts stemming from Wittgenstein. Lundequist claims that Winch’s perspective has important implications on architectural research. While most investigations into architecture study the object and its qualities, in the publications of Lundequist, architecture is mostly approached and explained through actions, experiences and processes. The task of philosophy, he argues, is “a never-ending investigation of being, knowledge and language” and the answers have to be found through empirical investigations. The task of philosophy is to create conceptual
propositions about being, knowledge and language. It’s not the linguistic details that are interesting, but the “misunderstandings regarding the nature of language” (Ibid., 18). Our language and the concepts constitute a potentially changing relation between the reality and ourselves. They are part of our understanding of the world, not freestanding neutral signs (Ibid., 19):

“We see the world through our concepts; we interpret the world we live in by seeing something as something (we see a specific building as a cathedral; we see a specific individual as a friend; we see a square metre of coloured canvas as a painting.”

The conceptual development is not a goal in itself. According to Lundequist, the aim is “to understand the context, explain the connections, anticipate future events (make predictions) and suggest steps to be taken” (Ibid., 32).

In the perspective of Wittgenstein, human actions and relations, as well as our concepts, are not fixed, but they are nevertheless to some degree stable. They are rule governed, but the rules aren’t explicit. The crucial point here is not the definitions of the rules. In our daily life the interpretation of their meaning remains on a subtle level and intuitive. It is when we are able to identify an individual following the rules that we know that s/he understands them. S/he may not be aware of them him/herself, nor need they be made explicit: practices are embedded in social situations where people behave according to socially-given rules. Meaning is attached to these rule-governed actions. The rules can be transferred to new contexts. The transfer can be successful, but it can also entail reflection and adaptation to the new settings (Ibid., 22).

Winch criticised the then existing social sciences – from the 1950s – and constructed a map of how they ought to be. Social sciences, in Winch’s sense, are about human relations (Lundequist Ibid., 17). The goal of the social sciences is “to articulate a social practice, by clarifying the concepts that are crucial to this practice” (Ibid.). The investigation of a subject should start with an analysis of the object – to “clarify the meaning of the actions and concepts that constitute the human practice”. Practice is a “rule-governed, social pattern of behaviour” (Ibid., 18). Furthermore, if the social scientist wants to study a form of life s/he has to be part of it (Ibid., 20). Research is an enterprise from within, but with an aim to clarify what is going on, on a conceptual level. The researcher must see the object of research as meaningful. According to Wittgenstein, meaning is a prerequisite for understanding (Lundequist 1998, 14). The researcher must have a “feel for the game” in order to be able to understand it and create a conceptual understanding. Tacit rules need not be irretrievably tacit. According to Lundequist, with reference to Wittgenstein’s Lectures on Aesthetics, they can be articulated: that the rules are embedded in the language games doesn’t mean that they cannot be expressed, but that their number is infinite and we must enlarge the context around it in order to be able to interpret the rules of the language game (Ibid., 33).

According to Tore Nordenstam – an analytic philosopher writing on art and research cited by Lundequist – the research strategy would be (Lundequist 1998, 3):

1. To present the various definitions on the subject and to compare them.
2. To analyse and discuss the development of the concepts, by clarifying the history of the phenomena they relate to; the circumstances where the concept has been used, interpreted and defined.

3. To analyse concrete cases, showing what people do in situations where the concepts are meaningful and important.

There are no big conflicts between the above strategy and the ideas on research presented by Dewey. Rather, it’s just a difference of emphasis. For both Dewey and Wittgenstein, the idea of knowledge is something much larger than the pure theory generated by scientific investigation. I myself prefer to apply the distinction between knowledge and information which Bengt Molander dates back to the historical separation between facts and values. The distinction he makes is between information and knowledge, where knowledge is carried by humans, whereas information can be stored in books and computers (Molander 1996). Knowledge is among many other things contextual, interest-based, participation, action and values (Ibid., 237ff). Dewey put an emphasis on the empirical investigations of real-life problems, which in a way would turn the strategy of Nordenstam on its head. On the other hand, we can interpret Dewey’s position as corresponding to this strategy, though he would have included a fourth point, that we need to develop the knowledge we procure to a conceptual and objectified level, where we can communicate it and allow for further scrutiny and finally testing in real life. Facts and ideas are operational. They constitute relations to other facts and the context, and can generate reasons. These reasons need to be developed into representations, which allow us to logically test them (Dewey 1934, 110).

The linguistic point of view introduced after Dewey constitutes no revolutionary change to his philosophy. Due to Dewey’s reluctance to accept any fixed truths and his willingness to accept culture and history as constituting powers in our understanding, as well as his acceptance of language as the means for communicating ideas and experiences, the linguistic turn proved less important to him. There is a cross-breeding taking place between the ideas of Wittgenstein and Dewey among the later pragmatists (Shusterman 2002, 2002 and Rorty 1982). The point Richard Shusterman makes is that the pragmatist can take a genealogical stand point or equally a more poetic point of view (2002, 194ff).
Pragmatist research strategies

Dewey’s *Logic – The Theory of Inquiry* (1938) is an extensive presentation of his research philosophy. Reading his texts over and over again, it has been difficult to remain untouched by his ideas. Dewey had a strong belief in the scientific method: for him, the research method of the natural sciences is the prototype for all research. However, this is no claim that the world view of the natural sciences would be the only correct one. In Dewey’s research philosophy there is space for many different types of knowledge and understanding. The point is that we should apply the experimental method to problems of the world and also to problems and situations that aren’t reducible to single relations tested in a simple manner. Instead of relying on the obvious validity of rigorous experiments, where all variables are known, Dewey emphasised the connection to reality itself as an instance of validity. The methods of the natural sciences are the instruments for acquiring knowledge. The appropriate method should be chosen according to the situation, but the scientist should retain a stance open towards unexpected results and ideas occurring during the research process. The social scientist should conduct experimental research not as laboratory experiments but as reactions, influences, changes – on the process and from within the process. Put in a simple form, one should change the conditions, see what happens and reflect on the results, and retain an open attitude towards unforeseen ideas (Dewey 1951, chapters IV and VI).

When discussing research strategies we have to consider what we are dealing with and what we are aiming for. Science aims to secure knowledge, but another aim is to acquire new knowledge. Reliability or validity is not enough: it’s not so interesting to produce secure knowledge about things we already know rather well. It’s more interesting to get to know new things, and doing so might even prove profitable for the research community and society at large. A certain degree of weakness of the verification of the knowledge is acceptable, if the knowledge produced seems promising and can initiate progress. Before continuing, I think it’s necessary to point out that the philosophy of science is moving forwards and that there are philosophers discussing the relation between representation and the phenomena to be represented, leaving the notion of law and truth aside, and using more precise concepts that describe this relation. I here use a simplified, rather positivist notion of science, and perhaps also a popular understanding of it, as a means of contrasting it against the ideas of Dewey.

Most writers who claim that design ought to be considered as a distinctive field put forward a critique of the perspectives associated with science. One has to acknowledge the distinction between design and science, as well as between design and design research. They each have different aims. Design often includes elements of research but the aim is also to design something. We have a different case if we make an inquiry with the aim of producing a conceptual understanding of the design process in itself. Both science and design address unsolved problems and confusing situations. They both aim at tackling and managing uncertainty and at predicting future effects of actions and structures created. Science has acquired a strong position as the authority of knowing. The scientific way of explaining
effects and causes is seen as the only true one. The reasoning associated with design lacks this clarity and definiteness. Still, design action and reasoning have remained very successful, despite lacking clarity. Scientific reasoning has never been able to replace the synthetic thinking inherent in design. Science has been successful in dealing with puzzling phenomena and in generating explanations, and these explanations have been important factors in designing solutions to the problems.

Dewey saw no clear demarcation line between different types of knowledge or knowing: it’s rather a difference in character and nuance between artistic skill, common sense and scientific knowledge (1980, 169ff). I am apt to propose that design should be seen as a specific type in this conglomerate of knowledge. There is nothing wrong with science. Science is a good tool, produces a lot of good answers and it can be applied to many puzzling situations. The big problem is the belief in science as Truth. This is also one of the important features in Dewey’s philosophy: the resulting theories from research don’t constitute truths, but rather hypotheses that are trustworthy yet not finalized: they can still be improved upon (Dewey 1934, 91, Suhr 1994, 133). The pragmatist thinkers have long been arguing against the domination of the narrow scientific epistemology and its understanding of knowledge (Dewey 1938, Schön 1983, Rorty 1982). Richard Rorty is one of its main advocates, and he tries to open up the discussion concerning how things and phenomena can be represented, or even whether they can be truthfully represented. In his view, it’s more important for a philosophical investigation to address problems than to try to superimpose a model for how we ought to think something can be represented (1982, 90ff). The pragmatist ideas advocated by Rorty (1982) find a counterpart in Pierre Bourdieu’s field theory, in the sense that Bourdieu sees the scientific field as a very strong cultural field. As Stevens puts it:

“The modern pure sciences come closest to this pristine state [with the right to be the ‘sole judge’ of its own products]. Their achievement in this respect may be attributed to three factors: success in constructing a widely accepted ideology whereby science is held to be best judged by other scientists; an undoubted utility to the dominant fraction of the dominant class in generating economic wealth; and an implicit contract not to interfere in the social order.” (Stevens 1998, 93)

This means that the current order regarding knowledge is tied to the dominant class, where the social contract says that the scientist should not interfere with the social order. In return, the dominant natural science is rewarded with autonomy, and thus can impose its world view and epistemology. But this is problematic for a field with a practical-type knowledge that is difficult or useless when discussed in terms of scientific epistemology. In a European context, I think it’s important to emphasise the option coming from pragmatist philosophy, that philosophy need not be isolated or reduced to the discursive elaboration of meta-theories. It provides an option to rethink this, asking where the borderline lies, or what are the characteristics defining the difference between the reasoning concerning, for example, the planets (as is done in physics) and the reasoning of philosophy. And if there are some characteristic features distinguishing philosophy, will philosophy be less useful or valuable if it interacts with real life?
The questions concerning where we should position design research and whether design research has to be addressed by a different type of investigation can be answered in two ways. Design is a very complex activity, always embedded in complex situations. This calls for forms of investigation that can address complexity and multilayered influences. If we claim that science is the only rigorous method, yet which cannot deal with complexity and which can only apply explicit and strict methods of investigation, then design research needs a different method. On the other hand, if we, like Dewey, single out the scientific method as the method of analysing phenomena (Dewey 1934, 60ff), apart from the discussion of the status of the results of science, we can use it as a means for exploring various issues outside the realm of science – complex situations and problems, such as design processes and influences. A problem remains with this approach to design research: we still have to meet the demand for rigor. The difference here, however, is that we have agreed that we will accept less rigorous, less validated or trustworthy results, but that we still need to achieve as reliable results as possible. As we all know, we can compensate this lack of trustworthiness with other results, like usefulness or promising hypotheses.

This discussion about the truthfulness or trustworthiness of research results has a few implications. The discussion concerning design research should not focus on dismissing the scientific method(s). On the other hand, it seems reasonable that we continue to develop new and better methods for research in design-related matters. The confusing attitude that we still have to address is the religious-like acceptance of science as the only way of knowing. This problem is, of course, more acute in engineering design than in the more social- or artistic-oriented design fields. The research attempts will be seen as either acceptable or unacceptable on the basis of the confusing double meaning of science (i.e. true knowledge and the experimental method of investigation). The application of the scientific method will often produce some good answers, albeit maybe too limited ones, but in general it will generate something useful. The problem arises if we apply the idea of science as Truth and the associated idea of an ideal theory as the only way of understanding phenomena – a theory hidden behind the phenomena only waiting to be discovered. I think it’s difficult to progress in design research with this limited and idealistic definition because it’s unlikely that we can produce anything like a total or final theory of design.

If we want to develop the field of design theory as a consistent discipline, thus supporting design research in various fields, and, furthermore, if we intend to create a convergent design theory as the area where we sort out the features that we all share, then the issue of knowledge is indeed an important one. The attitude towards knowledge and knowing is important and needs to be explored and discussed, at least until we reach a situation where we have created a clear understanding of the possible attitudes and the impact and resulting conclusions following from such different attitudes. The questions of method are of no importance in this discussion. That is because in the pragmatist attitude towards research, which primarily is about knowledge, reasoning, understanding and development, many different approaches and methods can be applied. We can use scientific methods or hermeneutics and aim to clarify concepts. Also, we can be experimental, explorative and innovative.
One could also claim that we should aim at all of these. We should also reflect and reason about what we find and do. In Dewey’s interpretation, the concept of “research” is not to be limited to the experimental process and the logical reasoning and conclusions. It is not to be limited to the testing of a hypothesis, which would then be either refuted or endorsed, in the latter case generating some potential trustworthiness. Research includes a much larger scope, including pre-experimental innovative thinking, the actual empirical investigations and any later interpretation, description, reasoning and evaluation. Thus research is necessarily always hermeneutic. We have to interpret the situation and the influences, and later the results. It also includes moments of concept clarification, because the interpretations and descriptions normally presume some kind of clarification and development or application of conceptual tools. The seemingly peculiar ingredient, which is both a weakness and strength, in Dewey’s attitude towards research, is the acceptance of reflection. As we all know, reflection is a necessary ingredient in all research, but in the philosophy of science it’s excluded from the experimental method in order to allow for a rigorous verification. This is, of course, good and useful, but the reflections before, during and after might also be very important. We cannot exercise research without reflecting on what we do. This is an important point in Dewey’s research philosophy (1934, 77ff). This acceptance of reflection makes it possible to rely on intuition and tacit knowledge or even prejudices. This, of course, makes the conclusion weak, speculative and more of a narrative than a scientific report that results from an experiment.

Hickman has returned to the method of controlled inquiry, termed ‘technology’ by Dewey (2001, 1992). Technology is, according to Hickman:

“The invention, development, and cognitive deployment of tools and other artefacts, brought to bear on raw materials and intermediate stock parts, to resolve perceived problems.” (Hickman 2001, 41)

Also, according to Hickman, the reason for calling inquiry ‘technological’ is:

“… that it is the means of effective control of an environment that is not what we wish it to be. Inquiry is in this way differentiated from other forms of activity. It produces something new as a means of changing situations that are not what we wish them to be.” (Hickman 1992, 41)

The idea of technology is that it can be applied on any kind of problem — moral, technical, practical, philosophical, artistic or social — and where we wish to change a situation into something new. As I see it, it’s a designerly way of approaching problems and situations. Hickman sees four major advantages:

1. A rejection of scientific realism — the belief that there is a prefigured reality “out there” waiting to be discovered and where physical sciences have no monopoly on the right way of understanding the world (Hickman 2001, 36f). This can also help philosophy out of its isolation and allow it to link with other fields and focus on immediate or everyday problems facing mankind, society or individuals (Ibid.).
2. It has “ecological power” in the sense that it accepts the broader look on human action in relation to the natural environment. Human activity is not separate from nature (Ibid., 38f).

3. Dewey’s conception of technology rejects the idea of final certainty and characterizes findings as fallible but still operational (Ibid., 40).

4. Technology is not a given or found solution but a method for constructing an understanding that can provide a platform for the creation of a desired outcome (Ibid.).

Technology in the above sense of the term is thus not what we normally understand by it – i.e. a practical application of existing theoretical knowledge on technical or physical matters – but rather a general method for creating an understanding of situations and problems we face, changing the situation and changing existing habits and understandings. Thus it can be applied not only to technical matters, but in all sorts of human undertakings, like politics, social sciences, as well as the reasoning governing technical innovations.

Schön has provided both an example of pragmatist design research and a proposal for what we should study. As I see it, Schön’s *The Reflective Practitioner* (1983) is a very good example of the research attitude intended by Dewey. It includes the following aspects:

1. It addresses a problematic issue: the peculiar and diffuse relation between scientific and intuitive knowledge in professional practices.
2. It takes a starting point in empirical investigations, in the form of case studies.
3. It draws on the findings of other authors.
4. It aims at changing our understanding and the general improvement of professional practice, education and research in professional practice.
5. The degree of reflective thinking is very high in his research process.
6. The reliability of his ideas is based on the connection to real life cases.
7. The results are strengthened by means of rational discourse.
8. He uses methods such as observation, concept clarification and the hermeneutic interpretation of practices.

On the other hand, it’s obvious that Schön interpreted the case studies in his own way, contrary to the dominant understanding of professional knowledge. His interpretations are weak in the sense of references to the actual process and methods of inquiry. The outcome is not a clear-cut description or theory, but rather a narrative making the reader believe that there is another way of understanding this issue. The emphasis is put on changing our understanding, instead of securing the rigour of the methods of investigation and the results. The advantage of this research attitude is, of course, the potential for studies of issues that are very complex, where the thinking is partly tacit and the influences and reasoning often remain hidden. At the end of his book, Schön makes proposals for how to do research and which approaches he favours. His research interest is, of course, in professional knowledge, aiming in particular at its improvement. Also of central importance is the understanding of the
professional role and actions. The idea is that when the professional becomes aware of his/her role and actions s/he can change his/her professional practice (Ibid., 310). The research Schön aimed at was closely connected to professional practice, but he also made some proposals for research that can be executed outside the immediate practice — with the intention to “enhance the practitioner’s capacity for reflection-in-action” (Ibid, 309ff):

1. Frame analysis — i.e. the study of ways in which practitioners frame problems and roles.

2. The description and analysis of images, category schemas, cases, precedents and exemplars, which can help build repertoires.

3. Research on fundamental methods of inquiry and the overarching theories: i.e. how the practitioner acts in certain situations or when confronted with a problematic situation.

4. Research on the process of reflection-in-action – i.e. closely study how people reflect in action.

Methods

Regarding the philosophical reasoning in the present study, I see it as a mixture of philosophical methods; clarifying and categorizing, analysing theories and their ambiguities, studying empirical evidence and lifting it to higher degrees of abstraction, with the aim of precision and clarification. Furthermore, I reason and defend certain positions found, trying to convince the reader by means of evidence and logical structures, but also by means of exemplification and narration. Finally, in my philosophical reasoning I have tried to avoid making definitions as means of making statements. Some might see this as a weakness, but, at least at the present time, I see no possibility of proposing such definitions about these matters that could provide anything more than limited framing elements that would be unable to match the particular problems of this field, with its strong dependence on knowing in practice, reflecting-in-practice, tacit knowledge and skilful non-conceptualized practices and artistry with embedded cultural values and knowledge. My aim is to articulate and create a operable picture not to define and create a definite structure.

I find it very difficult to pin down the research methods that I have used in this study, because I have found no model explanations for how to do research. I started off with a typical and naïve attitude, thinking that research is about proving things and about expressing complicated relations in a simple theory and definitions. From Lundequist I received the advice to study design processes by means of case studies. This is also an idea inherent in Schön’s proposal to address problems in the professions, which often remain ignored by traditional research, where research is
seen as being detached from the professional practice (1983, 307 ff). Using Schön’s words, it’s a question of rigor or relevance, where the practitioner is interested in relevance (for his praxis) but where the current scientific research dogma ‘tempts the practitioner to force situations into moulds derived from research’ (Ibid., 308). Schön’s proposal for “reflective research” includes the idea of repertoire building and case studies as a way of improving professional practise and with an emphasis on the professional’s process of inquiry into the situation, and on how the interacts with it (Ibid., 317). Usually research tends to ignore things in-between and “focus(es) on the starting situation, the actions taken, and the result achieved” (Ibid.). It’s expressed as a rather simple linear reasoning. Still, what Schön is aiming at is to improve practices, whereas my intention has been to present theories of design as a matter of non-professional knowledge creation. My research aims at improving the understanding of design on a general level not only on a limited or purely professional level. Another issue in Schön’s explanation is the seeing-as something (Ibid., 139). The point is that it is the seeing of ‘unfamiliar situations as familiar ones’ that is an important capacity for a practitioner (Ibid.), and this also applies to the researcher. This has been an important issue in the selection of case studies and the features within them.

I was advised by Lundequist to conduct case studies, to then reflect on what I found, and to sort and structure it afterwards. I studied Yin’s case study methodology (1984) and Glaser & Strauss’s Grounded Theory (1967), but they seemed very much in favour of research processes where the results are to be generated as a kind of mechanical filtering of findings. I see no need to dismiss these methodologies in general, but found them inappropriate for my intention to study the design process and their influencing factors and relations. What I did instead was to collect as varied and rich material as possible within a reasonable time and to lay it out as explanations and descriptions as soon as possible, but still with a degree of selection and organisation. The descriptions had to be organized under headings and sometimes limited or edited. I ended up with more material than I reasonably could integrate, and in both case studies I had to fill in the introduction with rather general descriptions of the contextual settings. Later I filled them out with narratives and complementary interviews. Still, I have always left the initial descriptions and explanations untouched — just as I have interpreted them after my observations and interviews. I have also tried to remain consequent in my interpretations of the interviews, leaving aside my own comments made during the interviews and instead relying only on the expressions of the interviewees. If I should try to condense my methodological approach, I would state that I have conducted case studies based on participant observation and interviews, aiming for a rich material. In the interpretations I have taken the freedom to sort and select, with the material illustrating a path of thought that seemed reasonable. Here it’s more a question of relevance than rigour. One important feature is that my reasoning is interwoven with existing theories, which I see as strengthening the reasoning. However, I clearly see my approach as an attempt to change the thinking and less as a rigorous and systematic investigation making its point by rigorous chains of proof. I see the danger in this rhetorical approach, but I also see a relation to Rorty’s perspective on philosophy as a kind of writing (1982, 900 ff). In this sense, the whole study, including the case studies, constitutes a speculative proposal and thought experiment.
which is to be measured by its power to convince and change the thinking of the reader. In Rorty’s philosophy it’s legitimate to attack an idea that seems problematic. The discussion continues if there is something in it that we think is worth defending or challenging. In Rorty’s perspective there is no way we can maintain any absolute relation between the object we want to describe by means of representation and the representation itself (Ibid.). Writing is a traditional way of scientific reasoning and of introducing novel ideas (Ibid., 106).
The position of the present study lies within pragmatist philosophy as an epistemological framework for design theory and design research. The basis of design knowledge and practices must also include the ideas of the later Wittgenstein. One difference between these philosophies is to be found in their attitude towards the future of man. Wittgenstein had a very pessimistic attitude, whereas Dewey is clearly optimistic and devoted to amelioration. The message is that we should address problems and diffuse situations, in the case of this thesis in architecture and design theoretical reasoning, and look for ethical, acceptable and useful solutions, not only as descriptions of how things are but also as proposals on how they could be improved. This is also the starting point I think this position provides. It provides a different approach towards design theory and philosophy which can change, clarify and improve the current situation in both architecture and design theory. This philosophical position can cast a new light on constellations that we find difficult to sort out and address within the current theories of design.

The present study consists of several approaches and research methods. Basically it’s a hermeneutical exploration. It’s also clearly devoted to both the clarification and development of concepts. The case studies and their interpretations are based on a selective interpretation of the material. Many of the conclusions are developed as discussions, where the philosophy of Dewey forms the basis. The idea has been to discuss and create a design-theoretical reasoning that extends the understanding of design processes.

The study includes two case studies. The goal has been to produce rich case study material and to articulate the design processes. Of course, one gets an idea of the design processes in the two case studies simply by reading them, albeit that they are based on my own selections; on what I noticed and thought interesting and presented using my own ways of expression. The tape recordings I made were not transcribed. Most of the process descriptions are based on notes and were written immediately after the interviews or observations. The tape recordings were mostly used to check the accuracy and to be able to pick out a particular expressions used. The case study research method is oriented towards the ideas of Stake (1995). I prefer to say that the knowledge inherent in the case studies and their interpretations are constructed (Ibid., 99). The validity of the studies rests on their immediacy and concrete nature. There is actually very little in the interviews on how the designers performed their design activities. The designers love to talk about what they do, but only in the sense of what they see — as presented in their sketches. Spelling out what they really have done — in the sense of design actions and thinking — seems to be very difficult for them. However, I am willing to draw some conclusions on the case study material, but the reader should be aware of the little proof the material can offer. The conclusions are speculative, based on one example, on one single case study, where much of the written material proceeds from the interpretations made by myself.
One important question is, what are we aiming at with design theory and design research? What is important? I propose four different goals, based on my current experience and understanding of design, and on the values inherent in pragmatist philosophy. I hope the reasons will become explicit over the coming chapters. Thus, I propose that, design theory and research should be:

- Aiming at improved efficiency.
- Supporting innovative activities.
- Critical, in order to enhance human values and needs.
- Culturally enriching, for all classes of society.
- Providing conceptual tools for communication about design issues.

The aim of the present study is not to prove anything but to introduce new perspectives on design processes, and to try to make the reader reflect, and potentially change his/her mind regarding certain issues. As I see it, the most important issues to be addressed are polarized subcultures, aesthetic experience and design rationality as well as to see design knowledge as a central issue in design theory. The reader should be guided into these particular matters, but also into the resulting reasoning and new insights. Hopefully most of the issues presented appear reliable. Some of them will remain less obvious, but the real issue is to push the thinking and theory development forward. In a pragmatist perspective, I think it’s important to look at the whole, to evaluate the study according to the greater picture generated and with less focus on details and, in this case, philosophical exactitude. I have been trying to generate a picture of the pragmatist thinking of Dewey and its impact on design and architecture, and on the case of design in both the context of ordinary people and within the realm of avant-garde architecture. I would prefer the study to be evaluated for the ideas put forward and their potential to trigger and support renewed research efforts, than for lacking rigour or an imperfect use of philosophical concepts.

Notes:
1 The doctoral thesis of Hilkka Lehtonen (1994), Perspektiivejä arkkitehtuurisuunnitelmien esityskäytännöihin, [Perspective drawings in architectural presentation practices] (TKK, Espoo), is one rare example, devoted to presentation techniques.
3

ASPECTS OF DESIGN
INTRODUCTION

This chapter presents different aspects characteristic of design. Design is difficult to define and determine and may be better presented without giving definitions. I have chosen to present design as a set of conceptual descriptions, highlighting different aspects that I regard as central in an understanding of it. I present the different aspects with references to different authors. I don’t think this is a full picture of design but, nevertheless, I think it’s important that one tries to develop a shared vocabulary and for the reader to know where I myself put the emphasis. Design research has generated a multitude of concepts, and, as in many other academic fields, the concepts are used with various intentions and meanings. I don’t think we need to define the meaning of the core concepts, but I think it’s necessary to clarify some general aspects and interpretations. The intention with the present chapter is to present a background for the rest of the study, with case studies and philosophical reasoning, which are far both from design theory. In a sense I am attempting to tie my reasoning to a background of established theories of design, because the intended interpretations of the pragmatist philosophy will inevitably be a rather freestanding.

As I said already at the beginning, I use the term design theory as a universal term for the reflections on matters shared among different design fields. I am apt to think that it could be substituted with design philosophy or the science of the artificial (Simon 1969). I make a distinction between on the one hand design research and design theory, as dealing mainly with design processes, and on the other theory of architecture, as dealing with the objects. This distinction is not definitive. One closely related discipline is the planning theory (Planungstheorie in German and suunnitteluteoria in Finnish). This deals with the investigations and the development of theories in the areas of urban or regional planning. It’s understood as (often interdisciplinary) investigations into sociological issues, policies and procedures. It can also include analysis and normative theories on how to perform design activities and the generation of guiding principles and reasoning. It’s mainly a philosophical discipline, but with a clear-cut field of interest in urban and regional planning. Planning theory is a field-specific discipline and should not be confused with design theory.

One central point in design theory is the idea of ‘tacit knowledge’. Design thinking is said to be tacit, because it seems to be “outside the bounds of verbal discourse” (Daley, 1982). Designers cannot accurately describe what they are thinking when they design. This sets an obstacle to scientific research, where findings are presented as descriptions. It seems that design thinking is better expressed by means of examples and by showing how design is done than by descriptions. Nobody believes that the practical training in design education can be replaced by theory. There seems to be rather little help from thorough models of design processes (Cross, 1994, 26). Still, in design research and in the administration of design processes, it can be necessary to apply theoretical knowledge of design. It’s also clear that we have a strong scientific tradition that we cannot so easily escape. We have to accept that
the vocabulary of the scientific tradition will continue to influence our thinking and ways of expressing our understanding. Design is a practice and can be seen as language games. It’s also a combination of various methods and ways of seeing and thinking. In this chapter I start with a discussion about design knowledge. In turn, I approach the issue of aesthetic quality in design and conclude with a discussion about the architects’ profession. This final part is to a large extent a discussion about morals in design practice or the ethics that influences design practices. According to Lundequist (1995, 84), design is about managing value conflicts. I myself think it can be seen as divided according to:

- The general ethical aspects of the process
- The ethical aspects belonging to the professional codes

The design process doesn’t have a clearly defined goal. It has the simple goal of designing a building or some other object, but the qualities of the object to be designed are not given in their final form. The design process will determine their final form. The goal continues to change and develop during the process. If the final goal and the qualities of the object would be known in advance it wouldn’t be a design process. It would be an assemblage according to fixed rules. According to Lundequist, design is not a truly problem-solving process, in the sense that the problems would cease to exist. Design is a process of addressing some given problems (for example, the need for housing or a product for the consumer market) and executed through a rearrangement of the given problems into a solution where the conflicts and contradictions are acceptable (Ibid., 82ff). Because these rearrangements ask for evaluation and judgement, the process presupposes value managements.

The ontology of design can be interpreted in various ways. Among architects design is often seen as limited to the early design phases of a project; whereas I myself prefer to see it as the whole chain of changes that contribute to its final shape. The English word “design” denotes all kinds of design and the different stages of any specific project or task. In reality we have different types of design in different stages. In Swedish we have the word ‘skiss’ to denote the preliminary design, approximating to the English word ‘draft’ or ‘sketch’. In this early stage intuitive reasoning is more dominant, whereas explicit analysis, precise documentation, reasoning and formal design procedures dominate in the later stages. This intuitive thinking, predominantly occurring in the preliminary design stage, is one of the targets of my investigations.

It’s important to notice that we can have different perspectives on design and that these perspectives colour our understanding of it. I can detect at least five different perspectives by which design can be distinguished:

- Professions (for example: architects, industrial designers)
- Disciplines (for example: architecture as taught at a university)
- Cultures (seen as produced, used and discussed by various agents)
- General or different competences
- Produced objects (for example: architecture, cars, cell phones)
I have proposed establishing a borderline between disciplinary design research and design theory. One reason why I think it’s better to structure design research with a borderline between the field-specific diverging disciplines and a convergent design theory is that there are many different research approaches and traditions related to various design disciplines. Traditionally in architecture we have a lot of investigations of the history of the objects (of the architecture), which I assume is rather rare in the field of software design. In engineering design they have a strong tradition of explicit analytic methods integrated in the design process, which on the other hand is very rare in the field of architectural design. In the fields of industrial design they often use consumer and market surveys, whereas we can’t find anything like this in the field of architecture, despite its big share of the total amount of invested capital and influence on the consumers. One could continue this list of differences without end. The variations are based on traditions, methods of organisation and other characteristics of the disciplines. Instead of focusing on these disciplinary differences, I will concentrate on the similarities and the potential benefits of sorting out basic shared features.

Design can be said to include very many different aspects. Many of them would be deemed unacceptable as subjects of study within scientific reasoning, while others are shared with science. Design is partly based on facts. It’s a kind of problem solving. It includes modelling and experiments. It uses explicit reasoning and adheres to logical and rational reasons, to a certain degree. Many of the similarities shared with science are shared only to a degree. Partly, design allows for divergent methods or reasoning. Among the other aspects typical for design are: creativity, action or practice, emotion and intuition, individual judgment, the dependence of tradition, values and context. Design has a differentiated vocabulary for the intermediate and final production; e.g. sketch, architectural design, documentation, illustration, drawing, final scheme. These are partly shared with the sciences, and in design they are normally accompanied by oral or written explanations. One difference is that scientific results must be rigorously documented and their validity is measured through the documentation, whereas in design it’s enough to provide a means for producing the object and the ultimate success is measured in the performance of the design. One peculiar concept often mentioned in discussions concerning art, but mostly left without further consideration in design theory or in the design practice of the non-artistic design disciplines, is the aesthetic quality. But in design theory aesthetic quality is hardly mentioned and the idea that it would be one of the shared ingredients, inherent in all kinds of design processes, is certainly met with suspicion.
Design history

Design history can be interpreted as both the history of the objects, as well as the history of design thinking; i.e. the history of design theory. Design methodology (Cross 1984) and design studies (Buchanan & Margolin 1995) are also used as general concepts for investigations into design processes. In this study the term ‘design theory’ stands for the academic discipline, whereas ‘design studies’ denotes research efforts, and ‘design methodology’ denotes efforts to analyse and describe design as a matter of systematic and controlled processing. ‘Design philosophy’ can be interpreted as a kind of theory on how to do design work – conjugate to ‘theory of architecture’, denoting a design activity on a conceptual level. It can also be seen as the reflection on various kinds of design matters. This is close to my interpretation of design theory.

According to Lundequist (1995, 65), design theory as an academic field has been mainly constituted through a series of conferences and publications, with the anthology *Developments in Design Methodology* (Cross, 1984) as a basic historical survey of leading ideas up to the time it was written. One important land mark is also Simon’s statement that design is a general competence shared by many different design disciplines (1969). The anthology edited by Cross is a survey of a development. It initially attempts a dissection of the design process and its problems into smaller sub-problems and their solutions, but later turns to user participation, concept development and the insight that design knowledge is to a large extent tacit and a specific type of thinking and knowledge (Cross 1984). Generally the theory development in design has been very heterogeneous, with an emphasis on idealistic theory generation, including proposals of models and definitions of the design process.

Buchanan (1995B) traces the design thinking back to the ancient world as a general human activity. An important change in design thinking, or the relation to design, is created by the separation of *making* from *design*. Buchanan dates this change back to the pre-industrial time, after the Renaissance (Ibid.). This aspect and the dualism and contradiction between theory and praxis – dominating modern Western thinking – are often seen as devastating for the theory of design. It has been difficult to establish an academic discipline out of something that is closely dependent on practice and where the validity of theoretical generalisations has proved of little use. Furthermore, design has a relation to art, which traditionally has been kept apart from the academic way of conceiving knowledge. There hasn’t been any legitimate space for design knowledge as an academic discipline. This, of course, hasn’t meant that the competence or activity hasn’t existed.

Schön (1982) made an important contribution to design theory by developing a theory of the actions of different professionals and how professionals think. Much of his ideas are related to the idea of professional practice seen as a kind of design, where the agents are “engaged in converting actual to preferred situations” (Ibid., 77). Out of the problem-solving behaviour of architects, Schön develops a set of steps typical for professionals’ problem solving (Ibid. 128ff). He presents
a simple model of design actions, including a few steps repeatedly applied in design situations: problem setting, reframing the situation, experimenting with the situation and evaluation of the changed situation (Ibid.). Schön’s thinking has a close relation to the ideas of Dewey and the steps mentioned are similar to those that we find in Dewey’s research methodology (1938, 60ff). Schön also gives an elaborate argument for the need to acknowledge the differences between scientific knowledge and the knowing inherent in professional practices, arguing that the scientific mode of thinking and representations of knowledge – as theories or data – are not sufficient to cover the design thinking (Schön 1982, 287ff). Dewey went into extended explanations in order to convince the reader of the same problem – claiming that there is no absolute difference between knowledge in practice and scientific knowledge (1938, 77): rather, it’s more a question of emphasis and results.

The architect’s profession has emerged from a different historical profession, that of the leading or general master builder. The profession of architect has existed for a long time, but originally it was devoted to the design of castles and other forms of defence, which in turn took on a representational value, but then also other major non-defensive buildings and monuments intended for representation. Over a long period of time increasingly more building types have been designed by architects. There was no education of architects available in Finland until the late nineteenth century, while in Sweden there has been an education available since the late eighteenth century, at the Royal Academy of Art. In the nineteenth century there was still a mixture of master builders and architects behind the design of important buildings (churches, mansions etc.), and it’s often difficult to determine precisely who the designer was. It’s often documented that the master builder redesigned the building, deviating from an architect’s drawings.
There is a significant epistemological discourse in Scandinavia closely connected to the thinking of Donald Schön, though not specifically developed in regard to design knowledge. It has, at least partly, its roots in the traditions of the Wittgenstein centres and in an on-going research at the National Institute for Working Life [Arbetslivsinstitutet], with Bo Göranzon writing about computerization and the erosion of professional knowledge. This tradition is focused on the knowledge inherent in practices, its qualities and how we acquire this knowledge. The intention has been to articulate this type of knowledge. Much of the knowledge will remain tacit and there can be no real display of it. The only possible way is to produce conceptual models that can support our understanding of these matters.

Bengt Molander (1996) has produced an extended study on the matter of knowledge in action, which also can be seen as related to this Scandinavian discourse. Some of the core features of this kind of knowledge, or ‘knowing’ as Molander calls it, are: attention, responsibility and dialogue. He describes the knowledge by means of polarized tensions, constituted through four different pairs of concepts: part/whole, empathy/closeness-distance, criticism/trust and action/reflection (Molander 1996, 258f). All of these are part of a game of dialectic changes between these poles. They constitute a schema for knowing and action. This knowing in action has connections to the type of knowing we normally call knowledge, but the main implication is, of course, that there is a specific type of knowing related to practice, and skilful practice. Design, with its large amount of tacit knowledge and its notorious dependence on practice for both teaching and learning, is not dependent on the articulation of knowing in action, but for design research, and the management and administration of design processes and organisations it might be useful to develop this kind of distanced and theoretical understanding.

If we see the design situation as an immense mixture of aspects, where normal analytic methods remain insufficient, because they require that we analyse every detail of the situation to all its consequences, we have to accept methods that simplify the situation or enable us to draw conclusions in these complex situations. Normally we call it synthesis, when we draw conclusions from complex and contradicting issues. Crucial in the performing of this process is the perception of the situation; moreover, our experience and interpretation of it. Without any perception or experience of the situation we can hardly draw any conclusions or form a synthesis.

Simon (1969) introduced the idea of design as a distinctive type of knowledge and coined a new field of research – the science of the artificial. This knowledge is present in many disciplines, in innovation and in most professions (Schön 1983, 49ff). Simon was working in the field of artificial intelligence, but saw the science of the artificial as a necessary complement to the natural sciences (Ibid.) – an idea, however, that still hasn’t reached any large influence, after more than 30 years. There are now signs that there is a larger acceptance and interest in other modes of knowledge, but the idea that the only true knowledge is theoretical knowledge
still dominates. Simon’s notion of the science of the artificial is an advocacy for a need to acknowledge the specific features of the knowledge of all professionals. In Simon’s (1969, 129ff) view, the scientific type of knowledge has been forcing the body of professional knowledge out of its place. In his view, we should develop a “science of design, with a body of intellectually tough, analytic, partly formalizable and partly empirical teachable doctrine about the design process” (Ibid., 132). Schön, with his roots in pragmatist philosophy, continued to develop this idea of a general science of design. Schön’s main goals were to criticize the dominating trust in the traditional type of scientific knowledge and to improve the education of professionals (1983, 1987). He saw design as a set of actions – with reflection embedded in the actions and applied to problems of real life situations, transferred to a virtual world (Ibid.). One major idea in his book *The Reflective Practitioner* (1983) is that professionals reflect on what they see and do. In congruence with this, he proposed a programme of “reflective research”, with research integrated into the professional practice (Ibid., 307ff). This is simultaneously a programme suited for all research as such. In Schön’s proposal, this is to be based on collaboration between professionals and researchers, a collaboration that can be pursued close to the practice. The core outcome of this kind of research would be repertoire building and an improvement of the knowledge of professionals.

Lundequist (1995, 1999), in turn, concludes the present understanding of design by presenting different aspects of design. According to him, design consists of four connected and overlapping moments (1995, 79):

- Processes of negotiation and decision making.
- Management of information.
- Artistic processes.
- Moments of resolving or management of design problems.

Design is action in a situation of uncertainty (Ibid.): it unifies such diverging aspects as technical, economic, ergonomic, psychological and social demands. The goals are ill-defined yet part of the design process. Based on Schön’s theories, Lundequist claims that design is not a question of solving problems but of managing problems in a virtual world. It’s a process of finding the problems and the means (Lundequist 1995, Schön 1983). Design includes the management of conflicting values and the organisation of a supporting rational reasoning (Lundequist 1995, 84). The action-oriented knowledge is expressed as a practical reasoning (Lundequist 1999B). The reasoning is about good or bad, not about right or wrong. The reasons cannot be fully tested empirically, but it gradually contributes to the determination of the object being designed (Lundequist 1995). Lawson (1984) argued that there are two common strategies in problem solving:

1. The scientific method, which tries systematically to understand the problem, looking for underlying rules.
2. The design method, where people fairly soon shift from the analysis of the problem to the generation of proposals.

Cross (1994, 18) draws the conclusion that the latter is suitable in complex situations where the problems are ill-defined. The differences are to be found in efficiency and results. The scientific method produces an advanced understanding of the problem, whereas the design method might miss some facts but can produce a satisfying result within a short time (Lehti & Ristola 1990, 79ff). The scientific method needs a lot of resources, especially when dealing with complex problems, whereas the design method is rather efficient, overruling attempts to analyse the problems extensively.

Creativity can be seen as an aspect of knowing or knowledge, and most authors stress the need for creativity in design. In the field of cognitive research, there have been a lot of efforts spent on understanding creativity as a mental process. In design theory one aim is to conceptualize the understanding as a matter of methodology, or as a mirroring or model of the actual process. Most authors of design theories stop after simply stating that creativity is a necessary ingredient in design. The same goes for tacit knowledge, which often is seen as the last possible conceptual outpost of the design process. We are restricted by today’s dominant epistemology, caught in its idea that cognition expects written descriptions and explicit models. Practitioners often relate creativity to intuition or see it as an innate talent. Most methods of improving creative efforts aim at liberating imagination, by setting aside the demand for systematic analysis, production and evaluation.¹

Design knowledge might be difficult to describe, but it’s not inaccessible to research. Nonaka and Takeuchi (2001) advocate a new theory of organizational learning as a means of explaining innovation: “The cornerstone of our epistemology is the distinction between tacit and explicit knowledge. The key to knowledge creation lies in the mobilization and conversion of tacit knowledge”. They have introduced four modes of knowledge conversions: socialization, externalization, combination and internalization. One particular point they make is that knowledge exhibits similarities to information, but is still also different from it. Knowledge is about beliefs, commitment and action: it’s knowledge to some end. It’s also about meaning, and is contextual and relational. According to Nonaka and Takeuchi (Ibid.), “organizational knowledge creation is a continuous and dynamic interaction between tacit and explicit knowledge” – described as a spiral progress shifting from different modes of knowledge.

There is also the question of whether architecture should or could be seen as a specific kind of knowledge. Kuoppamäki (1999, 2001) has addressed this issue and Caldenby (2004) has discussed the relation between the history of architecture and design practice. Hillier has devoted his research towards the empirical investigation of design in the field of architecture. I see his approach being in contrast to the more speculative architectural theory, which Hillier condemns as “too often... strongly normative and weakly analytic” (1996, 65). He stresses the need for more analytic methods in architectural research, and wants to have the results applied in design. He’s aware of the problem of scientific theories, which only capture knowledge in discursive form. A key concept for him is ”configuration”, which
denotes the holistic process of design, combining many different aspects into a whole – explained as “relations taking into account other relations” (Hillier, Ibid., Introduction). According to Hillier, “The inseparability of products and processes and of subject and objects is the essence of architecture” (1996, 19). He discusses the building as both a product and a process. He stresses the difference between building and architecture but also notices that wherever we have building we find a “preoccupation with style and expression” (Ibid., 15). In discussing building as a product, he concludes that:

“A building then becomes socially significant over and above its bodily functions in two ways: first by elaborating spaces into socially workable patterns to generate and constrain some socially sanctioned – and therefore normative – pattern of encounter and avoidance; and second by elaborating physical forms and surfaces into patterns through which culturally or aesthetically sanctioned identities are expressed.”

According to Hillier, the human mind is intuitively good at what he terms ‘configuration’, as a means within the design process, reflecting on ideas and cultural patterns. Hillier draws the conclusion that “(i)t requires not only the conceptualisation of pattern and configuration in vacuo, but also comparative knowledge and reflective thought” (Hillier Ibid., 54). His idea here is that the design is often non-discursive but that architectural theory must try to conceptualize it. The non-discursive methods, which are common in design, aren’t totally excluded from investigation and discursive reasoning (Ibid., 54f). What we do when we design is that we refer to the objects and compare them with each other. We can also express our solutions as functions, even if we show them as space or shape (Ibid., 423f).

Hillier sets out to explain how we can explore patterns in architecture and urban structures as a genuine mode of architectural research, thus generating useful knowledge that can be used in design. The idea is that theoretical descriptions can be used both for descriptions and, reversely, for predictions on how the proposed shape will function in response to given needs (Ibid.). Hillier makes a distinction between the conjectural, and generally non-discursive moments of design, and the analytic, mostly discursive phases of design (Ibid., 49). The knowledge an architect possesses is both discursive and non-discursive. Hillier constructs his view on how we design on the idea of a tacit relation between existing cultural patterns in the physical environment and design thinking, and proposes that we take this further into an open analysis (Ibid., 33ff). We judge and compare on the basis of previous experiences of empirical cases. We have seen and experienced actual buildings and representations of buildings. We might reason about the functionality of an entrance space, but the basis of our understanding rests on our memory of experiences of such spaces and functions. In conclusion, Hillier claims that the shift that takes place in the conjectural moments is not a transformation of theoretical ideas into shapes and spaces, but a transformation “from knowledge of formal and spatial possibility to formal and spatial actuality, and similarly for functional issues” (1996, 426f). The interesting implication I find in Hillier’s explanation is the idea that the knowledge isn’t transformed into a different mode of knowledge, but can be applied as it’s
constituted, with both non-discursive and discursive elements. Instead of seeing theory as the only type of knowledge, Hillier invokes other modes of knowing.

One basic notion about design is that it’s very complex and embedded in cultural practices. According to Lundequist (1998, 10), design practice can be seen as a rule-based practice – as a language game. There are no rules that define what a language game is, but it denotes a relational situation, with some agents interacting in a foreseeable way (Ibid.). A language game includes both concepts and actions. We learn the language game by participating in it. The rules are not explicit but there are patterns and conventions supporting our actions and participation in language games. Design problems cannot be described nor solved in the way mathematical problems can. Instead one can use Wittgenstein’s notion of language games as a means for describing the design processes, because it allows for open and pluralistic interpretations of design processes. There is not one single type but an immense amount of various design processes. According to Lundequist’s interpretation, the processes are not eternal: they are born, endure but can cease to exist and can be replaced by new language games. They change when the conventions that regulate their existence change (Ibid., 11). One major point in this perspective is that other people can identify the rules we adhere to and criticize whether we are acting in an appropriate way (Lundequist 1999, 10). This is also the way to prove that we understand the language game – by participating in a proper way. There can be mismatches between different language games but also family resemblances. The mismatches occur, for example, when a concept is used in a context where it doesn’t fit. To participate in language games is not a private action but a social one (Lundequist 1998, 14).

One point criticized by Wittgenstein was the assumption that we would be able to understand a word by knowing it. He claimed that we understand the meaning of a word if we are able to use it (Lundequist 1999, 10). In Wittgenstein’s perspective, there are areas that we cannot express in words (Rolf 1991, 47f). In his treatment of tacit knowledge, Rolf finds a difference between the Wittgensteinian understanding of tacit knowledge and Polanyi’s understanding. Rolf finds that Wittgenstein’s aim was to make us realize that we shouldn’t try to approach tacit knowledge by conceptual means (1991, 39). Wittgenstein’s aim was “to protect the deepest existential insights from the talk of the philosophers” (Ibid). Instead of Wittgenstein’s understanding, Rolf uses Polanyi. According to Polanyi, tacit knowledge is an activity or a tool we use when we investigate the world, and it can be in use even if it remains tacit (Rolf 1991, 29). Tacit knowledge is all the time framing our interaction with the world, and our explicit knowledge is generated within this framework. All explicit knowledge has tacit knowledge as a prerequisite (Rolf 1991, 62ff). However, the tacit knowledge is not a fixed prerequisite but something of a framework which enables us to understand what we focus on. Tacit knowledge is not a distinctive category or type of knowledge but an integral part in our interaction with the world, providing means for understanding.

We can also discern design language games that aren’t accessible to all members of the community. According to Lundequist, we cannot aim at defining or describing the aesthetic dimension we experience, but rather have to accept that we can only
observe the effects of aesthetic experiences in the perceiving agent (1998, 28). One other problem is that the concept covers all kinds of aesthetic experience, stretching from rather minor experiences in ordinary life to the overwhelming existential experiences (Ibid.). It includes ordinary life experiences, art experiences and experiences in professional life. Another complicating aspect is that aesthetic experiences are tied to personal and cultural frameworks. A piece of work might be attractive to one person or audience but inaccessible to others. Lundequist gives as an example the question: “What kind of music do the security guards at a rock concert like?” (1998, 28), assuming that they might not be able to enjoy the concert at all. In this context it’s reasonable to assume that it’s difficult for a layman to participate in the practices established around avant-garde design. Superficially, he can see and experience the design but normally the layman is not familiar with the conventions of the avant-garde. The layman doesn’t recognize the meaning. The meaning is not embedded in the object but results from our actions in a socially acceptable way (Ibid., 14). Architectural or design knowledge is thus a complex of cognitive relations. Knowledge is not purely knowing a fact about an object, but it includes “knowing how to do” and what it means (Ibid., 15). A fact is just one tiny little piece in this kind of knowledge. According to Lundequist’s interpretation of Wittgenstein, the design object is created in a design process that’s embedded in a collective- and rule-based practice, but it accrues a new identity as a finalized object, where it enters into the world of consumers and critics, communicating ideas about the object (Lundequist 1998, 29).
MODELLING

This section is about ideas of design as actions in a virtual world by means of representation (Simon 1969, 151f), where changes and solutions can be modelled as experimental means of exploration at very reduced costs. It’s also about different types of modelling of the design process itself, as a means to understand and control as well to enhance the efficiency of the design process. We model the object we want to create before we construct it (Lundequist 1995, 80ff). The advantage is, of course, that the possible mistakes and biases can be found and measures taken to limit or resolve the problems. The model is not the real thing: in a virtual world constraints can be reduced and ideas can be tested separately. Compared to reality, every step can be reversed or corrected. The modelling also generates feedback (Schön 1983, 131f). The virtual world – the sketched ideas – acts as a model of something and provides the designer with a tool for seeing things s/he cannot project in his or her mind. According to Linn (1998, 76), a drawing, as a model of an object, creates a bigger distance from the object than the mental representation we might be able to create in our brain. This provides us with a means to dissect and criticize the object and to inquire about consequences following from any intended measures. It helps us get beyond some of the restrictions of our mental or intellectual capacity. This virtual test function is useful only in so far as the model represents the actual world (Schön 1983, 159).

The design agent needs to know how to model the design (Schön 1983, 159). In the case of architectural design, students are taught how to represent houses, e.g. with plans, cross-sections and elevations. This provides them with the means to model future buildings. In reality architects learn to abstract and simplify much more than this. They learn to express ideas with sketches, where simple lines, dots and different signs indicate very different features: movements, borders, levels, etc., or simply the emphasis of certain areas. In design teams there is also a need for understanding this kind of very simple modelling of a situation, but normally even non-professionals can understand the ideas expressed in these simple lines, especially when accompanied with explanations. There are conditions that are difficult to represent or even missing in a representation. In his example from a case study with a therapist, Schön (1983, 160) noticed that storytelling can function as a means for creating a model, and that we can create “a virtual world of talk”. The idea is that the narrative enables us to reflect on different aspects of the event – a kind of slow motion of the real event, which normally is very complex and moving forward fast.

Buchanan cites Adrian Forty, who claims that the design includes an expression of ideas or myths about the world (Buchanan 1995B): “Every product, to be successful, must incorporate the ideas that will make it marketable, and the particular task of design is to bring about the conjunction between such ideas and the available means of production. The result of this process is that manufactured goods embody innumerable myths about the world which in time come to seem real as the products in which they are embedded”. Forty warns that the client has an ultimate influence
on the design decisions and thus influences the design as much as the professional designer. He notes that the ideas and myths are difficult to determine and far from being a single dominating idea (Buchanan 1995B, 49).

It’s important to notice that both the design object and the design process can be the target of modelling attempts. Above I have described how the object being created is modelled. On the other hand, much of design research is devoted to modelling the design process in order to create a systematic model of the process. Very often it’s described by means of linear models of processes that are iterative and repeated. In the formal building design process architects structure the design process by means of phases. They structure and manage the design process by dividing it into various phases. The building design process is often divided into three phases:

1. Conceptual design (skissplanering in Finland, förslagshanrlingar in Sweden). The initial problem-setting and creative phase.

2. Main design (huvudritningsskede in Finland, systemhandlingar in Sweden). The maturing phase, with more systematic analyses and tests, ending in a formal presentation of the design and external decision making (e.g. submitting the design to administrative check-ups, asking for an acceptance of the design, a building permit)

3. Detail design (arbetsritningsskede in Finland, detaljhandlingar in Sweden). The final phase, where the main task is to check details, documents and illustrate detailed features of the design and to secure that the design matches the expectations and production methods, often forcing the design into a more or less predetermined representation format.

The innovative design actions are mostly seen as limited to the first phase, or that the other two aren’t creative. I would prefer to see all the phases as including similar sub-processes, with their own creative steps: test, analysis and documentation. Some processes and phases are predominantly more open for changes, while others demand that the design work is subordinated to given formats, methods and restrictions. The actual methods vary between the different design disciplines – an architectural design is tested in a different way than a software design or an organisational design. In the later phases, the methodological rigour increases. Designers proceed with the design in accordance with existing traditions, which determine how to proceed with the design. I see a significant difference between the early phases and the later phases regarding the attempts to improve the design process by methodological support. In the later phases designers can try to improve the process by explicit methods. These methods are mostly strictly specific for the different disciplines. The shared understanding remains at an abstract or theoretical level. In the early conceptual stage, the methods are vague and intuitive. It’s here that designers initiate the most innovative designs or best solutions, and where they are closest to the creative moments and, as I see it, closest to the thinking of artistic design processes. This is the reason why I think we have to look at the artistic processes in order to improve our understanding of the initial design phases and
innovative design. In general I think it’s important to see the collaborative efforts
between designers, their cultural codes and the clients as a typical constitutive
conceptual design framework.

According to Lundequist (1995, 73), the conceptual design phase is constituted as
an interplay between the leading idea and modifying factors. Design is an iterative
process where the leading ideas emerge through the design work. On an abstract
level, the design phase can be divided into three sub-phases (Ibid., 74):

1. Imagination (föreställning)
2. Anchoring (förankring)
3. Condensation (förtätning)

In the first phase designers create a preliminary understanding of what the future
design could be. In the second phase the ideational sketch is anchored by analysis
and testing, thus developing the idea. In the third phase the design is condensed: it’s
simplified and clarified (Ibid.).

In large organisations there is a greater need for structured design processes, the
organized cooperation and explicit communication of design intentions, and an
application of methods and tools. The competence of the office staff is often tied to
certain methodologies and competences to use certain tools or methods. In the case of
architects, there is a simple division into conceptual design and detail design, where
most of the staff work with detail design, whereas most of the design education is
devoted to conceptual design and the representation of ideas. In the construction
sector the documentation serves the client in the tendering process as a means for
estimating the cost of the project. There has been very little progress in software
applications for the conceptual design phases. The pencil is still the most important
tool, though there are attempts to introduce software tools for fast sketching and
the illustration of ideas in this phase. In the engineering fields the design methods
are often combined with analysing tools, increasingly supported by software. In
architectural design most of the analysis is still done by the designer him/herself as
a rather intuitive and holistic analysis of the whole design situation and by means
of presentation and interaction with clients and users. Formal analyses such as
structural and cost analyses are prepared by separate consultants in later phases.

Another reason for modelling is that it’s a support in the monitoring of the production
process. The designer determines the shape and the details by means of drawings
and descriptions. Those involved in the production can use these documents and the
client can use them to coordinate the production process and the quality (Linn 1998,
76). The historical unity of design and production as crafts is today split into two
processes: design and production. Thus we can rationalize the production, but the
production process has become devoid of intellectual processing, whereas the design
process has become increasingly intellectualized (Ibid.). In design methodology we
find concrete methods describing how to push a design project forward. In the field
of architecture we talk about sketching. Brain storming and mind mapping are other
well-known general methods promoting the development of ideas.
DESIGN REASONING AND RATIONALITY

The design action is combined with reasoning. The design situation generates insights and reasons. Normally these reasons are expressed as explanations aimed at the client or other design team members as a way of supporting the understanding of the design. This reasoning is still only a support for the actual design action and solution.

Schön (1983, 128ff) saw the interplay between the designing architect and the particular situation as a dialogue – a reflective conversation. The designer is in a process of reframing a problematic situation, experimenting, evaluating and judging the outcome of the experiments. One major factor in the process is that the designer has certain repertoires which s/he can apply in each problematic situation. The designer sees the situation as something known, despite the fact that it’s not identical with any situation met previously. By seeing it as something the designer can try to do as s/he did previously, from his or her known repertoire (Ibid, 139). When doing so the designer can detect and reflect on similarities and differences. This “allows us to have a feel for problems that do not fit existing rules”. The dialogue is a dialogue between the designing agent and his or her intermediate solutions, the design situation. It may not be an explicit dialogue but simply an exchange between the situation and the designer – the designer learning from the situation and getting a grasp of the problems and their eventual solutions. The mechanism is a “back-talk” from the virtual experiments the designer conducts. Schön sees it as hypothesis testing – “moves that change the phenomena to make the hypothesis fit” (1983, 149). Diverging from traditional scientific laboratory experiments, the designer seeks to confirm his or her hypothesis and infer with the situation in order to find a satisfying solution (Ibid., 150f). Normally the scientific researcher tries to create a stable setting, avoids changing the settings of the situation, and principally aims at substantiating or refuting his or her hypothesis. Design is not a true conversation, but the interplay between the designer and the design situation generates reasoning about the problems and their solution. There’s something going on in the virtual world of the sketches, attached to the reasoning of the designer. Complementary to the sketched image and solution, we construct reasoning, complementing the sketched solution with reasons, as well as counter reasons for solutions dismissed. The design gets supported by the reasoning. It need not be explicit, but in the educational setting of Schön the teacher explains his or her reasoning and in a real life design situation designers often have to explain their reasons to the co-designers and the client.

According to Lundequist, the result of a design process is a product where “the qualities have been determined (or caused) by the persons involved in the project” (1995, 84). These determinations are decisions based on the occurring reasons. Lundequist refers to Rittel and Webber and draws the conclusions that it’s a situation with conflicting values, and that the design process is a negotiation process where reasons are put forward and debated, generating a shared opinion of the problem (Ibid.). For this reason, values are important in design (Lundequist 1995, 84). Lundequist states that the design process must aim at being organized as a rational
discourse. In a discourse about conflicting values, the answers are not about right or wrong but about good or bad, which, of course, makes it difficult to empirically test the arguments (Ibid., 84f). Design is a process of problem elimination or management. The more the problems can be eliminated the more determined are the qualities of the objects. According to Lundequist, technical, functional and economic reasons are not enough to reduce the possibilities to only one solution. A value-based judgement is necessary (Ibid., 82). On the other hand, the information given can also restrict the solution of the design process to such an extent that no solution is possible without changing the setting (Lundequist 1995, 89).

Buchanan sees rhetoric as a distinctive feature of design in modern society: “(T)heory is integrated with practice for productive purposes” (Buchanan 1995B, 44). According to Buchanan, we have a situation where rhetoric is an integrative element in design and technology – technology seen as “a science of art”, where art is not restricted to fine art but includes “all forms of making” (Ibid.). Buchanan rejects the Renaissance interpretation of rhetoric – that deals only with the fine arts and poetry – and uses the pre-modern notion of the word ‘art’ as a creative process of making. The point he makes is that design is accompanied by rhetoric. The rhetoric stands for the means by which the designer can express ideas. This is essential both as communication of arguments, as well as expressing the ideas of the design – by means of sketching shapes, relations and distinctions (Ibid., 46).

Nelson and Stolterman (2003, 74) see design as a systems approach, in contrast to the scientific approach, and use the term “systems thinking” as a description for it. Instead of being reductionist, such an approach is inclusive, holistic and analogical. The “systems thinking” is connected to concepts such as: relationships, organisation, consilience, substance, form, purpose, complexity, distinction, contrivance and communication (Ibid., 83ff). Nelson and Stolterman make a distinction between design and scientific reasoning, seeing the former as a distinctive way of thinking. Their use of the word ‘systems’ indicates that design is a controlled and organized action. This might seem contradictory, because science is always seen as well organised and as a controlled inquiry, whereas design takes emotions, intuition and feelings into account. On the other hand, one must agree that one major point in design work is that the material or situation gets organized. There is a danger of confusing the characteristics of design, but it also seems important to stress the rational nature of the design process. Design does not involve the purified rationality of scientific reasoning, but rather it involves different types of rationality. Scientific reasoning is based on the assumption that we can make very reliable predictions or conclusions when we have all necessary knowledge. Design can integrate this kind of reasoning but can also include other types of reasoning that aren’t possible in scientific reasoning. The idea of man as a homo economicus is contested. Human beings don’t optimize their decision making and selections according to purely explicit reasons. They act rationally but their reasoning is based on a varying set of influences, some of which aren’t explicit. The measure for rationality is their individual constellation of values, which are never fully accessible to the outsider. Some of the influences may even be conflicting and this conflict can only be resolved by a judgement and a decision.
The present study is about the design process, but it might be reasonable to reflect a bit upon the design object, too. It’s often concluded that the whole is more than the sum of the parts and that the whole has other qualities than the sum of the parts. But the whole is also dependent on the parts. A poor detailing in a construction destroys the whole. Design is about creating the qualities of the whole. It’s not enough to piece the constituting elements together: that would be simply to assemble. Design includes this creative management of components creating a unified whole. We can determine which components we need: in a construction, for example, we can state that it requires a floor, walls and a roof, doors, windows, and so on. We can also set some strict qualitative frames as obligatory conditions. We can prescribe a maximum price, a maximum or minimum size, and the colour of the walls. We can set more framing details and conditions. For instance, we can say that the exterior must adapt to the architecture of the neighbourhood or that we want a very modernist or avant-garde architecture. These latter conditions are difficult to define, but we will often be able to tell if the result matches the requirements. There is a gap between what we prescribe and what we get, but we can judge whether it matches our expectations. The wholeness is a quality in itself. We might claim that a design constitutes an attractive whole. We also enjoy the tension created when the obvious whole is disturbed but not destroyed. It’s also possible to think of a situation where the resulting architecture constitutes a unified whole, but where the solution is not attractive. It might be too monotonous, drab or outmoded. ‘Outmoded’ implies that it has some temporal dimension to do with fashion. It’s obvious that the unified whole might display too much avant-gardeness, too, and thus it might not be attractive to the client. The wholeness is important in design, as is the quality of the whole. The desirability of an object is a very crucial issue. On the other hand, it’s very difficult to describe the conditions that contribute to the successful design, because the success doesn’t depend solely on the components, though the latter are, of course, important. Missing components or replacements that fit badly disturb the whole. But it’s the new, emerging qualities of the whole that constitute the main body of the wholeness and the design.
AESTHETICS AND AESTHETIC QUALITY

In a discussion on design aspects I think it’s necessary to address such issues as aesthetics, (aesthetic) experience and creativity. The latter can be divided into artistic creativity and universal creativity (productive, innovative). I don’t have any clear definitions for these and have not traced them back too far in scholarship. They are all rather controversial and ambiguous. I have tried to find out how they are treated in the literature in design but have found very little. However, I don’t think we can leave them out of design theory. I suggest that they are important in all design work due to their connection to social value standards. I will here introduce some theories concerning these ideas but the theoretical investigation remains rather shallow. My hope is that the pragmatist theory and the empirical investigations can cast some more light on these issues and their potential role in design processes.

Aesthetic quality is seldom discussed in design theory, nor is it used in theories of architecture. Despite the common use of the word aesthetic in general, scholars seems to avoid it in their writing. It’s difficult to find explorations of aesthetics in design theory. Aesthetics is a vast area but it’s difficult to trace any real interest in the idea that aesthetic experiences would be a key word in design. On the other hand, there has been an increased interest in concepts concerning experiences. The users’ experience of architecture is a puzzling and demanding question for architects. Architects also distinguish between the client and the users. Architects often express an emphasis on the need to pay attention to the users, and they defend their work partly by seeing themselves as agents for the common good, the users and the anonymous public.

Most theories of design avoid the concept of aesthetic quality. One possible reason could be that the concept is too ambiguous, another that it’s of no real interest. The results of investigations in the field of academic aesthetics are mostly regarded as arid and useless by practicing artists and architects. Another related ambiguous concept is experience. I would agree that aesthetics as a field of knowledge has hardly been of any use in design education or for design professions. However, aesthetic quality is of great importance in design and therefore an important issue in design research. Aesthetic quality is a central concept in theories of art. In theories of engineering design it is not mentioned at all. There is a general acceptance of design as a combination of both analysis and synthesis, with a demand for creative actions. The analysis needs, more or less, to meet objective criteria and it should be possible for others, e.g. for the clients, to understand and evaluate the results of the analysis. On the other hand, there is always a core activity of creative action, including human subjective judgemental skills. As Archer has put it (Archer in Cross, 1984, 64):

“One of the special features of the process of designing is that the analytical phase with which it begins requires objective observation and inductive reasoning, while the creative phase at the heart of it requires involvement, subjective judgment, and deductive reasoning (…). Once the crucial decisions are made, the design process continues with the execution of working drawings, schedules, etc. again in an
objective and descriptive mood. The design process is thus a creative sandwich. The bread of objective and systematic analysis may be thick or thin, but the creative act is always there in the middle.”

As Archer puts it, it’s a simple process model, beginning with overt analysis, passing through a creative stage and finalized through an objective and descriptive mode. In reality the process is much more complicated, where the phases are intertwined and repeated many times. Archer’s conclusion is that the “art of (industrial) designing is essentially the art of reconciling a wide range of factors drawn from function, manufacture, and marketing”, and a combination of analytical and creative phases (Archer in Cross 1984, 65).

In his book *The Aesthetics of Architecture* Roger Scruton (1979, 25) draws the conclusion that the current functionalist architectural discourse sees the aesthetic considerations as a by-product of a search for solutions and problem solving in a design process. In this he sees an attempt to “banish them [aesthetic considerations] to the periphery” (Ibid.). In dictionaries the term *aesthetic*, as an adjective, is defined as “concerning or characterized by an appreciation of beauty or good taste” According to the *Oxford English Dictionary* (2002, 34), aesthetics is: “1. The philosophy of the beautiful or of art; a system of principles for the appreciation of the beautiful. 2. The science of sensuous perception.” The word comes from the Greek word *aistetike* denoting the science of the beautiful (Schischkoff 1991). Aesthetics also stands for “The philosophy of taste” (Patterson). According to Scruton, “The first task of aesthetics must lie in the correct understanding of certain mental capacities – capacities for experience and judgement” (1979, 1). He makes a distinction between the philosophy of mind – aesthetics – and empirical philosophy. For a philosopher it’s not the human reactions but the art of aesthetic experiences and the reasons for aesthetic preferences that are at the core of the investigations. According to Scruton: “The philosopher wishes to describe aesthetic experience in its most general terms, so as to discover its precise location in the human mind, its relation, for example, to sensation, to emotion and to judgement” (Ibid.). Scruton framed his investigation with the questions: “What is it to enjoy a building? What kind of experience is derived from the contemplation of architecture? What is taste? Are there rules which govern the exercise of taste?” (Ibid., 3). Referring to general theories of aesthetic philosophy, by such prominent thinkers as Kant, Hegel and Schopenhauer, Scruton finds that they “tend to give rather odd accounts of architecture” (Ibid., 5). The reason is that architecture is only “half articulate”, due to its distinguishing features of demand for utility and function and is thus “unable to give full expression of the Idea” (Ibid.). This is, of course, not typical only for architecture, but for all design work that is not executed purely for artistic reasons. Scruton also finds that abstract arts like music and architecture give rise to an interest unlike the interest aroused by representational arts, such as painting, drama, poetry and sculpture (Ibid.). His sees abstract art as lying in contrast to representational art (Ibid., 179ff). It’s easy to accept that architecture should not aim at being representational, even if it would be theoretically possible. It’s possible to design houses or other objects as representations of something existing – a hamburger bar shaped like a hamburger – but design objects as representations of something is very atypical. The core features are related to function and utility, and on an artistic level to expression.
Scruton, with a critical attitude towards functionalist theories, claims that function as such is not sufficient to determine the form (Ibid., 38f). The functionalist theories do not deny aesthetic values but claim that it cannot be understood without reference to function (Ibid.). On the other hand, these theories try “to provide a comprehensive theory of their nature” [aesthetic values] (Ibid.): as the architect Sullivan articulated it, the form must follow the function. Scruton criticises this viewpoint and stresses the need to understand the experience of the whole, the combination of many issues, such as function, morality, materials, details and the historical understanding of existing objects and styles (Ibid.).

Scruton makes no clear distinction between the positions of the designer and the perceiver. Central in his argumentation is the experience, which is not purely private but also includes cognitive and interpretative processes – what Scruton calls imaginative (Ibid., 73). There is a unity of experience and interpretation. Referring to Kant and Hume, he says that “it was imagination which knits together the scattered data of the senses into a patterned image of the world” (Ibid., 76). The criteria determining the success of an analysis is not “truth to the facts, but the provision of a useful concept, a concept which enables us to distinguish things that are observably distinct, and to formulate the facts which make them so” (Ibid., 84).

The expressive character of a building is not subjective – i.e. existent only in the mind of the perceiver – but rather lies in the public expression of the building. The connection to cognitive processes means that it can be influenced by the theories and thinking of others (Ibid., 90f). The perception is free and private, but the thinking is influenced by social life and concepts. Different aspects are perceived differently, but these aspects or interpretations can be compared to each other, generating a set of arguments (Ibid., 90). These inhibit an acceptable logic and can be tested. Aesthetic experience isn’t aiming at pure pleasure but is more complex. Pleasure is linked to aesthetic experience, but it will also include cognitive processing (Ibid., 111). The aim of criticism and judgement is not knowledge but experience (Ibid., 110). According to Wittgenstein, beauty is not a quality of the object but the relation between the object, the perceiver and the situation (Lundequist 1998, 31). An art object is not a rebus or a set of signs that can be deciphered, nor is the experience of art objects an innate competence, but rather something we learn by being part of these language games (Ibid., 30). The competence is not exercised in a simple manner of knowing explicit rules or certain objects, but through the exercise of aesthetic judgements in occurring situations. When we complete an interior design by hanging pictures on the walls, we decide their position by looking at the situation, selecting among art works available and expressing orders like, higher, lower, more to the left while hanging the works on the walls. Lundequist cites Johannessen and states that this view of aesthetics has nothing to do with “art for art’s sake”, but rather with the matters and actions of everyday life (Ibid.).

Aesthetics has come to mean a field of philosophy dealing with art. No scholar of aesthetics today believes in the idea of aesthetics as a canon of art issuing eternal rules for interpreting art objects and beauty. Still, a lot of professional architects, as well as art critics, express an opinion indicating that there are qualities of fixed and ultimately eternal values inherent in the object. There is a discrepancy between what seems reasonable in current philosophical discourse and the common understanding.
The idea of fixed and eternal values and qualities is, of course, advantageous to those seeking to hold a position of expertise in aesthetic matters, especially as long as these qualities remain hidden to the larger community.

Aesthetics is a discipline, like history (of architecture), where the development of the thinking and the traditions of the field are described as revolutions, ruptures, turning points or changing attitudes. This is also true of the history of design theory. Indeed, this is usually the way the conventions of the fields are taught – as a set of changing ideas and theories, and with selected objects expressing these ideas in the artistic fields. This selection includes an ignorance of the other cases and mostly also the design process. In reality we always have mixtures of influences and ideas in design processes. Today no architect in Finland or Scandinavia would design a house according to a given (style) canon, but the traditions are filled with the analysis of objects and cases where the purity of the ideas and qualities are stressed in a conceptualized format – it is presented as a style. This format will, of course, inevitably distort the understanding of design and architecture. Many of the qualities cannot be expressed in the language and the gap between design reality and design historical reviews will be unbridgeable. This is also an answer to the question of why practical training is so important in the process of learning to design.

Many well-known philosophers have considered the subject of aesthetics. We often relate aesthetics to Aristotle, Kant and Hegel – and in the American pragmatist tradition to Dewey - but also such important later authors as Wittgenstein and Bourdieu have thought and given substantial input to this subject. The field today is very scattered, like many other academic disciplines. Wittgenstein’s views on aesthetics have been influential in the last half-century. His point of view was that we cannot find or create any appropriate definition of art. However, it’s possible to identify works of art because of family resemblances and a network of similarities. Taking up the Wittgensteinian line of argument, Shusterman argues that we don’t actually need a definition of art: “Art is an intrinsically open and mutable concept, a field which prides itself on originality, novelty, and innovation” (2000, 37). There is no guarantee that future art works will conform to a definition we create today.

According to Brunius (1986, 5), the Swedish word “estetik”, which stands for both the idea of an aesthetic canon and aesthetics, is used in two ways. On the one hand, it can be the study of art, the similarities and differences between different forms of art, how they are created and how they are experienced and evaluated; on the other hand, it can also be seen as a refinement of art, as a way of refining the soul. His conclusion is that aesthetics, as a discipline, is pluralistic with a lot of approaches and various objects of study. The way of conducting research depends on what is being studied and on the traditions of the field (Ibid., 151ff). In his perspective, aesthetics is an academic discipline. Brunius is aware of the specific fine art cultures dominating the interest in aesthetics and art. His answer to this is that we should conduct studies comparing such behaviours in different cultures (Ibid., 157).

The main target of aesthetics is fine art cultures and their codes for the evaluation of art. This is seldom explained, but simply taken for granted. The codes discussed and criticised refer to the very specific group of connoisseurs or the art-appreciative elite. Due to the need to produce intelligible reasoning in written form, aesthetics is
also almost exclusively interested in issues that can be described. The target is still often the aesthetic experience, though it’s generally seen as impossible to describe. Shusterman reaction to Dewey’s insistence on aesthetic experience as art is as follows (2000, 55):

“One problem is that aesthetic experience seems too slippery to have much explanatory power. Though it undeniably exists, it does not exist as something we can clearly isolate and define; hence in defining art as aesthetic experience, we are defining the comparatively clear and definite by something obscurely elusive and indefinable.”

The field of aesthetics has been dominated during the last five decades by the analytic philosophical tradition, though it doesn’t possess any homogenous or clear-cut theory of design. One of the important constitutive foundations in analytic philosophy has been to reject the older idealistic theories. Another dominant idea has been the critical investigation and clarification of conceptual confusions. The renewal of aesthetics through pragmatism has mainly found its sounding board in the interest in experience, in contrast to the basically conceptual and rather arid conception of aesthetics in the tradition of analytic philosophy, primarily concerned with ascertaining the necessary and sufficient conditions of all art. Shusterman claims that “aesthetic experience clearly exceeds the limits of fine art and its objects” (2000, 26). Dewey wanted to restore the continuity between “the refined and intensified forms of experience that are works of art and the everyday events, doings, and sufferings that are universally recognized to constitute experience” (1980, 3). Here one has to notice that the ideas of Dewey don’t appear as isolated. In the rather eclectic theory of aesthetics by Yrjö Hirn, a well-known Finnish scholar at the beginning of the 20th century, emotions are seen as important as is the effect on the artist and on the audience (1902). It’s still a question of detectable outer signs of experience that are the target of the scholar, but the interest is on the experience as a reaction based in human psychology, tradition and in a belief that there is a genuine human urge to aesthetically produce artefacts (Ibid., 31ff).

To conclude, I would say that it seems that there is now a general acceptance of the idea of seeing aesthetic standards as anchored in tradition and history (Shusterman 2002, Danto 1981). Another strong, but also contested, idea is that of Bourdieu, who claims that the only true way of scientifically penetrating the art field is through the study of the historical institutions and social constructs and artistic skills that generated the artwork (Bourdieu 1996). There is also a renewed interest in the ethical aspect of aesthetics, as well an interest in popular art, consumer products and mass media as matters of philosophical and scientific investigations. One can certainly for the moment detect a tendency towards empirical and cross-disciplinary explorations of aesthetic issues. I have chosen to analyse the issue of creativity by addressing the use of aesthetic experience – as explained by Dewey - in design processes. My claim is that there is a lot of design expertise, based on aesthetic experience, involved in all kinds of design-like work. In my interpretations, I use Dewey’s explanations of aesthetic quality and experience as a referential framework. Creativity and aesthetic experience are concepts that are difficult to explain. For that reason the aim cannot purely be to explain the concept but to give examples of it, in order to share and improve the readers’ understanding of these aspects of design.
The organisational setting of the business of architects’ can, of course, be studied from different perspectives. I start with an organisational interpretation based on Mintzberg (1979). Still, I think the main perspective has to be the interpretation of the architects’ business as a profession, its special knowledge and cultures. In the interpretation of the second case study I will broaden this special knowledge perspective with Nonaka’s and Takeuchi’s (2001) perspective on knowledge conversion. Due to the fact that the authority of the professions is based in their special knowledge, I will also add a second broadening perspective, Bourdieu’s (1998, 1996, 1984) idea of the polarization of cultural fields.

Mintzberg sees the consulting business, ”where the approach is innovative”, as a typical example of “adhocracy”. The architect’s office could be seen as an operative adhocracy (1979, 448), its main task being to operate in varying projects. The organisation is highly organic (Ibid., 432), rarely containing professionals other than architects. Much of the coordination is based on a mutual understanding and acceptance of a common interest in an ideologically-coloured production (Ibid., 435). The managers don’t have a monopoly on innovation (Ibid., 436) but have to be supportive towards proposals and development by the staff. Decentralisation is common (Ibid., 432), allowing the project members their freedom. The architects’ offices in Finland can generally be divided into big and small companies. They are seldom very big or multinational. One-man firms are common and in Finland many are constituted by two or three partners. Another typical significant distinction between offices is the orientation towards artistic interests or commercial services. There is no clear border line between these types of offices, but within the profession there is normally a ranking according to how far the offices address and show that they adhere to artistic values. In artistically successful offices the responsibilities for the design projects tend to be kept in the hands of the owners of the offices, who prepare the initial sketches and monitor the whole design process, whereas in commercial offices the responsibility for the conceptual design is delegated to the employers. Big commercial offices are led by managers – often not architects - with little interest in influencing the architectural produced. The artistically renowned offices tend to be managed and owned by architects, with a devotion towards architecture. These offices are also known to pay lower salaries yet attract more students and young ambitious architects. They also attract artistically ambitious architects, who are willing to forego their artistic independence, for a while at least.

A more favourable perspective for the analysis of the practices of designers – than seeing the architect’s office as a business organisation – is to analyse them as a professional institution. The professions are seen as a kind of monopoly in the market – or as aspiring to a monopoly. Throughout history different professions have been able to keep and enforce their position on the market. The professions are characterized by their special knowledge, which gives them their status and a high social position. Due to their special knowledge, they can exercise power in
their field. According to Collins (1990), they are oriented towards the production and communication of symbolic values and, not as the productive labour-oriented workforce, towards the daily and local life. In the view of the broader masses, they have a magical knowledge, i.e. knowledge that is outside the understanding of anyone outside the profession. The professions are a ‘calling’ and not merely a job surrounded by professional conventions (Ibid.). The calling is focused on an aim outside the daily trade with clients: the doctors on saving lives, the lawyers on justice. The responsibility for the education of such professionals has nowadays been handed over to the universities. According to Selander (1990), the universities have taken over the responsibility as protectors of the special knowledge – a responsibility that used to be a task of the profession’s guild. The right to a practice in the profession is now dependent on passing the academic exam and often on accreditation (Collin 1990). In sociological terms, the education can be seen as a process of being invoked into the rituals of the profession – repeating and indoctrinating the ethical rules and rituals of the profession into the student. Despite the location of the education in the academic sphere, the practice is often not theoretical but practical (Ibid.). The professional is seen as a provider of a special competence, equipped with an authority based on his or her professional knowledge and skills (Schön 1983, 292f). One distinctive feature is that the client doesn’t have this competence. The relationship between client and professionals is based on trust and a moral contract that the professional will deliver his or her services – ‘to the limits of his or her competence’ (Ibid.). The only real source of evaluation of the professional knowledge rests on the competence of other professionals. The professionals adhere to professional corporate rules of the guild and codes of conduct.

Simon (1969) and later Schön (1983) have proposed an understanding of design as a principal mark for distinguishing the professions from the sciences. Schön has also advocated an approach different from the methods of science – namely, reflective research. The main idea is to reflect on how the professionals frame problems, build repertoires, reflect-in-action and inquire into occurring situations (Schön 1983). The main target of Schön’s criticism is the rationality of the scientific method and the application of the scientific method to problems of professional life. His proposal is one of improving professional competency in general, mainly through the professional’s dialogue with the situation and through his or her own reflections. In brief, Schön’s presentation of the design competence is one of the professionals’ capability to reflect on what s/he is doing (Schön 1983).

The architect’s profession has a long history and it is, despite the rather low level of income, a profession with a high status. There are many applicants for entry to the schools of architecture, and architecture is often highlighted in daily papers and other media. According to Spector (2001, 12f), the architect’s profession is based on a contract with the society, taking on the role of guarding public interests. This responsibility is repaid with a kind of monopoly on the aesthetic values of the society. It’s a responsibility against the values of capitalism, in the sense of representing the interests of those not present during design (Ibid.). Spector points out the contrasts with conflict theory, where the professions are seen as endeavouring for unilateral self-aggrandizement, trying to monopolize their trade – but in the end Spector rejects the idea inherent in conflict theory. The idea with the contract between society and
the architects’ profession is that the architects take on the responsibility to solve the conflicts embedded in design projects. Thus the norms of the architects have to be adapted to those of the society. The professional: “feels compelled to reconcile societal values with his professional norms” (Spector 2001, 8). This creates an internal conflict for the professionals which they seek to reduce: “Society benefits from this, in that it prevents the professional from becoming complacent about his or her professional tasks” (Ibid.). The professionals have to accept that they have to deal with conflicting values, which I would see as something on-going, where there is no given solution or ultimate rules. Society benefits from it because it doesn’t have to deal with it. It would be very demanding for society to try to reconcile these conflicts through political or administrative processes. Thus it’s impossible for the architects to escape the societal moral issues – among these the idea of goodness for everyone (Spector 2001, 15). Spector finds that the big clients could manage without architects, but they would then have to take on these issues themselves. He sees a distinction between the responsibilities in question, depending on whether the client is a quality-oriented full-time client or a one-off client. In the case of one-off clients, there is a need for a larger service, including interpretation and adaptation to the building standards. In the first case, with clients with all the competences needed, the client could take on the discussion with the society about architecture on his or her own. This would provide a transparent process, but leave the client in a rather vulnerable situation. The client would be fully in charge of the value-loaded architectural issues, and prompted to meet societal values (Spector 2001, 14f).

Spector is looking for accountability within the architects’ profession. He rejects Peter Eisenman’s hypothesis that the balance between form and function resides in itself, and the idea that the success should be measured according to its own theory of success (2001, 57). Spector investigates various values at stake in the architects’ profession. The idea is that the architects might find comfort or support in understanding their uneasy position as mediators of ethical dilemmas (2001, 21). It’s obvious that the societal values lie at the heart of the profession, but also the Vitruvian definition of architecture is seen as central (Ibid., 207). Inherent in this discussion is the necessity of pluralism. If we have to rely on social values there is no simple given code on how to reason and judge, or on how the different aspects are to be weighted. In this case, we have to accept pluralism. And an acceptance of pluralism easily leads to relativism (Spector 2001, 207). The problem with Spector’s analysis is that he has no other answer to this dilemma than saying that the Vitruvian definition poses an opposition to this pluralistic attitude, which implies that the rules stated by Vitruvius can act as some kind of objective truths or absolute values. I am inclined to accept the relativism but, in congruence with the art theory of Danto and others, I would see the values as socio-historically determined. The ethics of architecture is a cultural relativism with no objectively-given values, but the Vitruvian and other (gradually changing) definitions are values derived or inherited from social and historical developments. I think Spector misses one point when he rejects the ideas of Eisenman as well as the Frankfurt School, because he sees no possibility for the verification of design success in a relativist perspective (2001, 57). In fact, the success is not being measured according to the internal evolution of form, but according to the evolutionary preferences of the profession. I think most up-to-date architects are capable of verifying whether the architecture of
a new building matches the values of the profession and the society. That’s their job—and they do it all the time. The problem is, of course, that it cannot be measured by any quantifying means. It has to be evaluated through criticism and debate, which also include such methods as getting published in the architectural media and winning architectural competitions. I prefer a strong link to Bourdieu’s (1998, 7f) idea of taste as a vehicle for individuals and social groups trying to express their superiority in relation to others, and to show their internal unity as the mechanism that generates measures to be used in the evaluation of architecture—and, as I will later explain, the elite constituting leading stars for the rest of the field. Specter refers to Rorty, who claimed that the Leftist intellectuals (Specter compares the stars of the architectural profession with Leftist intellectuals) ignore and distance themselves from the societal interests and thus they don’t serve any social purposes (Spector 2001, 58).

Due to the changes in the academic world, with the introduction of market principles and open competition, the educational institutions are losing their monopoly on knowledge and are being forced to adapt to external demands. There’s a “scientification” taking place in the academic world but also a professionalization of the professions (Selander 1990). The professionalization can take scientification into account, but the scientification cannot replace or integrate the professionalization. The distinction lays in their attitude towards knowledge. In an discussion on how occupations aim at achieving the status of a profession, Selander states that the scientification “refers to the control over the production of knowledge and the language used (the occupational discourse)”, while the professionalization “refers to an occupational group which tries to reach both social status and occupational control over its field of work and its basis of knowledge” (Ibid.). One distinction between occupations and professions is that the occupations don’t have control over their production of knowledge. Schön (1983) is one of the advocates for professionalization and the need to study the professional knowledge by other means than the simplified methods of natural sciences. The increased education and the scientification has generated more internal criticism and questioning of the dogmas of the profession. Collins (1990) expects that in the future there will be an erosion of the professions and a de-monopolization.

Stevens (1998, 33) has found the interpretation of the architectural practice as a profession culturally tied to Anglo-American society and proposes that architects better abandon this attitude as the sole interpretative framework. He complements his view with Bourdieu’s field theory. The deficiencies he finds in the theories of the professions are as follows (Ibid):

- The theories tend to put the focus on the market as the core field of architectural practice, which he finds might be untrue for some other countries.
- The theories tend to focus on products and neglect the social milieu.
- The theories tend to view the profession as homogenous, which is not the case.
- The theories take specialized knowledge as central to their definition, whereas Stevens sees this as an approach that also diverts attention from the social influences.
In his book *The Favored Circle. The Social Foundations of Architectural Distinction* (1998) Stevens has produced a vast examination of architectural fields and in different cultures, and finds that one important issue to consider in an analysis of the field is the structure of reproduction of ideas and agents. His book is also an affirmation of Bourdieu’s idea of a force field, where the field of architecture can be seen as a field divided between commercial and symbolic forces (Ibid., 83) and constituted primarily as cultures and subcultures.

The field of architecture is by no means demarcated by being a profession. The educational system divides into different social classes, yet aims to produce professionals characterized by a certain homogeneity and codes of conduct. The same goes for the organisation of professionals in the labour market. In the field of architecture there are many more agents than those educated as architects: e.g. engineers, contractors, clients, critics, etc. Stevens takes the differences between the definition of architect’s professional tasks in different countries as one example of the inadequacy of identifying architecture with a profession (1998, 27ff).

These aspects, constituting a background for the coming chapters on pragmatist philosophy and Bourdieu’s field theory and my attempts to sketch a theory of design, are kept rather vague and are merely a background. I still see them as valid, but my intention is foremost to start from the findings of the case studies and pragmatist philosophy and to see what I can detect. The intention is to have a point of departure that’s not to heavily loaded with defined aspects of design, so that I might be more open to let the new theory that I introduce and the findings from the case studies generate a new approach towards design.

Notes:
1 See, for example, the methods described in Cross (1995) and Broadbent (1997).
2 An exception may be with children’s objects; for example, rucksacks in the form of teddy-bears, knives and forks in the form of branches, shoes as animal feet or cars, etc.
4

DEWEY AND THE PRAGMATIST TRADITION
INTRODUCTION

What can we find in the pragmatist philosophy of Dewey that is of particular relevance to design theory? I think we can find elaborate theories regarding the design process and the rationality accompanying design. I also think it provides a framework for an epistemology of design, and for the discourses concerning research methods and ethics. It also provides support in clarifying the differences between design, design research and design theory. Dewey’s philosophy is a general theory of creative and investigative processes, where there is no definite distinction between real-life questioning, artistic production and scientific research. They all show the same pattern of controlled inquiry – i.e. framing situations, finding solutions, testing them and evaluating them. The distinctive difference between science and art is that the former results in the production of theories, whereas the latter is a controlled inquiry into materials producing art works. I think Dewey’s theory of inquiry, as expressed in his major work on research philosophy Logic. The Theory of Inquiry (1938), offers a better understanding of his creative process than his major work on art, Art as Experience. The former is a theory of creative investigation, also accepting experienced aesthetic qualities as a means of judging the found results. This, of course, makes his research theory controversial within the framework of traditional scientific epistemology. On the other hand, his epistemology can incorporate such ambiguous aspects as the development of hypothesises and conclusions often left outside the normal scientific process, consisting purely of experimentation, validating or rejecting a hypothesis. Dewey accepted the fusion of facts, human experiences and knowledge within a holistic understanding of a situation, expressed by the term ‘aesthetic quality’, as a means of guiding the research process. As a counter-balance to these rather unorthodox allowances in research work, he stressed the necessity of an immediate retraceable connection to the preceding events or situations, thus facilitating the process of research with a validating feature (Dewey 1958, 36). Secondly, he put much emphasis on the reflection and reasoning developed from research. The research practice is necessarily a process invoking individual experience and reflection, thus remaining dependent on the opaque processes of the individual researcher. When the findings are transformed into theoretical concepts, it’s possible to test and criticise the findings according to the logic of the reasoning, thus explaining the findings. Dewey stressed the need for rigor in this reasoning, which is a continuation of the experimentation, where reasoning that doesn’t withstand criticism should be rejected. Still, the idea is not to blur the rigor of scientific methods but rather to expand the control over the process of inquiry, and to take care of the processes and reasoning preceding the only thorough scientific process, the experimentation. There are no absolute watertight divisions between scientific inquiry, common sense reasoning and design: there are only degrees of differences. One could say that science is one type of design. However, here one should not jump to the conclusion that this means that we should start, or that it would be acceptable, to “design” scientific theories like art works, where the inner forces and ideas of the artist constitute the dominating force. On the other hand, it’s common knowledge that hypotheses are designed and cannot be generated without human reflection. I think most of us will also agree that proper reasoning will lead to a hypothesis that is stronger and clearer, and not so easily refuted through testing.
This process, generating a hypothesis, reflection and reasoning about it (as well as testing it) are typical design actions. The point is that here the dominating force should be a rigorous reasoning, experimentation and description of results.

Dewey’s philosophy is a moral activity. His metaphysical reasoning, “the clear understanding of the generic traits of existence” (Campbell 1995, 95), is an explanation of how we can find support — a grounded belief — for how the world is constituted, and this is not to be reduced to the application of nature. It can be applied to all aspects of human reality (Ibid., 91): culture, science, art and religion. This is because there isn’t any given truth, since the given truths have dissolved within the development of cultures. Tradition or authorities, such as the church or the royalty, no longer support us with absolute answers. We need to inquire into problems and confusing situations in order to create an asserted understanding of the situation, which constitutes a means for managing in a chaotic reality. Philosophy is a tool in this activity, as well as research. Philosophy is an evaluative process, testing ideas, combining it with reason, justifying conclusions on the grounds of conditions, causes and relations (Campbell 1995, 93).

There is also a democratic agenda behind Dewey’s advocacy for understanding the impact of aesthetic experiences. Dewey’s democratic agenda is not about democratic institutions or legislative regulation, but about a means of enhancing the progress and lives of every human. Among other things, Dewey wanted to broaden the understanding of aesthetic experience, allowing all men their right to exercise their aesthetic judgmental skills and enjoy the satisfaction of an active involvement in creative action. This democratic devotion, on the other hand, has mostly left us with little substantial theory on the issue of fine art; and fine art is the ultimate target of architectural theory, aesthetics and art theory. One major implication found in Dewey’s theories is that the key to the understanding of design and, moreover, successful design, should be sought in the processes. The features that promote good design are not qualities of the objects but experiences had during the design process. It shifts the focus from theories of the objects towards the study of their generation, together with all the influences having an impact on the design process.

What can be made of Dewey’s theories regarding design theory? Dewey’s philosophy was written partly as a criticism of the positivist tradition and formulated as “the most highly generalized conception of inquiry which can be justifiably formulated” (Dewey 1951, 104). This generalization contains two challenges to the present thesis. First, there is no direct connection in Dewey’s text to the field of design. Dewey’s text is written as a general philosophy, with the main intention of expressing reasons for its advantages and the disadvantages of the positivist theory. Secondly, there are no implications regarding how to apply the ideas of the philosophy to real research activities. Still, Dewey’s philosophy offers an existing framework, stating how research with a close relation to practice and a need for close observation can be executed. It also provides us with explanations for how this peculiar synthetic combination of facts, forms and values — typical in design — is possible. Aesthetic quality is here a central concept.
What results from the attempt to read Dewey’s theories as an epistemology of design, or at least as a sketch responding to the demand for a specific epistemology of design? It creates a framework for research and education, and provides us with some conceptual tools that clarify the situation. In the design research fields we still need more concepts and methodological descriptions and an understanding of how a culture has evolved and continues to change. Dewey’s theories cannot provide us with all these aspects. He is not very specific on matters of research methodology, but rather has produced a vast conceptual framework regarding creative processes, and on a philosophical level a thorough description of how to do research, especially in *Logic – The Theory of Inquiry* (1938). The task is to continue to articulate, interpret and reason, to test new ideas, and to try to construct some secure ground for our understanding.

The aim of this chapter is to present the core ideas of Dewey’s philosophy and its usefulness to design theory. I start by presenting the pragmatist philosophy. The two main theories I pick out in Dewey’s philosophy are his ideas concerning research and art. I also try to make explicit the inherent understanding of rationality and aesthetic experience. One step in my presentation is an interpretation of how we can see different types of aesthetic experience in design work. The point here is that design is dependent on half-ready and intermediate solutions, and that aesthetic experience provides a concept that can help catch a meaningful aspect of design work. Complementing this, I also introduce some ideas stemming from later pragmatist thinkers who have seen Dewey’s ideas as valuable, offering a fruitful framework for various undertakings. Most of my own reasoning stems from Dewey’s writings, and I think they provide an important complement and an indication of where the pragmatist thinking is heading today. The most important among these is Richard Shusterman, with his ideas concerning popular art and criticism. At the end of the chapter I sketch a theory of design based on the steps Dewey presents in his theories on research and art. I combine these theories into a simple conceptual model of the design process. The model is very much like the model provided by Schön in his ‘The Reflective Practitioner’ (1983, 128ff). My conclusion is that it provides a reasonable conceptual structure describing the aspects and steps in a design process, but that it is insufficient in the attempt to provide a comprehensive picture of design processes. I also think it’s important to notice that it cannot be reduced to a linear model without losing its meaning. It’s important to take the character of the rationality into account and Dewey (1931) himself stresses the importance of the context in his attempts to trace the meaning of something.

Though I see the present study as a contribution within the fields of design theory and architecture, where its usefulness is important and, moreover, a concrete demand, I think it’s important to notice that it tries to address and develop the structures of the discipline of *design theory*. I think this is as important and useful as articulating design processes and producing concepts useful to the practitioners. In this sense, the emphasis in the subjects discussed below is oriented more towards an understanding of design knowledge and design research, with their inherent problematic issues, such as artistic production, values, subjectivity and judgement — issues which normally are left outside scientific epistemology. The presentation
Pragmatist philosophy

What is pragmatism? Usually pragmatism is understood as a way of acting – a way well adapted to the situation. In philosophical terms, pragmatism refers to the American philosophy initially developed by Charles Sanders Peirce (1839–1914), John Dewey (1859–1952) and William James (1842–1910). It was established in the 19th century and has had a great influence on American thinking and society generally. It generally lost ground to analytical philosophy in the mid-20th century. The pragmatists didn’t constitute a homogeneous group or school of philosophers, or even a consistent succession of ideas, but rather a loosely knit web of American philosophers sharing the idea of thinking being closely related to action. Human action is the source of reflection, which can be developed into a conceptual understanding constituting the framework for a trustworthy understanding of the world. Maybe the most striking difference between pragmatism and other Western philosophical traditions lies in the notion of truth. Simply put, to the Deweyan pragmatist truth is not anything eternally given, but rather a result of continuous efforts to improve the understanding of a phenomenon.

Different pragmatist philosophers emphasise different issues and have different interpretations of what it entails, yet base their reasoning on the thinking of other pragmatists. Pragmatist philosophy clearly poses a distinctive alternative to the philosophies of continental Europe and also to analytical philosophy. One seldom finds references to pragmatist philosophies in contemporary continental philosophies. There are a few exceptions, but mostly the pragmatists are marked out by many European writers as being different and thus left without further consideration. The contemporary pragmatist philosopher Richard Rorty (1982) has written about Wittgenstein, Dewey and continental philosophers such as Heidegger and Derrida. Another contemporary pragmatist philosopher, Larry Hickman (2001) challenges some of Rorty’s ideas, but has also combined the pragmatist ideas of Dewey with the thinking of Wittgenstein. The same goes for Richard Shusterman, who has written and discussed the pragmatist ideas of Dewey in regard to the thinking of several other philosophers – among these Bourdieu (Shusterman 2002, 2000, 1999). Despite their sometimes divergent interpretations and positions, they all extract a great deal of their philosophical foundations from Dewey’s writing.

Dewey had a long life and produced a vast amount of philosophical writings, essays and books — several of them late in his life. He began his studies in philosophy in John Hopkins University in Chicago in 1882 with the influential philosophies of the time, such as those of Kant and Hegel, but soon started to develop an empiricist
philosophy. It was the influence of the other two early pragmatist philosophers, Peirce and James, which contributed to Dewey’s development towards pragmatist philosophy. Suhr (1994) draws the conclusion that the environment of Dewey’s early university career in Chicago offered a suitable context for the development of a philosophy of praxis, with an emphasis on the improvement of social malaises. Chicago is said to have been a city with many social problems.

Dewey’s influence in philosophy was very strong in the first half of the 20th century, but diminished after World War II. This is said to be a consequence of the development of analytic philosophy, with its emphasis on clarifying analysis, conceptualization and a search for an explanatory essence of art (Shusterman 2002, 17f). Dewey is well-known for his theories on education, often expressed by the expression “learning by doing”. Theory on research and knowledge is another major field he approached, criticizing the then existing theories of metaphysics and, as Rorty (1983, 72) sees it, trying to explain why we don’t need metaphysics. In another sense his reasoning in itself constitutes a kind of metaphysics, though of quite a different constitution. Dewey’s academic involvement in aesthetics came very late in his life. In 1931, at the age of about 70, he gave ten lectures on aesthetics at Harvard University. His only work on aesthetics, *Art as Experience*, was published three years later, in 1934. These ideas had been touched upon in his earlier writings, but not presented as a theory of artistic design processes.

The words ‘pragmatism’ or ‘pragmatic’ might need some precautionary explanations. Pragmatism originates from Peirce and denotes the idea of real world experiences as the foundation of our understanding, in contrast to the idea of given natural laws. Such a definition is not what we normally understand with the word: According to the Oxford English Dictionary (2002), to be pragmatic (adjective) is to be “matter-of-fact; dealing with matters with regard to their practical requirements or consequences”. A Swedish dictionary defines the term ‘pragmatism’ as: “Describing relations according to causes” and “a theory of knowledge, where the knowledge is a means for action” (SAOL 1985). The *Cambridge Dictionary of Philosophy* begins the explanation of pragmatism as follows (Audi 1999):

“A philosophy that stresses the relation of theory to praxis and takes the continuity of experience and nature as revealed through the outcome of directed action as the starting point for reflection. Experience is the ongoing transaction of organism and environment, i.e., both subject and object are constituted in the process. When intelligently ordered, initial conditions are deliberately transformed according to ends-in-view, i.e., intentionally, into a subsequent state of affairs thought to be more desirable. Knowledge is therefore guided by interests or values. Since the reality of objects cannot be known prior to experience, truth claims can be justified only as fulfillment of conditions that are experimentally determined, i.e., the outcome of inquiry.”

In the early days, the concept was disputed and different authors tried to define it in their own precise ways. But today it covers a broad field of philosophy, based on the idea of a naturalist and empiricist origin of knowledge, combined with a devotion to development and often including an ethical insistence. It’s mainly a North American philosophical tradition, with very few predecessors on Europe. In this tradition *experience* is the result of our confrontation with real life situations. The
road to improved understanding, in a broad sense, goes along a road of searching, experimenting and experiencing, and it is informed by the traditions and ideals of our culture. Still, the foundation for ethical ideas are not given ideals but constructed through reflection (Campbell, 1995, 115).

Dewey

Dewey’s writing is as complex as he saw the world. His theories are filled with the complexity they try to display. The aim is, of course, to counter the tendency to simplify explanations and to prepare for a fuller understanding of a problem or an idea. My aim here is not to give a full description of Dewey’s ideas on aesthetics and knowledge (See an analysis of Dewey’s aesthetics in Jackson 1998). The important issue here is that the reader grasps the idea of aesthetic experience and the process of inquiry. Moreover, I want to push the reflections concerning these concepts further, in order to test their implications on design, and on architecture.

Today it’s obvious that the writings on aesthetics by Dewey are enjoying a revival. His ideas on education and epistemology have already received a good deal of renewed attention during the last few decades. However, his writings on aesthetics, which could have important implications in areas both inside and outside the art field, have long remained ignored and forgotten. Their true revival has been advocated by Shusterman. The influence of Dewey’s writings on aesthetics isn’t restricted to the intellectual field of academic interpretations of art and art criticism. They are an argumentation for how we could enhance our ability to develop and reach deeper and more coherent experiences. These experiences should have an aesthetic quality, which is a key to how we can grasp the fuller meaning of life and deeper insights. Dewey’s reasoning is marked by a conviction that a simplified functionalist attitude towards many human activities is insufficient. He was a strong advocate for the use of all available scientific methods, appropriate functional tools and instruments, but demanded that these processes have to integrate human experience, reasoning and judgement. These human actions are not to be seen as separate, but as an integral part of research, problem solving or artistic design, and with the aesthetic experience — based on human sensitivity, knowledge and technical instrumentation — as a central feature. Of course, this contradicts the general assumption that science and technology should be distanced from emotion and human influences: i.e. when simplified, preferably performed as mechanical executions, and based on purified logical reasoning.

In the introduction to his book Art as Experience (1934) Dewey states that he had been reading on the subject of aesthetics for many years and that he felt indebted to many other authors. His aesthetics puts a significant emphasis on the need to take notice of the aesthetic experiences of the ordinary man, and he seems to have been influenced by Albert C. Barnes. Barnes was not an aesthetician, nor a philosopher, but an industrialist with the devoted interest of a layman and who owned a large art
collection, including paintings by van Gogh, Cézanne and Matisse. In 1917 Barnes had attended Dewey’s seminars at Columbia University, and in 1925 published a book *The Art in Painting*. In the Preface of *Art as Experience* Dewey referred to Barnes’ book, and saw many of his main ideas as the result of the influence of Barnes (1980, Preface). Dewey’s credo in epistemology was laid out in his book *Logic - The Theory of Inquiring* (1938), which was published four years after *Art as Experience*. These ideas had been published earlier in various ways, whereas his attention towards art was a single eruption in his career. On the other hand, the idea of aesthetic quality, as an ingredient in both scientific research and practical life, had been central in much of his earlier writing.

It’s difficult to describe what happens during the design process and especially during the creative moments of design. Dewey didn’t present a full theory of the creative processes. He presented arguments for a different understanding of art — as an important vehicle in human life, supporting our understanding and liberating forces (1980). Dewey’s interpretation of reason and rationality is significant for his philosophy. The *modernist conception of rationality*, as an outside order of things and relations, is not very relevant, according to Dewey — especially not to real life investigations. He had an understanding of rationality and reason as the means of finding the way through the complexities of life and nature. In order to make this significant distinction clear, he later preferred to call this kind of rationality *intelligence* (see Visnovský 2004). This interpretation of rationality comes very close to intelligent design action. In the traditional aesthetic theories the qualities were invariably qualities of the object.

Dewey also gave aesthetic experience a significant meaning. His interpretation is linked to the other meaning of the word ‘art’, evident in several Germanic languages, denoting the practical skill. According to Duden’s etymological dictionary, the word “Kunst” (= art) is primarily used for artistic activities such as painting and sculpture since the 18th century. Its origins are in the word “können”, in English “can”, and in Swedish “kan” and has a double meaning, denoting both the noun ‘knowledge’ (*Wissen, Weisheit, Kenntnis*) and skilful activity (*können, Geschicklichkeit, Fertigkeit*) (Drosdowski & Grebe 1963). It’s the latter meaning — the creative process constituted by the active interaction and inquiry into form, materials and experiences — which Dewey presented in *Art as Experience*. Dewey saw the aesthetic quality as something emerging in the human mind — as a result of the interaction with materials and situations. Dewey didn’t deny the traditional aesthetic concepts, like pattern, rhythm or symmetry, and accepted the existence of fine art. On the other hand, one has to realize that his aesthetics is by no means an attempt to formulate a code of interpretation or criticism of fine art objects. Dewey’s aesthetics is foremost a theory of the creative process, such as it proceeds when an artist creates an art object.

Before discussing the core concepts and features in Dewey’s aesthetic theory it’s necessary to pick out certain ideas important in all his philosophical writings. One of these is *continuity*. Dewey rejected the idea of seeing the world in strong dualisms (1938, 245ff). Another feature in Dewey’s thinking is the rejection of (physical) objects as the most important issue in investigations. The prime focus
should be on *processes* and *relations* (1938, 114ff). Dewey’s idea was to focus on conditions and altering relations in real world situations (Ibid.). Other key ideas in Dewey’s thinking are a strong democratic attitude, a trust in the human capacity and an interest in the common good (Campbell 1995). One of the important issues when studying the philosophy of Dewey as a means of interpreting design is knowledge, which traditionally is seen as something separate and objectivised. Dewey, and other pragmatist philosophers, connects knowledge with praxis and action: action is the source of knowledge. We continuously interact with the world, and this is the source of experiences that can be elaborated as knowledge (Dewey 1938, 66):

“Experience occurs continuously, because the interaction of live creature and environing conditions is involved in the very process of living. Under conditions of resistance and conflict, aspects and elements of the self and the world that are implicated in this interaction qualify experience with emotions and ideas so that conscious intent emerges.”

Dewey regarded logic, scientific methods and reason as instruments for the creation of knowledge. Theory cannot be separated from practice, and research is a continuous process of doubt and action. Dewey’s theory of research, like his theory of art, is a theory of creative processes. Typical is his emphasis on continuity, seeing different types of knowledge and knowing as interrelated, stemming from the same initial source — the human interaction with confusing and problematic situations. There are no separated realms or distinctive spheres. He made no definitive distinction between science, common sense or art (Rorty, 1982, 51); they all have features in common (Dewey 1934, 66).

One of the most controversial ideas in Dewey’s philosophy is his rejection of “truth” as a significant expression for scientific results. For Dewey (1931) there is no way we can elicit true knowledge: there is always a step of interpretation that makes the statement compromised and insufficient for the notion of truth. It would be wrong to claim that we know the truth if we also know that it’s not complete. One of the foremost critics of pragmatism was Bertrand Russell, who accepted some of Dewey’s ideas but rejected his idea of replacing the notion of truth with ‘warranted assertibility’. “The main difference between Dr. Dewey and me is that he judges a belief by its effects, whereas I judge it by its causes where a past occurrence is concerned” (Russell, chapter 30). In Dewey’s perspective theories are operative and tools for further development, while for Russell and other philosophers of the analytical tradition, theories are statements in a body of knowledge (Russell 1940, 301, Dewey 1931). As I see it, Russell’s position is tied down by philosophical questions of absolute certainty, but more important in Dewey’s position is how to regard the rich variety of knowledge.
There has been a renewed interest in pragmatist philosophy since the mid-1990s. Also, from around the turn of the millennium there has been an increased interest among architects in pragmatist theory, mainly looking for a new foundation for theories of architecture (Ockman 2000, Dahms et al. 2001). Among design theorists, D. A. Schön, J. Lundequist and R. Buchanan have combined the pragmatist theory of Dewey with design theoretical explorations (Buchanan & Margolin 1995, 1995B). Buchanan and Margolin have been editors of the USA-based journal *Design Issues*, founded in 1984, and the approach expressed in their two anthologies is one that accepts a broad scope of design. Buchanan stresses the implications found in Dewey’s explanations on thinking and explorative “technology” as similar to the core elements in design thinking (1990). Since 1999 there have also appeared a number of dissertations in the field of Design Methodology at the School of Architecture in Stockholm (KTH) touching on the theories of Dewey: for example, Dahlin (2002) and Edwards (1999) discussing architectural experience and practice.

Arnold Berleant (1970) has for a long time written on aesthetics in combination with music and environmental experiences in the tradition of Dewey. He rejects the idea of formalism and the idea of disinterestedness in traditional aesthetics. The focus of his writings is to a large extent on the aesthetic experience and the complex and varied context where it is generated.

Richard Rorty has published several articles on Dewey’s pragmatist ideas and continues the pragmatist tradition by arguing for a different notion of truth (e.g. Rorty 1983). He restates the idea of Dewey, putting “literature and the arts as inquiries, on the same footing as scientific inquiries”, and emphasises the idea that ethics has a position in the inquiry into human affairs, and that it is by no means subordinate to science; nor should we try to make it scientific (Rorty 1983, Introduction). Rorty has often been seen as an outsider in the pragmatist field, expressing very controversial conclusions, e.g. the idea that pragmatists see science as one genre of literature (Ibid.).

Richard Shusterman (2002, 2000, 1997) is one of the most influential contemporary pragmatist philosophers, writing about aesthetics in the sense proposed by Dewey. Shusterman has devoted most of his interest towards popular culture and bodily experiences. For the latter he has coined the concept of “somaesthetics”, stressing the combination of aesthetics and the potential of the human body. He has edited anthologies combining and comparing the ideas of different authors, such as Dewey, Foucault, Wittgenstein, Rorty and Bourdieu. Like Dewey, Shusterman expresses a clear intention and moral conviction that we could change the life of man by means of aesthetic experiences and controlled inquiry.

Larry Hickman has produced a number of volumes on the writings of Dewey (Hickman & Alexander 1998, Hickman 1995, 1992). He has devoted much of his interest towards the concept of technology, coined by Dewey as the method of inquiry, that is, the instrumental means for controlled inquiry into puzzling and problematic situations (Hickman 1992). Hickman’s approach is coloured by the
same moral conclusions. Philosophy has a role to play in criticizing the current concept of technological culture and in bridging between theory and practice. The idea is to promote growth and democracy in a Deweyian sense (Hickman 2001).

In the following section I will first present Dewey’s theories concerning research processes and after that his ideas about art and creative processes. In the part discussing art I present narrative illustrations of how aesthetic experience can be interpreted, together with various kinds of aesthetic experience. I construct a classification of aesthetic experiences and finally make some narrative illustrations of aesthetic experience in design processes.
DEWEY’S THEORIES ON CREATIVE ACTION

The peculiar thing about Dewey’s theories is that he made no big difference between art and science. The basic pattern of inquiry he took from science — the experimental testing and the significant emphasis put on logical reasoning. Still, he didn’t want to degrade non-scientific processes as inferior or deficient. On the contrary, he saw all intelligent action as valuable, and with his favourable attitude towards community life this might even seem understandable. This basic pattern of inquiry is only the method and gives no proof of the superiority of science. Furthermore, with his democratic attitude, it seems plausible to stress Dewey’s interest in the intelligent development of community life. What we get from this, and which is of great interest to design theory, is how this attitude and this general method of intelligence can be applied in design processes. The application in scientific research processes is obvious and clear, but the application within artistic processes is not given. It’s also important to notice that the actual research method is not fixed or given, but has to be developed according to the particular situation.

The process of research

Dewey’s theory of research was finalised in Logic - The Theory of Inquiry (1951) [henceforth Logic]. My point of departure for this section is Chapter 6, “The Pattern of Inquiry”. Here Dewey gives a brief overview of his research philosophy. He discusses a methodology, a research process, in which the uniting feature in research is logic. Another central aspect of this is the notion of research as continuity, based on everyday problems and reality, resulting in abstract and general theories. The idea of experimental methodology as it is used in the natural sciences is apparent in Dewey’s theory of research, but he also wishes to apply his methodology to all forms of research. In what follows I will present the steps and parts that constitute Dewey’s description of the process of research. It’s an experimental process, where reflection and deduction play important roles. The concepts I will examine are: establishment of the problem, suggestion and idea, situation, reflection, emotion, logic, judgement and theory.

Establishment of the problem

According to Dewey, research should be based upon everyday problems. The first step is to localise the problem, the “institution of a problem” (1951, 109). In the introductory situation we clarify what it is that requires a solution:

“The risky character that pervades a situation as a whole is translated into an object of inquiry that locates what the trouble is, and hence facilitates projection of methods and means of dealing with it. Only after expertness has been gained in special fields of inquiry does the mind set out at once from problems; even then in novel cases, there is a primary period of groping through a situation which is characterised throughout by confusion.” (Ibid., 344f)
Dewey’s “institution of a problem” corresponds to “problem setting” in Schön (1983). Molander (1996, 134) has translated “problem setting” as “establishment of a problem” — instead of “definition of a problem” — in order to confer the idea of vagueness in the expression. It’s not only a matter of clarifying the problem, but also of observing and finding solutions. In connection with observation, the problem must be determined so that possibilities for solutions can emerge (Dewey 1951, 105):

“There are conditions of inquiry which must be satisfied by anything taken to be a subject. (1) It must delimit and describe the problem in such a way as to indicate a possible solution. (2) It must be such that new data, instituted by the observational operations directed by the provisional predicate (representing a possible solution), will unite with its subject-matter to form a coherent whole.” (Ibid., 127)

Dewey compares laws to social behaviour. Laws do not arise out of thin air but are founded on socially acceptable behaviour and formalised in legislation, which in turn regulates behaviour. Investigation in research works in a similar way. When we examine the situation we become aware of the circumstances, and from these circumstances we also learn how to act in order to progress (Ibid., 17, 102) – the situation is formalised and develops. A core concept here is “controlled inquiry”, i.e. controlled research. By this he means that scientific research differs from everyday investigation in that it is controlled, and that the circumstances should form a logical whole (1951, 65). Research is a continuous process that always strives towards elucidation and determination. Thoughts are at first vague but later become clearer and more concrete, supported by consciously controlled research (Dewey 1938, 110).

**Suggestion and idea**
In order to describe the introductory stages of research Dewey instituted two concepts: *suggestion* and *idea*. The difference between the two is that the suggestions become ideas when they are examined regarding their suitability for solving the problem (1951, 110):

“The suggestion becomes an idea when it is examined with reference to its functional fitness; its capacity as a means of resolving the given situation. [...] ‘Suggestions’ have received scant courtesy in logical theory. It is true that when they just ‘pop into our heads’, because of the workings of the psycho-physical organism, they are not logical. But they are both the conditions and the primary stuff of logical ideas.”

Ideas are thoughts that have achieved a certain clarity concerning the way in which something might be developed. It’s not enough simply to observe and look for solutions. We need suggestions and ideas that constitute the force that pushes the research forward. This is due to more problems arising from the examination of problematic situations — the more we know, the more we are able to discern problems and possibilities for change in the problematic situation; e.g. we conceive of experiments. The ideas and thoughts concerning the presented problem are abstract, but are directly connected to reality.
Situation

Dewey’s research situation is marked by its contextuality. We should judge appearances in their actual context. There is no point in reducing complex processes to individual, single processes. The point is to “search out the constituents of a given situation which, as constituents, are settled” and those that aren’t that settled but still conditions of the situation (Dewey 1938, 109). The individual parts of the process must be seen as constituents of entire situations, though it is in these that we conduct our experiments:

“What is designated by the word ‘situation’ is not a single object or event or set of objects and events. For we never experience nor form judgements about objects and events in isolation, but only in connection with a contextual whole. This latter is what is called a ‘situation’.” (Dewey 1951, 66)

To further explain and clarify his position, Dewey states:

“In actual experience there is never any such isolated singular object or event; an object or event is always a single part, phase, or aspect, of an environing experienced world – a situation. The singular object stands out conspicuously because of its especially focal and critical position at a given time in determination of some problem of use or enjoyment which the total complex environment presents. There is always a field in which observation of this or that object or event occurs. Observation of the latter is made for the sake of finding out what that field is with reference to some active adaptive response to be carrying forward a course of behaviour.” (Ibid., 67)

Detailed qualities and particularities create the circumstances — the context — and without them the description of the process is dubious (Ibid., 67). The researcher should conduct experiments in existing contexts by influencing or altering, that is, by using the facts of the situation as an operative means (Dewey 1938, 110). The point is actually that the ideas are operators that can infuse change and thus function as operators that can make relations distinctive and clear (Ibid.) Alterations can be put across in many different forms, but should be concerned with relationships, not objects. This idea is based on the fact that when situations change, we seek to restore the situation to one that again works well. According to Dewey, the situation we achieve, or which then arises, is not identical if we cannot recreate what we had previously, and thus we take a step forward and gain insights into the situation. He maintained that we react in a biologically determined way when something disturbs our well-working situation; we begin to see, search and attempt again to achieve a well-working situation:

“The structure and course of life-behaviour has a definite pattern, spatial and temporal. This pattern definitely foreshadows the general pattern of inquiry. For inquiry grows out of an earlier state of settled adjustment, which, because of disturbance, is indeterminate or problematic, and then passes into inquiry proper…” (Dewey 1951, 34)

According to Dewey, we should always bear in mind that each situation is very complex. There are an infinite number of variables, so every situation is unique, which means they are never repeated — as long as we do not reduce them to simple, single processes. On the other hand, however, differences and circumstances within the situations, distinctions and relations, can be repeated and studied again (Ibid.,
These are qualitative links and components that can be recurring, identical constituents of various situations. Our interest must focus on the connection between objects; objects in themselves, however, are only bases for problems, “they are the material of problems, not of solutions” (Ibid., 351).

**Experiment, reflection, emotion, logic and judgement**

Characteristic of Dewey’s philosophy is that reflection is seen as an instrument of action. It’s by testing solutions and building up causal connections that we come to conclusions (Dewey 1951, 140ff). Conclusions are not solely products of logic, as judgements and intuitive understanding also play an important role (Ibid., 143). Ideas are not preconceived opinions but judgements based on the researcher’s entire competence, in terms of both knowledge and emotion. One must not, however, seek answers in private reflection, but by testing alternative hypotheses that emerge (Ibid., 160ff). The researcher is able to construct a theoretical explanation based on the results of this.

Dewey protested against the Cartesian view of man as divided into two parts: body and soul. Man should be seen as an entire, experiencing individual. According to Dewey, man is a creature in a social situation that thinks emotionally, and one cannot distinguish between different parts of this existence (Dewey 1939, 819-821). Judgements are based on emotional understanding and impressions on the senses. The emotional is ready to react to uncertainties that man faces in momentary, real situations. Our will is in turn connected to the emotional, and tends to react in order to define the uncertainties (Dewey 1951a, 347f). Emotions should not be excluded from inquiry: they should be included but not be seen, of course, as a reigning power. Emotion is the state or capability to have a feeling aroused to a point of awareness. Emotion is not “in charge” of the process of inquiry, but is the tool by which we can describe how we are informed by feelings. Our awareness informs us about something stemming from a feeling. At the moment emotion reaches our awareness we can reason about it, and the reasoning is open to others and can thus be criticised and rejected if unreliable or faulty. The continuing process is not governed by feelings but be reflection, reasoning and rationality.

Conclusions should be based on the testing of hypotheses, and insights into characteristics, causes and consequences should be connected to the context. Here the importance of inner logic becomes apparent. Everything should be logically interconnected to form a coherent whole. The definitive conclusion is based on appreciation and conceptions that have been tested and confirmed: “Final judgement is attained through a series of partial judgements — those to which the name estimates or appraisals has been given. Judgement is not something occurring all at once” (Dewey 1951, 133). We achieve a reliable conclusion that is confirmed. What we see happen is a progression from the presentation of a problem in unclear circumstances to a situation where these are clear, verified and logically understandable.

**Theory**

An essential step towards profiting from experience is its organisation. Dewey also sees this as a step from something empirically experienced and based on the senses.
to an intellectual knowledge, at which emphasis shifts from impressions governed by feelings to knowledge constructed upon concepts (Dewey 1951b, 647). In order to achieve this, we require language: “Without language, the qualities of organic action that are feelings are pains, pleasures, odors, colors, noises, tones, only potentially and proleptically. With language they are discriminated and identified” (1939, 804).

Experienced impressions are made objective through language, as a quality arising from interaction. The experiences themselves develop characteristic traits, distinctive but also with a general validity. Ideas and suggestions for solutions cannot exist without some kind of symbolism. The situation is real and unique, but the ideas for solutions are abstract in their form and have an expressive meaning. They are deficient, but may still work:

“But because suggestions and ideas are of that which is not present in given existence, the meanings which they involve must be embodied in some symbol. Without some kind of symbol no idea, a meaning that is completely disembodied cannot be entertained or used. Since an existence (which is an existence) is the support and vehicle of a meaning and is a symbol instead of a merely physical existence only in this respect, embodied meanings or ideas are capable of objective survey and development.” (Dewey 1939, 110).

This is a brief overview of Dewey’s theories on inquiry. In fact, he goes to great length throughout Logic – The Theory of Inquiry to explain many different aspects of inquiry, regarding such different aspects as ‘mathematical discourse’, ‘generic and universal propositions’ and ‘social inquiry’ (1938). What I intend here is to elucidate a basic understanding of how he sees that we come to understand the (design) problems we face and how we go on exploring them and changing them into something preferable — as we always do in design. What I still have not touched on is how the aesthetic experience and the creative powers are linked to this process of inquiry. That’s the issue at hand in the following section of this chapter.

**Dewey’s theories on art**

It is now time to turn to pragmatist aesthetics. Experience is the result of our confrontation with real life situations. The road to improved understanding, in a broad sense, goes along a road of searching, experimenting and experiencing, and it’s informed by reflection. According to Dewey, experience occurs all the time (1980, 35). Sometimes, when enforced by emotion and reflection, it develops into an aesthetic experience (Ibid.). Dewey made a distinction between ordinary experiences and those that are complete in this sense. We can “have experiences” that are complete and inform us about how we should go on in life. The concept is ambiguous, which partly relates to the acceptance of emotion as ingredients of
experiences — ingredients which we cannot fully describe. It’s difficult to describe what happens during the design process and especially during the creative moments of design. There are different interpretations of the word ‘aesthetic’ and the word is ambiguous and difficult to use without any further description or definition, and the definitions cannot catch the real meaning of the word. The concept is hardly used in the discourses of professional designers or by design theoreticians. For this reason I think it’s worthwhile to examine Dewey’s view of aesthetics, because it offers a conceptualization of the creative processes and an approach to design thinking. Instead of starting with theoretical explanations, I could claim that we all know what aesthetic experience is. There is a general acceptance in the design fields that design education is best exercised by doing real design work, supervised by a senior designer. The artistic design fields have been very reluctant to accept a conceptual understanding and theory-based teaching. What I am trying to emphasise here is that there is knowledge in the design practice which cannot be transmitted by theory. I think most designers know when something is ‘good’, or know the sensation of reaching an end or satisfying result. It need not be very extraordinary experiences or related to art. I can have an aesthetic experience when I have reorganized my work space, or when I have planned a bike trip and can set off successfully with all necessary things packed and all preparations done. I’ll return to this later in the chapter — seeing aesthetic experience as a common experience and not as some exotic quality of an art object.

Much of Dewey’s efforts in changing the thinking of social science and art philosophy were devoted to elaborations of the idea of aesthetic experience as an important and integral part in all human intellectual activity. Still, he was restrictive in defining this aesthetic quality. Dewey presented many examples and aspects of aesthetic experience or quality, but he did not present any specific definitions (1980, 173). Shusterman draws the conclusion that Dewey was “committed to the indefinability (and indeed discursive unknowability) of aesthetic experience” (2000, 56). The reason is, of course, that aesthetic quality is something we feel and experience. It’s only the later stages and single features of the experiences that can be brought down to theoretical communication. If we reduce it to a discursive definition we have to leave out those important issues embedded in a more intuitive and emotional reaction to the given situation.

“ART is a quality of doing and what is done. Only outwardly, then, can it be designated by a noun substantive. Since it adheres to the manner and content of doing, it is adjectival in nature. When we say that tennis-playing, singing, acting, and a multitude of other activities are arts, we engage in an elliptical way of saying that there is art in the conduct of these activities, and that this art so qualifies what is done and made as to induce activities in those who perceive them in which there is also art. The product of art — temple, painting, statue, poem — is not the work of art. The work of art takes place when a human being cooperates with the product so that the outcome is an experience that is enjoyed because of its liberating and ordered properties.” (Dewey 1980, 214).

On the one hand, art is a process of ordering, on the other hand it induces new ways of seeing and understanding, and thus it will liberate the perceiver. One of
the core elements in Dewey’s theories — in both his cognitive and art theories — is the aesthetic quality, which denotes the meaningful synthesis we reach when we experience and investigate a puzzling situation (1980, 38). If it’s a complex problem or situation, we make use of an aesthetically qualified understanding:

“The most elaborate philosophical or scientific inquiry and the most ambitious industrial or political enterprise have, when its different ingredients constitute an integral experience, esthetic quality.” (Ibid., 55)

Aesthetic quality is something we experience. It is based on sense impressions and bodily experiences, but it’s also controlled and developed through intellectual activity (Ibid.). The experience is not and should not remain a purified pleasurable perception. It should develop into a unity and we should aim at having an experience.

Dewey stressed the importance of experiencing the situations and processes as an “enveloping whole” (Jackson 1998, 37). Other expressions he used include: “esthetic quality that rounds out an experience into completeness and unity as emotional” (Dewey 1980, 41), and “In final import they are intellectual. But in their actual occurrence they are emotional as well; they are purposive and volitional” (Dewey 1980, 37). Aesthetic experience is the result of an intellectual processing with the material: “the sensory satisfaction of eye and ear, when esthetic, is so because it does not stand by itself but is linked to the activity of which it is consequence” (Ibid., 49). The immediate experience is necessary if we are to grasp the whole situation. A purely intellectual process is not enough.

A classification of experiences

I think experience is something all of us are confronted with in our daily life, yet seldom reflect upon. Shusterman criticizes Dewey’s description of aesthetic experience as being too broad, including processes not regarded as artistic, like tidying your room or sports (2000, 34), and claims that it’s all too idealistic (2002, 218). But this ‘everyday aspect’ to aesthetics is, indeed, the very idea Dewey propogates (Jackson 1998). Aesthetic quality is something occurring in our daily life, it’s typical in many types of processes, and it incorporates a feeling of enjoyment (Dewey 1980, 47) and satisfaction (Ibid., 49). Jackson (1998, 35), and differentiates between art-centred experiences and aesthetic experiences in general. They don’t differ fundamentally, but the art experiences are more intense. It’s here that we can trace the real value of art. It provides us with a means of grasping the important idea and liberating energy of aesthetic experiences. We don’t specifically need art for enhancing the quality of our lives. One major idea of Dewey is that art is a vehicle for learning to make use of aesthetic experiences (Jackson 1998, 5; Dewey 1980, 12). We can distinguish different processes, with different ratios of aesthetic experience. All processes are unique, but for scholarly aims it’s useful to classify them because it supports the understanding of them. In the following I would like to sort out a few different types
— illustrated as short narratives — and enlarge the scope presented by Jackson (1998, 68ff):

**Ordinary experience**
All the time we experience. Most of it is unconscious and unreflected, like looking out of the window when travelling by bus or train. We see the landscape passing, but take no further notice. Sporadically we might reflect on something we notice, but usually we forget it after a while. We are hardly emotionally involved. We don’t really reflect and the experiences are just floating, without any interruptions.

**Documentation**
We might have the task of documenting the old buildings of a small town. We take photographs; we mark their positions on a map and write down the most important characteristics of the buildings. We might even search for evidence in archives and sort out the most important dates and facts. In this case we reflect on what we see. We work consciously with the material, yet hardly interact with it. We are forced to draw some conclusions, but very simple ones. We judge our actions, but we can do it without really getting involved. We document something.

**Aesthetic experience**
I might go to Italy for a short trip. I visit a small town comprised of many old buildings. I experience the conglomerate of vernacular architecture. I even enjoy it and read about it in the local museum. I am intrigued by the history of the local architecture. I walk around, touch the coarse stone walls and stumble on the worn-out pavements and steps. I make free-hand sketches and write comments. I might even compare it with my professional occupation, designing housing in my home town in Finland. The trip might culminate in a small lecture, presenting the photos and what I have learnt from my trip. Also, when I’m back at home I sit down at my desk and design local housing units, but some of the experience is injected into the design. It influences me and makes me change my thinking and actions. This case has all of the ingredients Dewey asks for, and in an appropriate manner. It’s emotional, intellectual and physical, and it liberates something in my mind.

**The experience of nature**
Nature and scenery can sometimes provide excellent experiences. I remember one February day when I had spent the whole day in a lonely part of the forest felling trees. It was a cold day, with a lot of snow. When I finished I was tired and felt that the sleeves of my clothes were frozen. I felt that I had made a good job — taken away the old trees and given the young plants space to grow. I left the forest and went to my car on the shore. The sun was slowly setting. The sky was red. The air was bright. I suddenly noticed that there was no wind. It was getting colder and there were veils of mist rising from the sea. I enjoyed the situation, even if it was cold and I was exhausted and could feel the moisture in my clothes. I’m fond of this memory. It’s not a designed situation. It just happened, close to nature.

These experiences are all different and I could go on telling stories like these or variations of them. The trip to Italy could have been like the documentation: I could just go to Italy to do the documentation and it will hardly feel like an experience
before I have to leave. Or, I could document old buildings in a small town at home, get really involved in it, create a new understanding of urban planning and change my professional praxis. I could spend a whole week in nature without having any real experience of it. It might be too cold; I might be tired or just keep wondering whether I remembered to turn off the stove back at home. Or, I might have some experiences of nature, but they never reach the same intensity as in the real life story above.

There are two important issues that we have to take into account when discussing aesthetic experience as Dewey presented it. First is his claim that aesthetic experience can be controlled. We can influence the situation and create situations that result in aesthetic experiences, which trigger shifts and developments in our lives and actions. We can also let the experiences float by, like the scenery seen from the bus window, missing all the opportunities. On the other hand, the control can or should never be complete. I have to let the situations have an influence on my actions. If I have planned the trip to Italy to that degree that I just do what I have planned, I might miss the nice misty morning or a painstaking but fruitful discussion with a fellow visitor with a vast knowledge of this town. According to Dewey, chance will always be present and the control should not exclude it. Rather, we should take notice of it, continuously evaluate it and adapt to the situation. The resulting experience isn’t solely dependent on maintaining full control or planning all moves, but rather on our capacity to adjust to the situation, which we can influence and redirect in directions we presume promising (Ibid., 162ff). Despite good planning, control and adjustment, the experience might remain unrealized or be of an ordinary character. Sometimes things don’t work the way we intended or we don’t get the enjoyment we expected. I might be too cold to enjoy the winter dawn.

According to Dewey, art has a remarkable potential of revealing the function of aesthetic experiences, which gives works of art a special significance in human culture. On the other hand, he also states that a crude experience is better than art works seen as categorized objects: it “is more fit to give a clue to the intrinsic nature of aesthetic experience than is an object already set apart from any other mode of experience”, if authentic (Dewey 1980, 11). Jackson (1998, 96) calls the extraordinary art-centred experiences spiritual, because “they involve feelings and thoughts of a transcendental nature”. “The experiencer undergoes an altered sensibility, achieves a novel way of looking at things”. These are something beyond the ordinary. Jackson (Ibid., 88) quotes Danto and a few others who have had some extraordinary strong art experiences with pop art. “Danto speaks of it as ‘my revelatory moment in art’ and as ‘knocked off my horse’, when he saw the exhibition of Warhol’s Brillo Box. John Cage’s piece 4’ 33” — which was performed by a pianist acting as a pianist, without playing a sound — is said to have given the audience an overwhelming experience at the premiere (Ibid., 80f). Both of these seem to be art experiences of great influence, opening their eyes and thinking for new ideas. Jackson (Ibid., xiii) attempted to see how far Dewey’s aesthetic theory still can facilitate the later
developments in art. In the case of both Warhol and Cage there was also a large amount of provocation, which has been typical for later artistic production, testing the limits of the definition of art.

Jackson picks out some important features in the examples of spiritual experiences. His examples deal with transformative experiences and spectators’ reactions (1998, 96). These experiences seem to have enduring effects. Both the Brillo Box and the 4’33” have had long standing influences on Danto and other thinkers on art theory. Jackson (Ibid., 94) finds that such experiences are “rare” and “idiosyncratic in character”, and that they “shed light on the power and the complexity of the emotions involved” and that they “expand over time”. It’s generally accepted that art experiences can have effects that go beyond ordinary experiences. Most of us know that we can be touched by art to an extraordinary degree and in very special, indefinable way. On the other hand, it’s reasonable to assume that Dewey meant that there are similar implications or influences to be found or received in less striking experiences. Art acts as an example in its capacity to free our thinking, but in the “better world” Dewey was hoping for there would be much more of these experiences outside the realm of art (Ibid., 68): “…an infinitely greater happiness than is now the case would attend all modes of production.” On the other hand, Dewey also states that there are different levels of aesthetic experiences and nobody can grasp the whole situation (Dewey 1980, 44). An aesthetic experience should also have a beginning and an end. The aesthetic experience grows progressively towards an end and its fulfilment. Dewey made a distinction between ordinary experiences and having an experience, which is characterized by the conditions that it’s being unified and accomplished (Ibid., 37ff), but of course it has no definite measure. On the other hand, he is clear about other distinctions: there are experiences that are anaesthetic and an experience should be organized into a unity. The anaesthetic experience is characterized by a slackness, a “loose succession that does not begin at any particular place and that ends — in the sense of ceasing — at no particular place” or, at the other extreme, it’s characterized by “arrest, constriction, proceeding from parts having only mechanical connection with one another” (Ibid., 40). An aesthetic experience should include some kind of organizing energy and it should render the human interaction with the situation some degree of felt wholeness and aesthetic quality. The crucial question is whether we can use these aesthetic experiences to support progressive and creative processes. It’s at this point I think we can find an interesting relation between aesthetic experiences and design. If aesthetic experience is common and can be used consciously it could be seen as providing a means for distinguishing qualities in an ongoing design process.
Pragmatism 103

Aesthetic experience in design

Jackson offers the case of a poet’s experiences as an example of how aesthetic experience is potentially everywhere and that the spiritual and transformative experience is possible anywhere (1998, 96ff). One feature he picks out is the poet’s capability to observe — “to see beneath the surface of things” (Ibid., 99). Jackson concludes from the poem “The Fish” — which also raises the issues of ugliness — that the function of art is not to turn our attention towards beauty, or the beauty of the natural world, but rather to teach us to perceive aesthetic experience in ordinary life and everyday situations. My own interest in Dewey’s aesthetics is more mundane. If aesthetic experience occurs on many different occasions, we can assume that it also occurs within the design process itself. Design is a controlled process, with occasional changes and influences from ideas found during the process. It’s emotional and explorative and demands a certain amount of reflection and judgement. Dewey’s description of the creative process building up to an aesthetic experience can be interpreted as a description of the design process. One distinctive deflective aspect in ordinary design processes is that they consist of a number of minor steps, where we usually reach just intermediate solutions, half-ready and sketchy representations of some ideas. These very often contradict each other and the sketches are vague and by no means final. Dewey didn’t deny the existence of aesthetic quality in the simpler processes, even if they don’t reach the same degree of unity that leads to the experience he calls ‘aesthetic’ (1989, 42).

It’ll be easier to understand what I mean about aesthetic qualities in design if we take some examples from the field of design itself. I’ll give three narrative examples: One simple case of a short and successful process, one typical unpleasant experience of design and the case of simple sketching.

Unfinished but satisfactory
I was recently asked to do some sketches for the design of a garden. It was part of a deal, exchanging services with a friend of the family. They had a renovated house on an even plot and the garden was to be redesigned. I had received a drawing of the site (500m²) and some hints on what the family considered the best positions for terraces, fences and hedges. When I got the drawing I felt empty, that I had no ideas, but I decided one morning to have a try, anyway. I sketched for half an hour and immediately some images of what the garden could look like emerged. One idea was to stress the impression of evenness. A second idea was to place the proposed stone arrangements at the front of the house. Then I got an idea for quadratic terraces surrounded by neatly trimmed hedges. I had sketched these arrangements, with a few changes, in thirty minutes. Later I realized that I could use low stone walls to frame elements, as a response to the clients’ interest in stone. When I finished the sketches, I had a sense of satisfaction. After the rather pessimistic point of departure I had reached a point where I saw that the conflicting issues had reached a unity, the design matched my professional preferences, but also some of the preferences and ideas of the client. It appeared to me as an ordered solution, based on simple
and even crude ingredients. The design also matched such functional issues as the optimal position of terraces according to the trajectory of the sun, and the exposition of the stone arrangements to passers-by and visitors. I was rather happy with the solution. Still, the design wasn’t ready. The barbeque was not in the right position and was too big, and the stone arrangements indicated at the front were too heavy.

**The ambiguous solution**
I have several times come to a moment of disappointment when designing and trying to make a synthesis of several disparate issues. I might have been working hard, checking different combinations, searching for possible solutions, and step by step I have got some insights into the problem — feeling that I’m making progress; the design is gaining in shape and meeting the conditions given in the brief. Suddenly my sketching has matured into a strong experience: but one where I realize that the shape is hopelessly contradictory. For instance, I might have created a formal axis oblivious of the main functional axis. The design seems ambiguous and useless, and I see no use in continuing with it. As one might guess, I feel miserable and have to start over again.

**Simple sketching**
In the early phases of architectural design, most of the analysing is done by sketching. As architects, we study the brief and the situation, make some sketches and look for connections and form. We might try to construct a layout for the site or a plan of the given functions. We seldom reach any definite solution. We produce something and get some insights. There are no big highlights or insights. We combine, reflect and sketch as a matter of normal professional design practice. Especially in the later stages of a project, we are confronted with a lot of minor design problems, demanding analysis, reflection and a solution. The problems are intertwined with the idea of the whole building and the already established conditions. We produce many design solutions of this type but they are just pieces in the design as a whole. Sometimes we have to take a break for discussions. And sometimes the design process is abruptly interrupted and even stopped for a long period of time. Jackson finds that there is nothing strange in a disruptive, and thus extended, process constituting an experience (1998, 106). We normally think of it as a consistent process, with a beginning and an end. According to Jackson, we can trace the process back to preparations and influences, but there are also the moments of “going public” and confronting an audience, where the experiences are shared and communicated (Ibid.). The artist’s experience is something of an on-going experience, consisting of a continuity of experiences. Jackson calls them “a single phase or segment of the artist’s transactions with the work” (Ibid., 108). “Each of these ways of relating to the work makes up a portion of the artist’s experience with it” (Ibid.).
Rationality

Dewey’s conception of rationality is not so easy to ascertain because it’s embedded in all his writings and isn’t the concern of any specific investigation. Visnovský (2004) has produced an overview of Dewey’s understanding of reason and rationality which I find enlightening. His idea is that Dewey represents a post-modernist position, which doesn’t deny or totally reject the Cartesian-modernist rationality, but sees it as “reaching its limits” in today’s science and culture. The Deweyian conception of rationality encloses emotion and the anthropological context. One important point for Dewey was that an ideal and absolute rationality cannot provide support for the reasoning in real life investigations. Real life investigations deal with nature but also with social and human values, established traditions and memory. Nature isn’t rational or irrational, as a given outside order, but rather is rational as it is, with its complexity and its tendency to aim at achieving natural ends, such as survival. In the same sense, human action is rational, not as a given ideal order but as rational actions in the interaction with occurring problems and situations (Visnovský 2004).

The opposite of this rationality is not irrationality but routine, which, according to Dewey, lacks the focusing power of sensitive, emotional attention and the will to reform through criticism (Ibid.). It’s not enough to see rationality as a given set of rules, but it must also be informed and able to find its way. This is very close to design action, which is informed by human senses, and cultures and can never produce anything outstanding if there’s no interest in going outside pure rationality as a matter of constructing new solutions or evaluating proposed solutions. According to Visnovský (2004), in about 1917–1919 Dewey changed the name of this rational attitude to intelligence. The point is, of course, that the distinction from modernist rationality becomes clearer. Intelligence is operative and attached to judgement. In this kind of rationality it becomes an altering activity guided by reason and judgement. Visnovský concludes that Dewey’s rationality is creative, non-cognitive, experiential, experimental and communicative, and can thus serve as a support for investigations into human rationality, which I see as crucial elements in design thinking and practices.

Schön’s argument for an alternative view of the work of professionals is based on a criticism of what he calls “technical rationality”. He claims that the current rooting in a technical rationality, inherited from the methodology of the natural sciences, falls short when explaining how professionals work (Schön 1983, 21f). Schön believes that there are other factors in the process of working that one cannot understand unless one takes a different perspective. One fundamental characteristic in the practice of working professionals that he highlights is that they first and foremost have to ascertain the problems (Ibid., 63). This primary process cannot follow the strict requirements prescribed by the methodology of the natural sciences. When the professional has established a problem corresponding to the theories, he can solve it supported by technical rationality. Schön didn’t abandon technical rationality, but claimed that it’s insufficient as an explanation of the work of professionals (Ibid., 46). Basing his opinion on Simon, he introduced the idea that the work of professionals is characterised by thinking around design. However, he does not further specify what this enhanced rationality means. Instead, he describes how professionals
work, supported by tacit knowledge, reflecting-in-action and reflecting-on-action (Ibid.). In cooperation with Argyris, Schön introduced what he calls “model II”, an alternative to the prevailing theory of action based on technical rationality (Ibid., 231f). Model II is based on communication — on exchanging information, as well as on creating an understanding of potential solutions. It concerns the creation of predispositions for a profitable communication, where matters other than pure fact can be discussed and where solutions can be sought. This allows for daring to express and test ideas, as well as being able to take in information and to learn from the situation one happens to be in (Ibid., 232).

The sociologist Hans Joas is one of the few European thinkers to have discussed pragmatism. Among other things, he has argued for the importance of taking creativity as a third dimension — in addition to rationality and normativity — in describing models of action (Joas 1996, 15). Joas’ aim lies in clarifying the concept of action as a key concept in philosophy and sociology (Ibid., 11). He bases his argument on a derivation from the phenomenon of creativity found in certain writers. Rationality is a core concept when discussing knowledge in action. A rationality of goals implies that one should strive to maximise the fulfilment of goals; the question is, which goals can one establish or observe? One can view the goals as restricted to something solely material, emphasising usefulness or rule-boundedness. Of course, goals may also exist on an emotional or socio-cultural plane, in which case it’s more difficult to ascertain their fulfilment. According to Joas, based on the thinking of sociologist Niklas Luhmann, the aim of explicit goals is to show plausible achievements within the surroundings, in order to be allowed to continue with what one is doing (Ibid., 223). Attempting to study action by isolating and defining the concept of rationality may be futile; it’s preferable to work with a model system where one defines the connections between goals, causes and effects (Ibid., 224). He bases this idea on Luhmann, who sees rationality of action as a system of cause and effect, where the individual represents the “cause”. This implies that even in organisations we have to try to understand rationality from the point of view of the individual and primarily from a perspective of action. Based on Luhmann’s argument, there is a multitude of goals, and one goal may cause other goals to be disregarded (Ibid.). Joas perceives three requirements, all of which contribute to the decision of whether human action is rational. According to Joas (Ibid., 217), the subject should:

- Be able to work in a determined way.
- Have their body at their disposal (as an instrument).
- Be autonomic in relation to their fellow beings and surroundings.

If these requirements are not fulfilled, or are fulfilled to a lesser degree, rationality in the actions of the subject decreases.

It’s important to note that rationality in design processes cannot be taken as a form of explicit, utilitarian rationality, or as something that is instrumental or technically inspired. Furthermore, the rationality of goals is not a sufficient explanation of the rationality in design processes. All these types of rationality exist, but design also
possesses an evaluative rationality and the complex rationality that Habermas (1990, 170) wishes to measure in expressive actions. There is no simple route to judging rationality. It may also be futile to attempt to isolate the concept of rationality. It’s important to note that there are explicit goals, and that these are not necessarily decisive: the individual and co-operation with other parties are, however, decisive. The goals may be hidden, change and exchange places. In the discussion of rationality, one can conclude that communication is decisive for the individuals involved in the design process in order to reach a mutual understanding, and that communication comprises many different types of communicative action. What’s interesting here is that the mode of art criticism comes into play as a way of dealing with expressions of art, and that these modes and structures need to be criticised.

**Popular art and criticism**

I’d like to complement this overview of pragmatist philosophy with the views of Shusterman. Shusterman (2000, 35) wishes to update the analytic views on art and aesthetics, basing his argument on Dewey’s viewpoint that art lies in the encounter and experience, not in the object. Shusterman argues against the analytic aesthetic tradition, which he regards as having restricted aesthetics to fine art. However, he regards Dewey’s view on aesthetics in experience as far too all-embracing and imprecise to work in discussions within artistic circles. Shusterman’s view is liberating, giving room for experimentation with the huge variety of material that surrounds human existence (Ibid., 58); we cannot, however, include all human existence in the concept of art. Dewey wished that one could individually understand and profit from the existing potential for having aesthetic experiences. Shusterman sees as his aim to create an understanding of this aesthetic view in smaller steps — by broadening ways of thinking and introducing the pragmatist view into the judgment of popular culture (Ibid., 58f).

While agreeing with Dewey, Shusterman defends a wider interpretation of aesthetics, emphasising the process, as well as the idea that the aim of art should be to give meaning to man’s existence and to influence society. Shusterman has written several books and numerous articles in which he analyses aesthetics and the conceptual sphere within pragmatist aesthetics. He has also subsequently developed thoughts concerning the need for philosophy and the task of philosophy to teach us the art of living (Shusterman 1997, 5). Shusterman has a background in the aesthetics of Adorno, but abandoned it because of its elitism (2000, xvii). He has written much on art criticism and has acted as a renewer within aesthetic theory. In his book *Pragmatist Aesthetics: Living Beauty, Rethinking Art* (2000) Shusterman compares the view on aesthetics in analytic philosophy to that in pragmatist philosophy. In the analytical tradition, science presides over art, and emphasis is placed on the object and on the definition of art and non-art. According to this tradition, art should be a goal in itself, free and independent of requirements placed on its usefulness and of
explanations, and thus incomprehensible to scientific thinking. Shusterman sees this attitude of “art for art’s sake” as an attempt to protect art from utilitarian requirements placed on its usefulness (Ibid., 9ff). He finds an opposite to the analytic tradition in the pragmatist emphasis on the continuity in art and on the need to understand art from a socio-historical perspective (Ibid., 19). The pragmatist’s acceptance of art being anchored in the everyday, historic continuity and man’s experiences implies that we have to abandon the analytic view of aesthetics. Instead, the role of aesthetic philosophy is concerned with giving shape to concepts, criticism and the development of the view of the world, helping us orientate in the art of living.

Shusterman (Ibid., 62) takes up Dewey’s explanation of the importance of aesthetics and brings out four concepts that he regards as important in aesthetic theory: organic unity, opinion, interpretation and understanding. Unity is a classical aim of art; according to this notion, artistic production should result in the creation of a whole, that is to say, the whole is something more than its constituent parts and has its own qualities besides those of the parts. Deconstructionists have, however, questioned the need for organic unity in art. Shusterman takes as his basis the thinking of Derrida and his idea of différence, which represents a structure and a systematic interplay between differences and relationships. From this he concludes that there is a connection between differences, and that the parts are linked to each other, forming a unity (Ibid., 71). Organic unity is a central concept, important to understanding and interpretation. We seek a unified understanding when we read (literary) works, and we have a need to achieve a unified understanding of the whole (Ibid., 75ff), in order to grasp its meaning. However, Shusterman does not see organic unity as a criterion for art, but rather as something we seek, and which is created and experienced in interpretation, which is always dependent on time and space (Ibid., 82f).

The three concepts of opinion, interpretation and understanding belong together. Shusterman claims that understanding can often be incorrect, and that interpretation and understanding are separate issues. All understanding is not interpretation, as the former can occur without conscious consideration. Interpretation, on the other hand, demands a conscious, intellectual action (Ibid., 123f). Interpretation is complete when we no longer feel that our understanding is insufficient. What he is aiming for with this distinction is not a definition, but rather to bring out the meaning of interpretation through a contrast, and to link interpretation to a meaningful basis: we must have a pre-understanding (Shusterman 2000, 129). In the spirit of Wittgenstein, understanding and further interpretation demand that we look for meaning in what we see. Another difference that Shusterman wants to demonstrate is that interpretation demands expression, whereas understanding doesn’t, and sometimes it may not even be possible to express our understanding. Here he again refers to Wittgenstein, but states that the indescribable is not mysterious but occurs as something normal and everyday (Ibid., 134f).

The aim in Shusterman’s discussion is to bring out both Dewey’s views on aesthetics and the fact that art has a utilitarian function that ought to be opened up and appreciated by everyone (Ibid., xv). Like Dewey, he wishes to open up the right to aesthetic experience to the broad public. It should not be restricted to a small
elite, but should enrich the lives of everyone. Dewey makes a distinction between popular and official art and claims that official art would decline unless renewed by popular art, with its more immediate link to reality (Dewey 1980, 152). Shusterman sees a possibility for this renewal in popular art and its criticism: through this one can better reach a broad stratum of people and influence the development of society, rather than devoting oneself to fine art, which is isolated and segregated from society. He discusses the problems associated with changing objectives and finds more arguments for his cause. One such argument is that popular art brings joy to so many people that we cannot simply ignore it (Shusterman 2000, 170). As an example, Shusterman looks for distinctive aesthetic marks in the object in his study of rap music (Ibid., 201ff). Here I think he takes as his basis a common tradition in aesthetics with its roots in classical philosophy, and bases his opinions on criteria typical for the art and its objects. Shusterman discusses various phenomena in rap music, which at first glance may appear not to be included in what is traditionally regarded as distinctive of art. Among other things, he discusses how rap borrows ideas from other styles of music, its fragmentation of these ideas and how it uses technology and commercial channels. He claims that despite the fragmentation and borrowing, forms of both unity and originality arise (Ibid., 206). He states that the relationship to technology and commercial areas is complex, and that rap could not have become what it is without them. His point is that it’s dependent on commercial interests and, to a certain degree, technology. Thus there is no art independent of technology, and highly appraised artists often operate in close collaboration with gallery owners and retail channels. Copying, commercialism and industrial production are present even in fine art; these are issues presented as the vices of popular culture and are regarded as arguments against popular art being seen as aesthetical (Ibid, 174). Production aided by technology, produced in a standardized format and governed by an external organisation that influences artistic expression, is depicted as a sign of shortcomings. According to Shusterman, however, this is based on the myth concerning demands on individualism — demands in artistic creation. This, however, denies art a collective dimension (Ibid., 189). In fact, artists have always operated in relation to society, convention and audience (Ibid, 190). He refers to Dewey concerning the question of the corrupting influence of the organisation, and claims that it’s something to be opposed and dealt with, but not a criterion in deciding what is art (Ibid.). Shusterman also discusses traditional concepts such as complexity, purity, creativity, form and the independence and self-consciousness of art (Ibid., 230ff). In his example “Talkin’ All That Jazz”, he finds examples of elements of all these traditional criteria in art (Ibid.). Shusterman answers the question of the superficiality of art and its lack of deeper human realities by admitting that much superficiality exists, but that the roots of, for example, rock music lie in serious human and social problems, and that it expresses protest and pride (Ibid., 188).

Furthermore, according to Shusterman criticism is a source of evaluation in art (Ibid., 140). He bases this claim upon the fact that art has not been able to, and cannot, be defined by perpetually valid definitions; instead, each generation strives to define their own view on the nature and meaning of art in relation to needs and responses. Like Dewey, he claims that the objective of pragmatism is not to abolish the institutions of fine art but to broaden them, and to take advantage of the
power of art to touch and influence people. His goal is a better and more democratic society, where everyone can have aesthetic experiences of art. Shusterman wishes to accomplish this by critically examining works of art. This criticism should bear an ethical stamp, and it should be linked to popular and day-to-day existence (Ibid., 144). Art criticism should deal with the moral faults in the art work, but should also contribute towards increased understanding and education (Ibid., 167ff). Criticism is not only something that neutrally analyses at a distance, but requires contact with the work, and is based on the knowledge and opinions of the critic (Ibid., 223ff).

One faces difficulties when attempting to convert Shusterman’s arguments to apply them to design processes, in that he sees art from the observer’s perspective, i.e. the criteria of use in the perception of completed art objects. In doing so he primarily applies traditional criteria in judging works of art, criteria that are theoretical and bound to culture. In other words, he doesn’t discuss the issue of subjective experience. Shusterman passes over the aesthetic encounters and experiences that have given rap music its popularity. Rap has not become popular solely by being examined and criticised by means of traditional criteria in art, but by many people appreciating the music and its forms. Shusterman’s argument is thus more of a motive for seeing rap music as an art form, rather than a discussion of what the broad strata of listeners experience and what their aesthetic experiences are like; or what aesthetic experiences the rap musicians themselves have when creating or performing the work. In a design theoretical perspective, the designer’s subjective aesthetic experience is central to the process.

How is Shusterman’s view useful in regard to design theory? It illustrates how one can view aesthetic qualities in the less sophisticated forms of architecture, even though these deal with standardised components and borrowed characteristics of style and restrictions originating from a standardized mode of production. Despite these restrictions, however, the components give an opportunity for creation. The art lies in being able to compose and design using these ingredients. I see this as one step closer towards understanding that design is not created by the criteria of art, but by combining crude and disparate ingredients in a creative way, and that everyone can work in creative processes and have aesthetic experiences.

Understanding Dewey’s view of aesthetics is clearly complicated by the fact that both the terms ‘art’ and ‘aesthetics’ are so strongly linked to a certain interpretation. Shusterman is able to discern the dimension of aesthetic experience Dewey intended and which is not limited to experiences of art works, and that there is a task to change the understanding of it in order to make it available to a broader public. Despite this, he restricts himself to an area that touches upon traditional aesthetics. It must be admitted, however, that in his explanation of somaesthetics, he broadens Dewey’s view on aesthetics to something more everyday and common, as a kind of embodied philosophy of a good life (Shusterman 2000, 262ff). In other words, there is a much larger objective, one concerned with seeing the importance of aesthetic experience in everyday processes, and letting people appreciate and profit from their aesthetic experiences, primarily for enjoyment but perhaps also for more utilitarian purposes. Shusterman’s approach to criticism and analysis could even be seen as a model for design research. He analyses examples within traditional aesthetics as tradition
dictates, but also ventures into new areas and combines these with the theory created by tradition and culture. The problem for theoretical design research is his emphasis on the object — the completed object of art. That is to say, he observes the works of art as someone outside the process. In design theory, the interest lies in the process, and according to the pragmatists aesthetics is inherent in the process. Hence one could perhaps adapt Shusterman’s views to apply to processes.

In his writings, Shusterman often returns to the ideas of Bourdieu. They pose an appropriate toolkit, but they also provide some conclusions offensive to the pragmatist point of view. Shusterman accepts Bourdieu’s investigations and explanations of the cultural fields and his view that fine art and education pose the only real rivals to commercial power, as sources of social status and legitimation (2000, 146). What Shusterman criticises in Bourdieu’s reasoning is his view of popular art as trivial (Ibid., 172) and his lack of attention to the diversity of art forms and experiences of art (Ibid., 222f). Despite his own advocacy for the aesthetic experience in popular art and its potential for the amelioration of the lives of the masses, Shusterman sees the field of popular art and mass media and its consumers as manipulated into “a docile conformism and worship of the new, which keeps the dominated consumer in a confused frenzy of changing fashion and consequent insecurity about his tastes” (Ibid., 146). Shusterman’s ideas aim to improve both fine art and popular art.

The philosophical method Shusterman applies is, in contrast to the tradition of analytic philosophy, a development of speculative ideas and proposals, together with the traditional methods of reasoning and comparison. He designs concepts and theories in congruence with the pragmatist ideal of development. In his book *Surface and Depth. Dialectics of Criticism and Culture* (2002, 227) Shusterman suggests that “dramatization” is a “useful definition of art”. The point is not to redefine art but rather to put new concepts into play, which can function as a means for reconciling conflicting issues in art theory — naturalism and historicism (Ibid., 229). Shusterman doesn’t really believe in defining art, but continues to fight for a different understanding of art and an acceptance of a broader understanding of aesthetic experience. What he does is to put his theories to work. He reasons and develops his arguments, but he also puts his ideas to work in examples. He analyses rap music, the beauty of text layouts and other genres alien to the fine art community. There is little potential in trimming and refining definitions. A more promising route is to find new and better approaches to art and aesthetic experiences. The criticism of popular music is one approach that conforms to this ideal.
I will construct a theory of design by bringing together Dewey’s two theories concerning artistic creation and scientific research. In doing so I take support from the pragmatist view that it’s not possible to draw a clear line between creative and rational thinking (Garrison 1996). My construction is a simple prototype, aimed at creating a specific model by which to explain the design processes. The aim of this prototype is to use it as a means to transform Dewey’s theories into a format that is closer to existing design theory, with its tradition of design process models. The model is not so much a linear model as a set of steps and some descriptions concerning influences at certain stages. The theory provides a conceptual framework. I won’t spend too much effort on refining the theory conceptually, but the theory acts as a basic prototype for the understanding of the design process in a pragmatist perspective. I also think it’s necessary to complement my outline with Shusterman’s interpretation of pragmatist aesthetics (2000) and ideas concerning rationality. My aim is less to construct a model of the design process as it is to reason about how to understand design, and about the impact of the pragmatist philosophy of Dewey on design theory and architecture. In the penultimate chapter I will continue to draw conclusions about design theory in the light of Dewey’s pragmatist philosophy.

According to Dewey, the processes of art and research are similar. They are based on problems and ideas in everyday life, and evolve to give an order and intellectual abstract: rationality is inherent in both. Aesthetic experience and active creation are a mixture of experiences of the senses and the reworking of them, an interplay between experience and intellectual formation and change. The route for these in terms of progress is via experiments in context. A successful design process should result in a consummation requiring no more reworking. The most important components are:

**Situation**
Design arises from a real situation, a situation with problems. We are constantly bombarded with experiences and impressions. It’s typical of design work to be problem-solving in particular situations, where the situation must be treated as a whole. Parts of it can be studied and developed, but decisions must be made with regards to the whole. Here Dewey’s views on both art and research come together. We are constantly faced with problem situations or facts that confuse and affect us. It takes place in a social context where there is a historical perspective: it’s bound to position, time and space, and we have some pre-established knowledge of it.

**Finding and testing conceptions**
There is a pattern common to both research and art in the confrontation with experiences, in the importance of impressions and in that we process and structure them. We experience the whole, yet can separate parts and create meanings within them. The same is true for design: we look for suggestions for solutions and conduct experiments; the process begins to elicit conceptions in us and thus controls the subsequent process. On closer inspection the designer begins to discern various structures and contexts within the situation. One could call these possibilities, as
in Lundequist’s description of problem space (1995, 87), or ideas, as in Dewey’s Logic - The Theory of Inquiry (1938, 109).

**Materials**
The material used in the design process consists mainly of representations of reality, or rather of a plausible future reality. Dewey states that all forms of art consist of specific media by which the artistic whole is presented. He distinguishes between means and medium (1980, 197ff). The means in this case are, for example, sketches, whereas the medium is the product of design, the architecture and the building. Science is mostly concerned with theories and logic, art with structured materials, while design makes use of a combination of both. Design is also accompanied by arguments that constitute a part of the participants’ understanding of the object. Solutions must have motives that can be communicated, i.e. follow a certain logic that is mutually understandable and meaningful, and which reaches a degree of objectivity.

**Seeing and judging**
In design test results are to a large degree judged intuitively on the basis of sense impressions. By examining the results and relying on his or her evaluations, the designer draws conclusions about further steps to take and whether the result is suitable or unsuitable. There is an obvious parallel here to Dewey’s aesthetics; but at the same time, design contains facts. Design is also judged according to its usefulness, cost and functionality. The experiences of the senses play an important role in examining problematic situations; and this is likewise important in design. It requires an ability to make choices that build upon our experience of the situation, on precognitive understanding and not on simple recognition. Design is linked to both emotion and intellect. The aesthetic experience is the fused conclusive statement of all these elements. Facts are weighed against evaluative judgements. Reflection is a thought process that recalls and links the experiences of the designer; facts may be present, but the rational interpretation is not immediately evident, and thus must be developed.

**Reasoning**
When we analyse and conduct experiments we start to see relations emerge. The results can to a certain degree be formulated as theories; thus experiments are delimited, abstracted and generalised to become statements. From design we also gain experiences that remain material, in which there are relations, qualities, characteristics and expressions. Some relations must be experienced by the senses and can only be paraphrased, not defined in words. The whole must be structured rationally according to its own internal logic, which is dependent on a certain degree of mutual understanding and logic. The results of the design are abstract to some extent, and are supported by language and theory. However, it’s not necessary in design to determine all causal connections. Conclusions based on aesthetic experiences constitute arguments that cannot be fully articulated, but must be left partly unspoken and pointed out by means of metaphors and nuanced and to some extent poetic/artistic expressions. In some cases the circumstances are stated very clearly, for example as costs or durability. The parties are involved in the design
process in a way different to that of art. In design the collaborating parties influence the design and expect to be notified of arguments concerning it.

**Consummation**
The steps in design are repeated until the situation is solved and a synthesis is created. Dewey puts it in terms of a situation no longer being in a state of conflict; a stable order has been achieved (1980, 116). The end results are achieved when one feels that the situation has become clear, when one has developed a structure with harmony and clarity. The result should be harmonious but also realistic, and should be based on realistic considerations and facts: “Hence the object has form in a definitive sense. When this form is liberated from limitation to a specialized end and serves also the purpose of an immediate and vital experience, the form is esthetic and not merely useful” (Ibid.).
CONCLUSIONS

I will not make any concise statements about design and the impact of the philosophy of Dewey on design here. I will return to this issue in the conclusion in part 3. and chapter 9. As I see it, Dewey’s philosophy consists of a programme by which to profit from knowledge gained in reality and in processes through experiments in existing circumstances. There should be a connection between reality and the formation of theories — from the impressions on our senses and reflection to objective theories. Theories are in no way final truths but rather good explanations, which should be regarded as hypotheses for continued research and improved action. It’s essential to be able to arrange, search and change; to be able to consider, judge and make links to other theories; and to organise, articulate and describe. The connection with reality and the study of processes are also important, as is letting circumstances and occurrences control the course of the research through reflection. According to Dewey, the choice of method by which one conducts research is not given, but should be chosen according to the situation and the problem at hand. We are not searching for definitive truths; instead, the research reaches a level of maturity when the original problems have been explained.

Dewey emphasises the context and criticises the idea of theories being absolutely true. Still, he is keen to make a distinction between the methods of science and the assumption that research results are truths. To me Dewey’s reasoning seems plausible. It’s difficult to determine what a final theory that we could claim to be true is. What we have is more or less useful or reliable statements and theories. From this reasoning about contextual influence and deficient statements there arises a few conclusions:

1. History provides an entrance to understanding the tradition and cultures we live in. We cannot really distance ourselves from our tradition but we should try to understand it and criticise it, because tradition and preservation has proved less useful to human existence than development.

2. Philosophy (or in this context design theoretical reasoning) easily loses its contact to reality, due to its inherent abstract ways of addressing problems. Theory is a good tool for development but is easily lost in empty reasoning without relevance for praxis and human life.

3. Design theoretical proposals need to have contact with their context and are preferably tested and developed in a close connection with design processes.

4. Design theory (as a kind of philosophy) has a second order context where it is to interact, too. Design theory has a central position in the theoretical development of theories of design on the level of the interdisciplinarily-shared understanding of design processes. It’s good for design theory, as a philosophical discipline, to have a close relation to the crude real life processes, but there is also a need to meet the demand for useful theories and criticism of design research cultures.
It’s not so important to continue trying to refine my model of the design process by means of theoretical reasoning. I see Dewey’s ideas as useful and promising for design theory, including the ideas of Shusterman concerning popular art. However, it seems better to turn to empirical investigation and try to see if I can elicit some more useful ideas about design. This is especially true when discussing aesthetic experience. It’s very easy to present speculative ideas about something we all know and still don’t have any appropriate expressions for. Before I go into case studies I’ll present the ideas of Bourdieu as a way of extending the ideas of Dewey by means of existing theory, which also has a substantial backing in empirical research. Dewey asks us not to forget the link to the context and to notice the influence of cultures and traditions in all kinds of thinking and action, including research itself. However, he is not very specific about this. As I see it, Bourdieu’s field theory provides a reliable model for how to interpret cultural fields and where we should look for guidance — or where the powers and traditions are that we should try to disseminate and criticise.

When it comes to the question of aesthetic experience I think it’s problematic or at least not so important to refine the conceptual interpretation of it, because a conceptual understanding cannot replace its function and there is a danger in pressing it too far. The conceptualisation can never express the full complexity of aesthetic experience. As I see it, the crucial question is whether it’s useful and designates something important in design. For this reason, I prefer to leave the discussion about aesthetic experience at this stage and proceed with Bourdieu’s field theory and the case studies as an exploration of this issue.

Notes:
1 This descriptive definition was presented by Richard Buchanan at the Design & Emotion conference in Ankara, 2004.
2 According to Rosing (1982, 63), reflection can be seen as a type of retrospection that represents a link to private knowledge and unspoken processes.
5

BOURDIEU AND THE AVANT-GARDE
INTRODUCTION

One of the interesting perspectives provided by Dewey’s philosophy is the idea of looking at artistic production in a broader sense. Traditionally art, design and architecture, as well as technical innovations, products and systems are criticized and evaluated mainly in regard to their qualities. In historical reviews we can find explanations and surveys of how a product came into being and which influential factors contributed to its development. Dewey’s art theory takes into account all kinds of influences in the production process, but with the focus on the fusion into an experience and a unified creation. Bourdieu went further in his attempt to secure an authentic representation of the actual historical process and situation, and wanted people to study art from a purely socio-historical perspective, even attempting to analyze the sociological roots of aesthetics. In order to understand the design process as a matter of “universal professional skill” I think Bourdieu’s perspective, however, is inappropriate. Nevertheless, despite Bourdieu’s sociologist background and his negative attitude towards the study of artistic production, which focuses on the qualities of the object, I think it’s necessary to understand his explanations of cultural fields, and (if we discuss top-level design) his conceptual framework for the avant-garde, but without totally distancing oneself from the artistic interests. In his approach Bourdieu sticks to the Kantian idea of a disinterested interest. However, in his interpretation, Kant’s “aesthetics is true, but only as a phenomenology of the aesthetic experiences of all those people who are the product of skholè [leisurely scholarship]”. This means that it’s only true for those who share the ‘correct’ education in the subject. On the other hand, the art interest is distanced from necessity in this social class and thus their interest is disinterested, i.e. they can enjoy and experience art without having any immediate functional obligations or material interests included in their interest (Bourdieu 1998, 134ff).

The aim of this chapter is to introduce the field theory of Bourdieu, and other concepts related to it. I will make use of it in my own interpretation of the second case study. In this chapter I will also discuss the development of artistic freedom in architecture, and how it was strengthened. As I see it, the potential for innovation is increased by this freedom, but the distance to the client or user interests might consequently grow. Bourdieu’s writings provide us with a structure to map the field of architectural design. It’s important to remember that his interpretations focus on the relational aspects in human action. He refers to the field of French literature in his studies, but assumes that his theory is applicable to any mature cultural field. Bourdieu’s explanations link aesthetics to culture and human practices, and the producers to consumers. One of his conclusions is that stylization — putting form above function — is possible everywhere, in every type of practice (Bourdieu 1984, 176), which, in fact, is an idea found in Dewey’s thinking. Bourdieu’s reasoning attempts to demonstrate how tastes are ‘operators’ for making distinctive signs out of things (Ibid., 174). One of his most interesting assertions is the idea of how to describe the avant-garde. Taking on from Bourdieu, I will try to show that we can construct different descriptions of the avant-garde.
One idea I see in Bourdieu’s writing with particular reference to pragmatist philosophy is that of knowledge not being fixed, but rather provisional and socio-historical. For Rorty (1982, 110), the border between literature and science is not clear, but diffuse and opaque. There is a long tradition in Western society of trying to distinguish how objects can be truthfully determined by means of representation and language; but according to Rorty this is unnecessary. It’s enough if we can have an identifying description that lets us “see what would count for or against various assertions” (Ibid., 118). In the pragmatist tradition there is also this notion of ‘warranted assertibility’ as an adequate notion of the trustworthiness of reasoning and as a replacement of truth, sufficient in the problem-solving mission of scientific research. According to Rorty, the role of such institutions of society such as the arts or the sciences is not to embody or to make statements about truth or beauty but to solve problems (Ibid., 16). The point is that a statement or a theory need not be complete or absolutely true to be functional and useful in a problem-solving approach. We could leave aside the desire for definitive truth, and instead address the problems more eloquently. We would see the foremost task of research not as stating definitions and truths but as improving the existing problematic situations. In this perspective it seems reasonable to address our knowing and knowledge as a matter of socio-historical defining patterns, especially in such an opaque field of knowledge as design. I think Bourdieu’s sociological perspective, where social positions and the education into traditions are seen as central, is important for the interpretation of design knowledge and also for the interpretation of aesthetic experience as a central qualifying concept in the determination of successful design and appropriate action and decision making. I think culture and subcultures must be seen as central constituting elements in a theory of design. There is no such thing as a free-standing functional design theory. We have to make a distinction here between the functional theories embedded in the design fields and the descriptions of design in universal terms. I don’t think the latter is very important, but the reading of the cultural knowledge in a field is important, and the uncovering of the constituents of cultural knowledge might be a task of design theory.

There’s another reason why I think it’s important to examine Bourdieu’s theories. It’s very common to assume that design is identified with a profession, in the sense that architects as well as industrial designers tend to define architectural design as a profession. As I see it, there is a danger in studying design competence through the mirror of the concept of profession, because this is only one part of design. And especially when we discuss competences, and design knowledge the concept of profession is a too narrow framework to fruitfully allow a deeper and fuller investigation. I think it’s better to take the cultures or subcultures in the fields of design as a suitable context for design research and questions about design thinking, competence and knowledge. This is a position that I’ve borrowed from Garry Stevens (1998) in his discussion of the social foundations of the field of architecture. I’ll start this chapter by introducing Bourdieu’s thinking and field theory. I concentrate on the idea of a polarized field, with a two-fold avant-garde. I think this is a crucial factor in an interpretation of design competences, where the commercial interests are just one side issue in the fight for innovation and progress. I make a comparison between the ideas of Dewey and Bourdieu, looking for similarities and differences.
In the final part of this chapter I introduce the conclusions of Stevens and present an interpretation of how the field of architecture has reached a degree of autonomous artistic freedom despite the natural domination of commercial and functional interests embedded in the idea of architectural design (as well as in other design disciplines). As I see it, this chapter enlarges the background I’m trying to create by introducing aspects of existing design theory and pragmatist philosophy.
Stevens (1998, 60) states that Bourdieu’s perspective on power differs from the usual definition given by Anglo-American sociologists, in the sense that power is “the capacity to impose a specific definition of reality that is disadvantageous to others”. Power is not equal to control. One important point is that it’s not only economic power or physical power that imposes changes in our society, but also symbolic power: “Symbolic power involves the wielding of symbols and concepts, ideas and beliefs, to achieve ends” (Ibid). This leads me to the conclusion that in Bourdieu’s thinking art is a question of collective belief and nothing like a truth. Bourdieu uses the word *illusio* — the investment into the game — to define the acceptance of certain dogmas inherent in the thinking of certain social groups (1996, 227f). Referring to Arthur C. Danto, Bourdieu claims that there are no real distinctions between art objects and trivial objects. There’s no eternal truth stating that some objects are by definition art. There’s no definitive distinction between art objects and simple everyday objects (Bourdieu 1996, 286f). According to Danto (1981, 99, 111), the distinction is constructed in the art world — the art world stating that certain objects are to be seen as art objects, depending on social conditions of the production and the reception. The art objects are not equipped with any significant aesthetical content nor do they have qualities of eternal value. The values are historically- and socially-determined (Ibid.).

*Habitus* is an important term in Bourdieu’s field theory. It stands for the system of classification of practices, as a matter of lifestyle — how to act and recognize practices (1984, 170):

> “The *habitus* is both the generative principle of objectively classifiable judgments and the system of classification (*principium divisionis*) of these practices. It is the relationship between the two capacities which define the habitus, the capacity to produce classifiable practices and works, and the capacity to differentiate and appreciate these practices and products (taste), that the represented social world i.e., the space of life-styles, is constituted.”

*Habitus* denotes the fact that much of our knowledge and actions are dependent on strategies that we have internalized from the socialization process in the family and within the social group where we live and act (Bourdieu 1996, 74ff). We think our ways of thinking and living are accurate and correct, but they only accord to the rules of our culture. People living and acting in other cultures might think differently. A layman might think architects quarrel about nonsense when debating questions of architectural compositions. For the architects the issue is real, because we have learnt to think that it’s important to discuss details of design. This thinking need not be explicit. It’s to a large degree tacit and partly embedded in bodily experiences. *Habitus* is: “a socialized body, a structured body, a body which has incorporated the immanent structures of a world or of a particular sector of that world — a field — and which structures the perception of that world as well as action in that world (Bourdieu 1998, 81).”
Bourdieu’s theories deal with the social field as a space of opportunities — *possibilities* — regulated by a changing system of power relations, positions, dispositions and interests (Ibid., 76ff). ‘Position’ relates to Bourdieu’s idea of a social field where the agents take positions (I will discuss these concepts later in more detail). The other central concept is ‘disposition’, marking the skills and other individually defined qualifications (Bourdieu 1996, 231ff). In order to be successful one has to have a suitable position and the necessary dispositions. Bourdieu claimed that these two aspects, together with their mutual relationship, constitute the situation that enables an artist to progress or not (Ibid.). To exemplify this, we can take a historical architect that was successful — German-born architect Carl Ludwig Engel, who designed the classicist architecture in Helsinki in the early nineteenth century. What would he have done if he had been a contemporary of Aalto, Bryggman and others, in the early Functionalist times of the 1920s and 1930s, or if he had been an old and influential architect in those days? In the latter case he might have tried to block the emerging architectural ideas or architects. In the former case, as a young functionalist architect, he might have created some striking functionalist pieces of architecture; e.g. a proposal for a new parliament building. The early career of Engel also includes misfortune and problems. He had to leave his home country in search of work. If he had arrived to Finland a few years later, or not journeyed to St. Petersburg to make himself known to those with power over Finland, he might have missed the career opportunities that eventually came his way. He also kept up with the development in the field of architecture during his lifetime, for instance with the move towards the neo-Gothic style. Simplifying the ideas of Bourdieu to a maximum: being skilled is important; being at the right place at the right moment is important; and having the right skills at the right moment is very important in the competitive fight for success in an artistic or cultural field. Success leads to an improved social position within the specific field where the agent is working. Positions here primarily refer to social position, and the social position is, as I see it, a combination of professional and non-professional structures.

As Bourdieu sees it, the cultural fields are polarized (Bourdieu 1996). There are two poles of power (or capital); the commercial (economic) and the symbolic (cultural) (Ibid., 142). Neither of them can control the other, but both influence the field with different values. According to Stevens (1998, 80), the dominant class of the cultural field is subordinate to the dominant social class, though it’s part of it. The difference depends on the latter’s ‘massive amount of economic capital’. However, the cultural elite possess a significant amount of cultural capital. There’s a mutual dependence exemplified by Stevens: “The architect profits most from by designing buildings of taste for people of taste, and displays his or her own cultivation by selecting a cultivated client as much as the client displays cultivation by selecting a cultivated architect.” Typical for agents close to the symbolic pole is the strong belief in the dogmas of the cultural stakeholders (Ibid., 244) and the ignorance of commercial interests (Ibid., 142). Bourdieu saw the field as a battlefield, where the agents struggle for position. Within the field there is one part that we could call the *establishment* — with a potential for symbolic domination (Bourdieu 1998, 100). The members of the establishment are those that are or have previously been successful. To Bourdieu this is a position where an artist is allowed to judge what is good art — the agent is allowed to *consecrate* the production of other artists (Bourdieu 1996, 121ff). Those
who have achieved a position where they have the right to consecrate influence the
values of the field, and the position is associated with a high-rank status within the
field. This position can also be financially advantageous, but it need not be (Ibid.,
146). Capital, both in its economic and symbolic forms, is always a key to social
relations and positions. Both commercial and symbolic capital gives reasons for
actions (Bourdieu 1984, 113). Capital is here understood as any kind of power.
Symbolic capital is the opposite of commercial capital and is based on cultural
values, basically based on taste. I use the term ‘commercial’ rather than ‘economic’
because it seems more appropriate in the vocabulary of design theory, and it’s also
used by Bourdieu as a complementary concept (1996, 142).

Bourdieu based his understanding of the artistic fields on a historical development,
resulting in the emergence of the free artist who totally rejects commercial interests.
The artistic production is driven by a reversed commercial rationality (Bourdieu 1996,
142). Artistic production with an art-for-art’s-sake attitude rejects any subordination
to commercial restrictions or external demands. The commercial profits and the
straightforward logic of business and commercial interests are replaced by an
incorporated interest in symbolic values (Ibid.). In this kind of cultural production
the precise values remains hidden and diffuse (Bourdieu 1998, 3ff and 84f). The
space for the existence of free artists is created “against the ‘bourgeoisie’ (in the
artists’ terms) (…), against the market and against state bureaucracies (academies,
salons, etc.) through a series of ruptures” and by the “diversions of the resources
of the market — hence of the ‘bourgeoisie’ — and even of state bureaucracies”
(Bourdieu 1996, 257). We see their freedom as a prerequisite for production, but
the freedom is, of course, not possible without economic support. Bourdieu saw
this as a result of collective work. The existence of artists and artistic production is
not simply a result of their skills and efforts, but of possibilities and expectations
offered by the community of their consumers, too (Ibid., 102).

Figure 2.
The distribution of different powers and fields within the social field. The poles S and C
stand for the distribution of commercial power (C) and symbolic power (S). The latter is the
area of the establishment. Together they are enclosed within the field of power.
Bourdieu’s theory deals with how we act in a force-field, where we seek to retain or improve our positions. For example, a young student seeks to get a position in the profession of architects through education. On the basis of his or her education, s/he will get a position, but later might try to improve it within the profession by specializing in a certain type of building or by entering architectural competitions. It’s important to notice that the relations are always specific for an agent in a particular field (Ibid., 181ff). In order to draw conclusions one has to know the elements and relations in the specific case before one can enter into a study of the external relations of the specific field (Ibid., 199). We can assume that there are subfields within the field of architects which have their own structure of positions and relations. The fields are not chaotic but develop into a mature structure. A field is determined by forces and the position-taking contributes to the structuring of the field.

Bourdieu’s theories, as well as his way of writing, are very complex. This makes it quite difficult to pin down and cite his texts. Below I have selected a part to cite, which simultaneously demonstrates the complexity of his writing but also the complexity of the relations and properties of a force-field referred to above (Ibid., 231).

“The field is a network of objective relations (of domination or subordination, of complementarity or antagonism, etc.) between positions — for example, the position corresponding to a genre like the novel or to a subcategory like the society novel, or from another point of view, the position locating a review, a salon, or a circle as the gathering place of a group of producers. Each position is objectively defined by its objective relationship with other positions or by the system of relevant (meaning efficient) properties which allow it to be situated in relation to all others in the structure of the global distribution of properties. All positions depend, in their very existence and in the determinations they impose on their occupants, on their actual and potential situation in the structure of the field — that is to say, in the structure and distribution of those kinds of capital (such as literary prestige) put into play in the field.”

It’s the interest associated with these positions — in a stable situation — that govern the “space of position-takings” (Ibid., 231). The field has a specific logic in accordance with the principles emerging through these positions and the possibilities. Different positions have different qualifying conditions, and the field is kept together due to the relations and the competition — the interest in “the game”.

“The literary (etc.) field is a force-field acting on all those who enter it, and acting in a differential manner according to the position they occupy there (whether, to take the points furthest removed from each other, that of a writer of hit plays or that of an avant-garde poet), and at the same time it is a field of competitive struggles which tend to conserve or transform this force-field. And the position-takings (works, political manifestos or demonstrations, and so on), which one may and should treat for analytical purposes as a “system” of oppositions, are not the result of some kind of objective collusion, but rather the product and the stake of a permanent conflict. In other words, the generative and unifying principle of this “system” is the struggle itself.” (Ibid., 232).
The positions taken aren’t stable but change with the changes in the field. The producers try to influence the force-field by conserving the structures or changing them, depending on where the art producer is positioned: whether s/he is interested in changing the situation or would prefer to keep it as it is (Ibid., 234). The result of a new group reaching a position in the field is that the others face a change in the possibilities and positions. They might find themselves confronted with the potential of being downgraded or upgraded into ‘outmoded’ or ‘classical’ positions (Ibid.). The field is a field of struggle. Retaining the same production that previously rendered success might now lead to failure, because the structure of the art field has changed. Another example of change is the example of classic works that are so often repeated that they generate an “effect of parody”, undermining their respectability. It’s also possible that the designer can influence the reception of his or her own work by being active within the force-field: but this, according to Bourdieu, is doomed to fail, or at least partially (Ibid.), because such actions will transform the conditions of the reception and they would not need to influence the reception if their work was already well received (Ibid., 233). The field is never stable but always in continuous change.

To Bourdieu, the art fields are constituted by objectively identifiable potentialities (Ibid., 235). These potentialities are not eternally fixed. They are historically and socially defined (Ibid., 235f and 258). The potentialities are relations or potential actions, conditions of the real life of artists, artistic thinking and production (Ibid.). Bourdieu denies the possibility of an absolute artistic freedom: instead, it’s a freedom under constraints, in “a finite universe of potentialities” (Ibid., 236). A revolutionary change is possible only if there is space for it (Ibid., 164f), if it has been inscribed as a potential action — even if nobody has realized that the option was there until it’s put into action.

The traditions of a field are constituted by a set of “problems to resolve, stylistic or thematic possibilities to exploit, contradictions to overcome, even revolutionary ruptures to effect” (Ibid., 235). The space for artistic action is constituted by the previous positions-taking: “identifiable as objective potentialities, things ‘to be done’, ‘movements’ to launch, reviews to create, adversaries to combat, established position-takings to be ‘overtaken’ and so forth” (Ibid.). According to Bourdieu, we have to take into account all the features of genres, schools, forms, manners, subjects and so on, if we are to see the relation between positions and dispositions, especially in the turning points of people’s careers. We have to consider “their internal logic”, their “social value” and the “categories of perception and appreciation” associated with the art works (Ibid., 237). The agents acting in the field cannot escape the logic of the field (Ibid., 236):

“This space of possibles impresses itself on all those who have interiorized the logic and necessity of the field as a sort of historical transcendental, a system of (social) categories of perception and appreciation, of social conditions of possibilities and legitimacy which, like the concepts of genres, schools, manners and forms, define and delimit the universe of the thinkable and the unthinkable, that is to say, both the finite universe of potentialities capable of being thought and realized at a given moment — freedom — and the system of constraints inside which is determined what is to be done and to be thought — necessity.”

128 BOURDIEU
Behind the now reigning structure of the art fields there is a maturing process that made this structure possible. It is, of course, not given that all cultural or artistic fields have reached this maturity. The other important feature is that the art for art’s sake is not given but constructed. In Bourdieu’s description of the field of French literature, the artistic freedom is created through a double rupture — rejecting the external demand for a production of useful art, and the ethical and political doxa of societal institutions (Ibid., 77). Poet and literary critic Charles Baudelaire is taken as a typical example of this new attitude in the French society during the revolution (Ibid, 78). This art for art’s sake includes: “a refusal to bow to the expectations of the public” (Ibid., 79), having to manage without the support of the spending power of the bourgeoisie (Ibid., 82) and “sacrifices of all kinds and, definitely, in time” (Ibid., 85). The artistically ambitious artist has to create a distance to both money spenders and bourgeois values and interests and make a sacrifice of him/herself for an indefinite time. S/he will just have to live on the hope of success and try to manage in some way: but s/he mustn’t deny the art for art’s attitude. It is this attitude that now constitutes the historical basis for artistic freedom and still prescribes that modern avant-garde artists have to keep a distance to all conventional ways of living and earning money. The artist must not subject his or her production to the forces of business. It’s only when his or her products find a receptive audience of connoisseurs that s/he can accept the profits it might include. This attitude is, of course, in conflict with the very idea of design, where there is always a client providing an order and a programme for the designer.

The “schemata of thought” embedded in the potentialities of the field are shared by its members and also to some degree by the larger public (Ibid., 236). These schemata are shared, and due to this, Bourdieu sees them as objective. On the other hand, Bourdieu claims that the profits associated with choosing the right stakes, taking the right steps and making inventions, are hidden — at least for a while — to the art producers (Ibid, 237). Even if the freedom is not total and each art field has a given structure, in every moment the structures are never totally determined. The situation is not locked: there is a freedom to make moves, though the situation cannot be predicted with any degree of certainty. It’s only within the historical reconstruction that it will appear as the only possible development — an “appearance of predestination”, as it’s often termed in biographies (Ibid., 1996, 239).

The introduction of new ideas is a typical action included in the strategies of those competing for a better position — especially in the avant-garde: “The subversive action of the avant-garde, discrediting current conventions, meaning the norms of production and evaluation of the aesthetic orthodoxy, and making the products realized according to these norms seem superseded and outmoded, get objective support from the wearing out of the effect of consecrated works” (Ibid., 253). Attempts to start revolutions are normal, but their potential success depends on how far the erosion of previous thinking and innovations has gone. According to Bourdieu, the old time autodidacts were hardly recognized by the field because their approach had the mark of being excluded (1984, 84). They’re not interesting to their contemporary audiences, because to them they are simply alien. The autodidact always has the problem of alienation, but today the autodidact often has a basic education — maybe left half way through (Ibid.). It might still enable them to attack
those possessing the legitimate cultural values in an acceptable way, with the power of newness. In the current field of architecture in Finland and Sweden, I think it’s very difficult — but of course not impossible — to get your production accepted if you aren’t part of the field. A mechanical engineer with a twist for designing summer cottages in a new style will presumably meet immense obstacles in his or her attempts to enter into the top field of architecture. But in the long run, in the wake of historical restorations, s/he might still be discovered.

In his book *The Rules of Art* (1996) Bourdieu explains how the independence of the artist developed and similarly the various relations between agents in the art field. However, when it comes to the concept of ‘dispositions’ in regard to art, Bourdieu gives few descriptions of how to understand it. Instead one has to look at the descriptions given in his book *Distinction: A Social Critic of the Judgement of Taste* (1984), which is a sociological commentary to Kant’s *Kritik der Urteilskraft*.

Bourdieu focuses on different social classes and their capability or interest to relate to different art works, creating schemas mapping the relation between types of art works and different social classes. The book is an exposition of a large survey on how people appreciate artistic production and - the important conclusion of the book - how taste is used as a demarcation of social position-taking. Bourdieu’s focus is on the audiences - the consumers of artistic production. For this reason, his texts don’t clearly state his views of the producers. Bourdieu’s conclusion regarding Kant is clear: he accepts Kant’s idea of disinterestedness, but the latter’s descriptions fit only those who constitute the elite (1998, 135). The point of a disinterested gaze, in Bourdieu’s thinking, is that interest stands for a real, explicit interest, which is typical in commercial business and which is rejected in the fields of cultural production (Ibid., 77). This is one of the conflicts between pragmatist aesthetics and Bourdieu’s views. Shusterman doesn’t want to accept what he calls: “his [Bourdieu’s] rejection of philosophy’s role as a revisionary theory” (2002, 210) and instead Shusterman wants to accept “philosophy’s respect for lived experience, particularly aesthetic experience” (Ibid.).

Many of the dispositions are related to the social background. Bourdieu sees competences as being determined by the social situation of the family and school (1998, 19 and 1984, 85). In the family we learn both how to do things properly but also what is correct. We realize, through the praxis in our families and at school, what we should and shouldn’t do. The necessary competences are “constituted by usage itself” (Ibid.). We can unconsciously decipher what is lovable from “the countless signs which at every moment say what is to be loved and what is not, what is or is not to be seen, without ever being explicitly oriented by pursuit of the associated symbolic profits” (Ibid.).

The family and the school simultaneously function as ‘markets’, offering acceptance and rewards if we act according to the codes, and with condemnation or embarrassment if the action is out of place (Bourdieu 1984, 85): “The acquisition of cultural competence is inseparable from insensible acquisition of a ‘sense’ for sound cultural investment” (Ibid., 85). Stylistic approaches that might have been acceptable in the beginning of the education of an architect might turn out to be embarrassing in a later stage of the architect’s education. This sense for investment
is internalized without explicit processes and is connected to a sense of the relation between the “site of acquisition” and the “centre of cultural values” (Ibid.). Also, it’s not explicit or associated with the rationality we normally associate with financial investments. Bourdieu expressed this rationality as the art lover recognizing it only as his love for art (Ibid., 86). The family and the school “functions both as one of the sites where competence is produced and as one of the sites where it is given its price”, but the relation is not as straightforward as it might seem and the school is influenced by a devaluation, due to its image as “being only the school” (Ibid., 88).

The mastery of appropriation has to be achieved through extended contact with the works of art (Ibid., 66). It’s a slow process of “familiarization”. It demands a master-disciple relationship, “repeated contact with cultural works and cultured people” (Ibid.). Education is a shortcut to the mastery of appropriation - providing “a symbolic mastery of the practical principles of taste” - but it’s easily dismissed as not thorough enough because it substitutes the aesthetic experience and spontaneity with “norms and formulae” (Ibid., 67f). The genuine way of learning is based on the already mentioned cultivation on an unconscious level. Another point is that those possessing a lot of cultural capital can refuse to apply the codes and rely purely on their internalized codes. Thus they can suppress people, competing by means of explicit codes (e.g. the institutionalized theory of art) (Ibid., 61). This is typical for avant-garde producers. The avant-garde producers and the connoisseurs have a disposition of an ethos, which provides them with the correct way of perceiving things - “a pure gaze”. This disposition is related to their acceptance of art as an overly important issue. Art has a very important position in their life. Art is a way of living for the avant-garde and the real connoisseurs (Ibid., 57). Due to this connection between class and art, Bourdieu concludes that the top bourgeoisie and the top artists are able to make their way of living an art in itself (Ibid.). Bourdieu also makes a distinction between the theory of art and the experience of a connoisseur. The latter cannot express the principles of his or her judgement, whereas the institutionalized theory of art is dependent on rationalisation and classifications in order to transmit the knowledge (Ibid., 67). Bourdieu found in his surveys that those with an education tend to have internalized a more classical and more useful repertoire - in investment terms - than those lacking the appropriate education (Ibid., 65).

In the sociological theory of Bourdieu, there are significant differences and gaps of capital between different types of art consumers. These types conceptualize the different attitudes towards the experience of art. Some of the types he distinguished and their defining characteristics include are (Bourdieu 1984, 67):

- The scholar, with a strong discursive and rationalized relation to art.
- The connoisseur, emphasizing experience and contemplation.
- The ‘naïve’, looking purely for pleasure.
- The petit bourgeois, who lacks the ability for contemplation and academic reasoning.
- The ‘parvenu’, the pervert, who puts knowledge above experience.
The avant-garde

One important point in Bourdieu’s theories is his explanation of the avant-garde. There is, he argues, a frontier between the established dominant figures and the young on the outside (Bourdieu 1996, 154) - or appropriating this to the field of design theory - between the establishment and the upcoming generation, the newcomers (Stevens 1998, 83). At this frontier the artists fight for a position in the establishment. Those at the very frontier are called the avant-garde - pioneer artists who are at the cutting edge, crossing borders and traditions with new ideas and solutions, but also fully aware of the existing traditions and current thinking and expectations at the top of the field (Bourdieu 1996, 164). According to Bourdieu, the avant-garde is always separated by one "artistic generation" - "a gap between two modes of artistic production", the young from the established (Ibid, 154ff). The changes in the field are never totally internal, but also related to external changes and supportive powers outside sanctioning some agent or group in the art field (Ibid, 253). The conflict between the dominant establishment and the newcomers fighting for a position among the consecrators is the driving force in a cultural field (Stevens 1998, 98). The normal way of defending a position is conservatism and thus the newcomers may try to address arbitrariness in the aesthetic codes of the dominating fraction (Ibid.).

One major point in Bourdieu’s argumentation is that rationality is not based purely on a struggle for economic wealth or power, but on a combination of economic and symbolic power, which provides the means for achieving a position in society. Bourdieu saw it as a polarization between economic and symbolic poles (Ibid.). At one end of a field there is a dominating interest in cultural values, whereas at the other there is an interest in money. These interests together can be seen as a driving force. Money is not the driving force of avant-garde artists: they produce or design art for art’s sake.

The avant-garde usually have a very small audience, and the avant-garde producers often remain unaware of their relation to their consumers (critics and readers) (Bourdieu 1984, 234). Each production has or needs its audience, with the appropriate attitude towards the art works (Bourdieu 1996, 302f). The art works aren’t decipherable by the larger audience because they expect the matching competence - the competence of a true reader (Ibid, 302ff). Other consumers can take an interest in the art work but the actual and important audience consists of those with a disposition for reading the work (Ibid.).

On a general level, we can construct a simple map of the field of architecture. Albertsen has analyzed the field of architecture in a few papers (Albertsen 2002, 1998), though without any accompanying empirical studies. He has found several distinctive features congruent with Bourdieu’s field theory, but sees the architectural field as constituted by three subfields; the artistic, the professional and the techno-economic. The professional is seen as a position between the other two (Albertsen 1998). I think it’s possible to see the devotion towards professional interests as a separate specific feature in the constitution of the field of architecture, but this cannot replace to total domination of symbolic values in the field. Being successful
only in professional performance can never replace the need for success in the
proper artistic way - not among architects:

“The only legitimate accumulation, for the author as for the critic, for the art dealer
as for the publisher or theatre director, consists in making a name for oneself, a
name that is known and recognized, the capital of consecration - implying a power
to consecrate objects (this is the effect of a signature or trademark) or people (by
publication, exhibition, etc.), and hence of giving them value, and of making profits
from this operation.” (Bourdieu 1996, 148)

I will return to Albertsen’s analysis in my interpretations of the case studies, and
apply them to the context of the design process of the competition design as a means
of mapping the social structure of the architects’ establishment in Finland (Case
study 2). My investigation will concentrate on one particular part of the field of
architecture, where the “artist architect” has other architects as his/her true readers
- in the design competitions.

Figure 3.
A hypothetical construction of the field of architecture. The position of the avant-garde
shapes the thinking of the architectural field. It’s located at the pole of the symbolic power
within the architectural field. The poles C and S stand for the position of commercial power
(C) and symbolic power (S). The size of the fields in this figure is not to be seen as conjugate
to the size of the actual field. The architectural establishment and the avant-garde are rather
small within the field of architecture.

The point made here is that the avant-garde is not defined by mere experimentalism,
but by the “avant-gardist’s” age and position in the field. As I see it, the young avant-
garde must belong to the group of the successful. There are certainly others attempting
to reach this position but they fail because they have not been recognized. Another
point is that the changes imposed by the avant-garde - “leaving a mark” (Bourdieu
1996, 158) - constitute a new “mode of production” (Ibid); i.e. a new “style”. Here
one must notice the differences created over time. The young avant-garde changes
the thinking and production of the field, which the established and old avant-garde
has held in their hands. The old avant-garde can move forwards entering into the

BOURDIEU 133
status of classic, but they can also be degraded. History will produce a different evaluation of the successful avant-garde artists. Some might be highlighted, while others will be forgotten. Based on a survey of architects mentioned in the Macmillan Encyclopaedia of Architects, Stevens (1998, 139) finds that there hasn’t been time enough yet to reach consensus on who are to be counted as consecrating architects after the Second World War. This means that it takes more than 40 years - more than a working career - for the architectural elite to really decide who is going to be counted as a classic architect. There is also a possibility that history will upgrade forgotten or unsuccessful artists, making in a sense a post mortem. There is no eternal truth, but the position is socially constructed and can change over time, and thus it’s important to consider the relations in the field (Ibid., 258f).

**Economic capital**

The basic distinction is that art stands in opposition to commercial power. Still, in a field of power with two poles there is an influence from both poles on anybody within the field. Also, it’s theoretically possible to construct a situation where the agent is on the further side of the commercial pole and thus potentially out of reach of the powers of attraction of the other pole. This, in fact, implies that the agent would be outside the culture, which might be possible but seems extreme and hardly of any interest, because hardly anybody can hold such a position. According to Bourdieu, commercial power is: “foremost a power to keep economic necessities at arm’s length”. The sign asserting the possession of this power is displayed in the “destruction of riches”, e.g. by spending money on luxury (1984, 55). The cultural power is determined by the opposition to this. The distance from necessity is a sign of distance from the commercial influences (Ibid.).

At the commercial pole we find the “economic logic” of the artistic industries, which act and work as commercial institutions, aiming at short-term gains and good performance. They “are content to adjust themselves to the pre-existing demand of a clientele” (Bourdieu 1996, 142). The only way they can do this act, combining artistic production with commercial results is by denying their artistic interests and by “abstaining from fully revealing their self-interested goals” (Ibid.). One measure for the “commercialism” is how far the industries try to meet pre-existing demands and how they use pre-established forms (Ibid.). Bourdieu thought that the length of the production cycle would be a good measure of how far the industries are devoted to commercial ends. The shorter the cycle, the more devoted they are to commercial ends, and the less interest they have in cultural investments (Ibid., 142). The point, at the commercial pole, is to avoid the risks of the artistic art trades, especially those which don’t have a market at the present time.

The publishing houses, galleries, academies, salons, and critics are players in the force-field, but are important only to certain groups. Not all publishing houses
address the same audience (Ibid., 144ff). They serve particular audiences. Some of them are large, some of them are very small. The cultural producers always relate their freedom in contrast to this commercial pole. The freedom is defined by the freedom from the interests embedded in the conditions of production at the commercial pole.
Bourdieu was a sociologist but he saw his rules of art as a new way of studying art - not as a theory of sociology (Bourdieu 1996, 178ff). In his view, it’s indeed the only acceptable objective way of understanding art. His point of view shifts the focus of design research from the art object and its qualities to the context of the designer and the relation to the consumers or clients. Bourdieu pressed very hard on the need to study the cultural fields strictly from the perspective of an outsider (Ibid, 267ff). He thought the researcher has to distance him/herself from the dogmas of the field: the latter must not be attached to the illusions of the artistic games we play. The researcher must create a rupture, freeing him/herself from the unspoken bonds of the field. His/her point of view is that of the socio-historical observer - one should try to place oneself in the historical position of the artist, studying and analyzing the influences of practical and social circumstances of those days, without falling into the rhetoric and illusion of the artists (Bourdieu 1998, 134f).

Bourdieu’s writings are not only sociological theories, but also a perspective and extensive philosophical theory on how to regard human practices. Similar to the theories of Dewey, it’s an attack on existing theories concerning the study of cultural practices. Bourdieu replaces the idea of rule-based action with strategies, and dismisses the common, preconceived notion of human rationality as something like mathematical logic or straightforward economic reasoning. Human social actions are more complex and the study of them needs to respect these issues. This can be suitably applied to design research - with its focus on processes - in that Bourdieu put the emphasis on dispositions and actions, and the analysis of their relations:

“(T)he science of the work of art thus takes as its very own object the relationship between two structures, the structure of objective relations between positions in the field of production (and among the producers who occupy them), and the structure of objective relations among the position-takings in the space of works” (Bourdieu 1996, 233).

In response to this, I think we can make a distinction between his attitude towards research - with its strong emphasis on objectivity and a distanced attitude - and his explanations concerning the structure of the cultural fields. We can profit from his mapping of cultural fields and their structures and from the concepts he developed. His demand for a distance to the object and especially to the culture focused upon is more problematic, however. I will return to this issue and compare it to the attitudes inherent in the pragmatist philosophy of Dewey, and to Shusterman’s critique of Bourdieu’s writings. Complementary to the conflicting views on research, there is also a distinctive conflict in the views on aesthetic quality. To Bourdieu, the true aesthetic evaluative judgments are produced on the basis of education and socialization - to a large part a social construction. Dewey accepted social influences and education as a strong instrument, but saw it also as a complex construct out of universal biological, psychological, human dispositions (1980, 20ff).
BOURDIEU’S PERSPECTIVE AND DEWEY

The social field is structured and differentiated into various changing fields. This structure is also differentiated vertically into social classes. Such a notion, I believe, is compatible with Dewey’s world view. Bourdieu claimed that the aesthetics of the lower classes is trivial in the eyes of the elite, both to the cultural elite and to the bourgeois elite. Again, this is compatible with pragmatist reasoning. It’s reasonable to assume that celebrated artists or successful leaders in society will mostly find the production of hobby painters trivial. The problem I find in Bourdieu’s reasoning is that he doesn’t acknowledge the different possibilities of aesthetic experiences. It’s still acceptable to the pragmatist logic that there is a differentiation of tastes according to social class. It is controversial to put - as Bourdieu does - the elites and avant-garde in favoured and dominating positions. It’s important here to use the plural. It was important to both Dewey and Bourdieu to realize that the social and cultural fields aren’t simple, homogeneous masses, but various communities with particular interests, constituting common rules. Bourdieu’s claim that taste is an important vehicle for creating distance to other classes, individual or groups, seen as inferior, mainly by rejecting the taste of others as vulgar or lacking refinement (1984, 175), is also a reasonable description according to the pragmatist position - though somewhat disgraceful to a truly cultivated human position. In the pragmatist reasoning of Dewey, the aesthetic experiences are determined by biological and emotional, as well as social/cultural factors. This is true regardless of the social status of the perceivers. To Bourdieu this means that only the elite have potential to have the most fulfilling experiences, due to the accepted superiority of the elite and their taste.

To the pragmatist the perfection or refinement of the aesthetic experiences is potentially as Bourdieu claimed, but these ultimate nuances of aesthetic experience are not the real substance in question. Furthermore, Dewey was very critical of “museum art”, where “the works of art are set in a niche” (1980, 11). The point is that these compartmentalized works of art are very far from the real nature of aesthetic experience. It’s difficult to get in touch with the qualities of the object if it’s already defined as “fine art”, expecting a distanced perception and enjoyment combined with a presupposed understanding. The experiences are varied and the structures of our society have deprived many people and groups access to various aesthetic experiences. It’s the “mechanism” as such which enables us to have aesthetic experiences: this is the primary issue in pragmatist aesthetics, and the rehabilitation of this mechanism would provide many more men and communities with enhanced aesthetic experiences. It might be true that the upper-class audience’s experience of listening to avant-garde opera, knowing that it’s part of its true audience, is more fulfilling than listening to singing football fans as a member of the football team communities, but the difference is ignorable in the greater project of allowing or supporting people in their attempts to have aesthetic experiences. My conclusion need not rest only on the assumption that the football fans will agree with me, and be able to express their joy and fulfilling satisfaction. I think we must see this relative to what each of us aims for from experience. I accept Bourdieu’s perspective as reasonable when locating social structures and the distribution of
power; and everyone doing research related to human practices and organisations should be aware of this perspective. If we make a closer examination of social groups, professions and such relations, we mustn’t forget the power of aesthetic experiences and cultural practices as a power and potential embedded within the actions of all human beings. I think ignoring this comes close to tacitly accepting the “illusion” of the elite, saying that the aesthetic of the lower classes cannot be anything but trivial. This is a point of view I hope I can express by means of the two case studies.

In the currently dominating (analytic) view of aesthetics it’s commonly understood that a cultured taste is a prerequisite for correct judgement. There is no mention of people with less cultured tastes, but within a humane perspective I wonder whether it’s at all correct to assume that it’s enough to restrict the discussion to this minor group of cultivated elites. One could simply claim that all the others are not interesting for philosophers of art, or that they have to be put into a totally different category. I would prefer that we realize that the cultures constitute a mosaic of more or less cultured tastes, spread out on different interests. This type of cultivation is an important aspect that cannot be left without consideration. A cultivated lover of classical music might be a parvenu or even ignorant concerning architecture. Furthermore, before s/he became a connoisseur of music s/he would have been only a novice – a “student of classical music”. However, in those early days s/he used to have at least as marvellous aesthetic experiences as s/he has now. Reducing aesthetics to fine art includes the danger of throwing out the baby with the bathwater.

I think it’s necessary here to address Shusterman’s (2002, 208ff; 1999) interpretations of pragmatist aesthetics. He has studied Bourdieu’s theories and, furthermore, used them to extend and develop some unclear notions in Dewey’s aesthetic reasoning. The most striking issue, with an influence on design research, is that of Kantian disinterestedness. To Bourdieu it’s a natural ingredient in the habitus of the elite. Disinterestedness is the result of the rejection of functional and commercial restrictions, as a result of historic-evolutionary factors. For both Dewey and Bourdieu, criticism of existing corruption and mismatches between ideal and real practices is important. For Bourdieu the only realistic way to achieve this is by creating a distance to reality and its illusions. For the pragmatist, aesthetic experience is a useful tool for distinguishing varieties of meaning (Shusterman 2000, 221). Distanced observation is only one of the ways of observation. We can assume, of course, that there is only one way of observing something, and that would be the social-historical way. But if we accept that there are various meanings to be ascertained, we will need the “mechanism” of aesthetic experience and a closeness to both the object and the context. This will, of course, complicate and blur the perspectives, but it might offer a richer and thus better picture of the situation.

If we keep in mind one of the basic ideas of Dewey, namely broadening the concept of aesthetic experience and the communities where it can be experienced, one notices that this does not occur in quite the same way in Bourdieu’s thinking. The latter sees the aesthetic codes as defined by consumers. It’s a mutual game, each side enforcing tacit opinions on the thinking of the other. The producer is aware
of his/her audience and influences it through his/her production, but s/he is also influenced by the actions and opinions of the audience. My criticism of Shusterman is that he engages mainly with the aesthetic as it appears to the art critic, and this is a very reductive perspective. A full scholarly investigation of the aesthetic qualities in a genre of music should include the perspective of the composer’s creation, the performances and the perception in the audience. The main interest must be on the process of aesthetic experiences and not only on the qualities of the object which primarily promotes a process of lifting the genre to a higher appreciation among connoisseurs. Shusterman devotes his attention to the qualities of the object, while Bourdieu devotes his attention to the qualities of the social relations and power structures. But there is one important perspective missing, one left over for design research to pick up and study - the process of creating or having aesthetic experiences. Despite being a devoted pragmatist philosopher, Shusterman ignores the basic pluralistic attitude in Dewey’s aesthetics. Dewey’s aesthetics is a moral agenda to reinforce the acceptance of aesthetic experience as an important tool for amelioration in ordinary practices. This is the starting point for the present discussion. From this point we can proceed to specific areas, such as somaesthetics, rap music or design processes and architecture. Shusterman (2000, 55f) touches on this broad perspective but rejects it as too infinite and confusing.
DESIGN CULTURES

Before I present my interpretation of how the field of architecture matured into a mature cultural field, I want to pick out two notions concerning design learning and design cultures in Stevens’ (1998) study of Bourdieu and the field of architecture. The point that I want to make is that culture is an important issue in the education of designers. (Architectural) design education is not so much a question of learning facts and certainly not only a question of acquiring problem-solving repertoires, but about becoming cultivated within the traditions of a cultural elite. I use the parenthesis because I don’t know where to draw the demarcation line, which design disciplines to include within this tradition. I suppose that all design education includes some degree of cultural cultivation, but I assume that this tendency is stronger in the mature design fields and in the artistic fields. Still, this tendency is closely related to the transfer of top level ideologies and design thinking.

One important point in Stevens’ book The Favored Circle (1998) is the clarification of how architecture must be seen as a culture and not as a profession, because to talk about architecture as a profession would entail ignoring some important features. For instance, architects in different cultures do different things: in some countries they participate also in the construction phase, whereas in other countries they don’t. Also, architects handle different types of objects depending on where they practice. Stevens’ major criticism of this interpretation is that seeing architecture as a profession tends to leave the relations to society aside, and especially the mechanisms reproducing the culture (Ibid., 30f). It’s well-known that design is better learnt in hands-on studio teaching and in a master-pupil relation. I’ve already mentioned how the professions have handed over the education of new ‘candidates of the architect’s profession’ to the Schools of architecture. Based on Bourdieu’s thinking, Stevens argues that architecture is taught in a charismatic mode of inculcation (the other possibility would be a scholastic mode), because this is “the only possible means of transferring embodied cultural capital” (Ibid., 197). The scholastic mode produces knowing and the charismatic mode of inculcation produces being, which also produces a strong identification with the occupation (Ibid.). Lectures play a small part in design education and architecture. The design studio is, according to Stevens, “the site par excellence for the operation of a charismatic mode of inculcation” (Ibid., 198). Normal university students are rather anonymous to their teachers, but in design studio teaching the students are learning through an interaction with the masters. Stevens emphasizes that this embodied knowledge cannot be assessed by usual university means: “if taste and cultivation were capable of objectification they would not have the value they do. Difficulty in acquisition and assessment in person of the person are essential and defining characteristics” (Ibid, 199). Talking in the right way is, according to Stevens, also an important issue in the acquisition of the cultivated manners of an elite architect: “Students from cultured families have already acquired the basic dispositions required to further their symbolic mastery of architectural language. They already know how to talk and manipulate culture, and most important, they already have a visceral feel for the nature of the game they are playing” (1998, 201). He also was able to show a correspondence between the
number of architects achieving success and architects with master-pupil relations in a survey of the architect’s careers in the *Macmillan Encyclopaedia of Architects* (Ibid., 156), for instance, only two in ten of the major architects listed in the book had no relations at all with anyone else in the book.

What Stevens finds is that there has been a shift within the field of architecture in recent decades. The number of architects has increased, but this has led to diversification within the field of architectural design. There is now a structure of subordination and domination by the elite. All of them adhere to the same symbolic values but, in Stevens’ pessimistic conclusion, the expansion has created “a huge class of people who are ideologically accustomed to take as their role models the members of the symbolically elite sector; but who can never enter their ranks” (Stevens 1998, 213). As I will show later in the case study, the architects tend to share an ideology, but I wouldn’t interpret it too pessimistically. Most architects manage their professional life as a rational commercial concern. And one could, of course, pose the question to Stevens of what he would like to replace the ideology with. However, I still find his conclusion relevant regarding the diversification of the field, where the computerization of drafting has forced a larger number of architects into the practice of drafting, which used to be the task of draughtsmen and not so much of architects. Here we see the same tendency as in engineering design, where the tool (the computer), the demand for a competent user and the need to reduce labour costs have been the reasons for the restructuring of the engineers work field, enlarging the area of the profession’s occupation but also degrading and differentiating the status of the profession.

Stevens (Ibid., 206) makes a distinction between the discipline and the wider culture of architecture. The latter includes the consumers, producers and critics, whereas the former is clearly connected to the education of architects and the reproduction of the ideas. This means that the critics are members of the discipline, too. He sees the discipline as a second-order activity, dependent on the producers of architecture: “The central function of the discipline of architecture is to provide the intellectual instruments by which “architecture” is valorised. Discourse about these instruments constitutes the primary symbolic capital of the discipline” (Ibid.). The hardware of architecture is not the main issue in the discipline of architecture but the theory or codes of architecture (Ibid.). Stevens’ interpretation seems plausible, but his view of architectural theory is that it is only rhetoric aiming at persuading and without any real content (Ibid., 207). As I see it, he observes the status architectural theory enjoys and compares it to that of the scientific disciplines and finds that research in other areas of architectural practice (for example, moisture physics or computerization) have little chance of producing a prestigious position in the educational system of the discipline. The symbolic market of the discipline of architecture functions in a different way than in other university disciplines, where successful researchers are selected to reproduce the knowledge of the discipline. Stevens argues that the schools of architecture produce members of the occupation (I would prefer the word profession), and unlike science departments, who produce science, they seldom produce architecture, “but instead talk about architecture” (Ibid., 207). Stevens’ point is that science departments conduct research and thus produce scientific results. In a sense I myself don’t think the architectural schools are too far away from this. Their
talk, of course, produces an important amount of all the discourse about architecture that is available to architects. My own impression is that architects don’t read very much and they seldom reason about their architecture with colleagues (because they compete on the same market), which means that the educational input constitutes a large part of the production of discourse. Stevens’ conclusion that the schools of architecture don’t produce the top level knowledge (contrary to many scientific fields) seems plausible. The role of the schools of architecture are thus also more or less the conservation and reproduction of the existing dogmas, and they will have problems in meeting the demand for avant-garde design ideas and theories, which are produced in the practice. His conclusion is that the “Academics exercise less power in the field compared to those in other disciplines”. The conclusion I draw from this is that a powerful position in the field of architecture presupposes a combined position as both teacher and a successful practise, preferably with connections to the institutions of the establishment — a position combining development with “indoctrination” and architectural discourse.
THE MATURATION OF THE FIELD OF ARCHITECTURE

I came across Tom Wolfe’s book *From Bauhaus to Our House* (1999, originally published 1981) when working on Bourdieu’s field theory. Wolfe is very powerful and expressive in his writing, but produces a rather oversimplified picture and maybe not all too correct picture of a complex development. Still, I see his description of the development is one of how the field of modern architecture in Germany and the USA during the mid-20th century matured into a full-grown art field with a dualist structure (Bourdieu 1996, 113ff), where the freedom to apply the ”pure gaze” on architecture has been established, as an illustration of this kind of development could be traced. A reasonably trustworthy explanation would of course demand much more investigation than I can provide here. The development is, of course, not as simple as this. For example, in Wærn’s description of the development of the competitions there is a similar tendency, even if not that clear. (1996). Wolfe is a well-known novelist and journalist, who has published novels and journal articles on very different issues. In the seventies he also wrote critiques of architecture. In the above book he expresses a strong criticism of the International Style and its main characters, Le Corbusier, Walter Gropius, Ludwig Mies van der Rohe and Philip Johnson, the latter being the active promoter in the USA of the style under the protection of the new architectural department at the Museum of Modern Art in New York (Wolfe 1999, 39ff). Wolfe’s criticism is directed towards the, as he sees it, empty rhetoric and the illusions transformed from the European context of the Bauhaus and other early modernist movements to the American architectural establishment and society after World War II. At the same time, Wolfe’s book is a brilliant illumination of how the modernist movement developed and matured. One might even say that it’s only Bourdieu’s perspective and vocabulary that is missing. It’s possible to articulate how architecture matured into a full-grown art field with this peculiar double perspective; with commercial and symbolic poles. Wolfe didn’t make the ultimate conclusion on how the mechanisms of the cultural field of architecture works; instead he targeted the social functionalism and its simple architecture, which, it seems, didn’t match his own understanding of the greatness of American society (Wolfe 1999, 52f). The surprising thing is that he himself actually argues that it would have been possible to transfer the European modernist architecture, devoted to socialist ideals, the rejection of all bourgeois values and a simplified, industrial architecture, to the avant-garde of the USA and adopted by its leading classes. I would conclude that the *illusio* is very strong, despite its seemingly empty rhetoric. The modernist vocabulary of form, on the other hand, I would claim, is today very weak by means of reason and will eventually disappear — which I presume was what Wolfe was hoping for. I would also draw the conclusion that the structure that made this transfer possible is reasonable and logical. Wolfe produces the logical reasons and Bourdieu the perspective that makes it seem reasonable. It’s all there when we study the development as a fight for power and position. The establishment of the International Style, as the dominant architectural style in the USA, is the story of changing structures in a force-field. In this case, with the significance of maturing into an art field, it’s where architecture is able to free itself from the commercial interests of the clients. Wolfe continuously states something like: they (the clients) yielded to the destiny of architecture “and
took it like a man” (Wolfe 1999, 62), meaning that the clients submitted to this new but odd type of avant-garde taste, leaving the judgement of taste to the priests of the new architectural establishment.

The story began in Germany after the First World War. Gropius had just opened the Bauhaus in Weimar in 1919. It was a different school: “It was a commune, a spiritual movement, a radical approach to art in all its forms, a philosophical centre comparable to the Garden of Epicurus” (Ibid., 8). Gropius was young, handsome and without snobbery (Ibid.). The school was joined by other young artists, teaching the students that they have to start from zero (Ibid., 10). Many of these artists had a connection to some independent group; The Vienna Secession, de Stijl and the Novembergruppe constituted in opposition to the institutions — claiming not to want to get into the sacred art institutions but rather to take over their responsibilities for art (Ibid., 13). Manifestos were their tools; claiming their access to art, right thinking and judgement. Wolfe calls them the ”art compound”. They ”met regularly and agreed on certain aesthetic and moral principles, and broadcast them to the world” (Ibid.). In a simplified statement, Wolfe expresses the main content of their manifestos:

“We have just removed the divinity of art and architecture from the hands of the official art establishment [the Academy, the National Institute, the Künstlergenossenschaft, whatever], and it now resides with us, inside our compound. We no longer depend on the patronage of the nobility, the merchant class, the state, or any other outside parties for our divine eminence. Henceforth, anyone who wishes to bathe in art’s divine glow must come here, inside our compound, and accept the forms we have created. No alterations, no special orders, or loud talk from client permitted. We know best. We have exclusive possession of the true vision of the future of architecture.” (Wolfe 1999, 13)

This expresses much of the ideas of Bourdieu, in reference to what he saw as conditions for an avant-garde and the movement towards a position constituted in opposition to external powers, such as money or a political elite. These architect compounds and its people were freeing themselves from the older art traditions and the establishments. They shared some moral principles: they were actively promoting their ideas through reason and they attracted attention. Young American artists and intellectuals coming to Europe tended to circulate in these compounds (Ibid., 26), but also other European artists were attracted by their ways and actions.

These art producers, notoriously claiming that they were something new, strictly non-bourgeois, and owning the right to consecrate, found a matching client in the new social democrat governments of Europe. These governments were sometimes short lived, but went about executing their intentions and social programmes with intensity. They started housing projects for the workers, and commissioned young architects to design them (Ibid., 24). They needed a new architecture — a new taste — to show that they had better ideals and intentions. Nothing could be better than a new architecture for the new better world to be created (Ibid.). It would have been strange to initiate new political and social programmes and have them executed as neo-classicist palaces or temples — the outcome of history seemed inevitable, as Bourdieu stated, in retrospective. The Weissenhof Werkbund project in Stuttgart
1927 was a beginning (Ibid.). The new avant-garde also managed to establish a business relation to the traditional clients, such as industrialists and developers. It was not easy but they had a few successes. There were a few clients interested in this new architecture, the Sunila factory and community commissioned from Alvar Aalto by the Ahlström company could be seen as one of these. Wolfe mentions apartments in Pessac in 1925 commissioned by a developer Frugès (Ibid., 24). Wolfe claims that the early modernists had no audience (Ibid.). Ordinary commissioners wanted classicist buildings.

Due to the tensions in the thirties in Europe, and especially in Germany, with the National Socialists ostensibly rejecting modernist art, many of the main forces emigrated to the USA (Ibid., 35). It’s at that moment that architecture matures into a field characterised by a double perspective. The immigrant architects became immediately attached to the educational institutions (Ibid., 36, 44ff). Gropius became Head of the School of Architecture at Harvard; Mies became dean at what later became the Illinois Institute of Technology. Their architecture was celebrated by American architects and they were given new commissions (Ibid., 58ff). Wolfe claims that the idea of architectural education changed within three years (Ibid., 39). The new instruction methods inherited from Bauhaus were immediately imposed in the American schools (Ibid.):

“Studying architecture was no longer a matter of acquiring a set of technical skills and a knowledge of aesthetic alternatives. Before he knew it, the student found himself drawn into a movement and entrusted with a set of inviolable aesthetic and moral principles” (Wolfe 1999, 43).

The architecture created had to be non-bourgeois. As Wolfe interprets it, the original American architecture of architects like Frank Lloyd Wright was set aside despite its roots in the American tradition (Ibid., 74). Instead, the European social housing architecture was implemented as an idea (Ibid., 53 and 40). The agitators from European manifesto groups, claiming that only they knew what architecture truly is, became the institutionalized educational establishment overnight. To Wolfe’s regret, the consecrators are not those producing large architectural projects but those who are at the universities and who produce very little real architecture. They became the consecrators. Wolfe vividly describes the attitudes: "In architecture, naturally, the ‘Silver Prince’ (Gropius) became the chief executive, the governor of the colony, as it were” (Ibid., 39). Wolfe is critical towards the lack of rationality: "At the heart of functional, as everyone knew, was not function but the spiritual quality known as non-bourgeois” (Ibid., 59). It’s made clear that the sanctions are very hard. The architecture they disapproved of is dismissed as bourgeois. The worst stigmatisation hit those who had been part of the establishment. They received hefty criticism and were left and ignored. They where treated as if they didn’t exist (Ibid., 67ff). Wolfe mentions Stone, Wright and Eero Saarinen as “too American” to be accepted (Ibid., 72). Saarinen is dismissed due to his organic architecture, such as his TWA terminal in New York (1956) (Ibid., 70). He had a reputation and he created a unique architecture, but the problem was that he went outside the borders of right thinking — or he had no real audience at that time for this architecture.

One of the points Wolfe wants to make is that the architecture and the dominant
tradition were not congruent with the major (explicit and commercial) tendencies in the society at that time. He picks up the example of the skyscrapers and the American Mid-West tradition of Wright as examples of a “good enough” American architectural tradition (Ibid., 30). Wolfe would like to have seen a more glamorous presentation of the reigning super power, but finds that the elite were imposing the simple architecture of European social housing on them (Ibid., 53). Obviously the tradition must be read in the historical development of the elite, not in a straightforward interpretation of the ongoing processes; nor need it be a continuity of existing traditions. They are there and they can be remedied, as we can see, but for a period of time they can be neglected by a new establishment.

Architectural design is by definition tied to a necessity, to meet functional expectations. What we can see here is that, despite its interlocked relation to function and the commercial interests of the clients, the field develops a structure, where these functional interests can be given minor attention and the responsibility for the right taste is given to the elite of the field. Wolfe makes it very clear that the clients with high rank commissions, like university campuses, museums, convention centres etc., hand over the responsibility to the architects. The commissions were now managed by selection committees (Wolfe 1999, 62), instead of businessmen or aristocrats. In these committees there is always ”one prestigious architect, who, being prestigious, was of course a product of the compounds” (Ibid.). The client doesn’t select the architecture, or if he does, it’s unlikely that it will be successful in addressing the reigning architectural codes. The field is divided by commercial and symbolic powers, and the architects have created sovereignty over the symbolic powers. The impact I trace has to do with artistic freedom, combined with a strong internal coding and manipulation. This is also one of the conclusions drawn in the study of architectural design competitions in Norway, but with a willingness to match the prevailing tendencies in society at a rhetorical level (Tostrup 1996, 175f). The freedom is only constructed towards the external commercial powers. This mechanism allows the architects to exercise architecture (at the elite level) with sovereignty, where the pure artistic gaze is an essential component. Architecture must be perceived from the perspective of the leading dogmas and codes, which sets aside commercial interests. In my interpretation, function, construction, production or economy cannot be totally ignored, but the primary goal in architecture, at the top level, is to address the codes of the field, which in Wolfe’s story is the modernist architecture, with flat roofs, and white and undecorated walls (Wolfe 1999, 47). In the story of the “Yale box”1 it also becomes obvious how the codes degenerate and become outmoded. The artistic codes aren’t fixed, but are continuously changing due to changes in the field. This is also the theme of the last chapters of Wolfe’s book, where he studies the changes initiated by Robert Venturi and the then emerging postmodern movement (Ibid., 80ff). What he finds is that there is a strong continuity among these new opponents to the old dogmas (Ibid., 83f). The postmodernists are still attached to the ideas of the early modernist movement and they are very careful in their attacks not to violate the codes too much (Ibid., 87 and 108). From the early modernist movements, through its introduction into the American universities and in the later postmodern movements, theory has played an important role in developing architecture as a tool for defending ideas and dogmas. These theories seem to be of a specific type: they are ethical codes and reasoning, related to form. They are, as
reasoning is, rather exact, but discrepancies between designed form and reason are allowed. They are by no means recipes for success. The codes are only partly given in the reasoning: the rest are embodied in the individual experiences of the leading architects and in the iconography of “turning point objects of architecture”. There are two ways to influence these embodied codes. One is by the introduction of revolutionary new forms and shapes. The other is by reasoning about architecture. I think the reasoning has a much bigger potential impact than form development. The change through new forms is an ongoing process. One peculiar thing is that the reasoning is difficult to prove unsatisfactory by means of simple logical reasoning. As Wolfe shows us, the improprieness of some arguments is accepted or briefly adjusted (Ibid., 17). The whole ”truth” about architectural codes is not to be found in the reasoning. Reasoning is but one tool.

What we have here is a description of architects gaining an artistic freedom. In the story of Wolfe it is clear that the rules of the field and its development aren’t explicit. Wolfe cannot understand it, despite his by now historical perspective, or he doesn’t want to understand it. This new avant-garde was given both commissions and the right to judge and was part of a larger societal mechanism. There is a dependence on external forces, but they are indirect and hidden — and they aren’t to interfere with the artistic practices.
CONCLUSIONS

One of the merits of Bourdieu’s book *Distinction. A Social Critique of the Judgement of Taste* (1996) is the elaborated and well-founded description of the gap between the broader audiences and the connoisseurs — representing the finer arts — (and the true readers). Regarding the current codes of architects in Finland, it’s assumed that their production is suitable and appropriate to all kinds of audiences; true readers, clients, users and the general public. In light of Bourdieu’s explorations of the distribution of taste preferences, this code or attitude seems naïve or pretentious. If the emphasis is on typical professional values — i.e. a good performance, the service of the client and user needs, combined with a respect for the values of the local community — the codes seem reasonable. But if we combine this with an avant-garde attitude, we create a logical somersault. There is an obvious contradiction between taking an avant-garde attitude and pretending to meet the expectations of a larger audience. It is, of course, possible to hold two contradicting ethical opinions. In a rational discourse it seems necessary to state that different architects have different audiences. Most of the architects are forced, by their respective audiences, to meet and respond to more trivial aesthetical values. The avant-garde architecture is suitable for only a very specific audience. The rest is divided between various audiences. It’s understandable that the broad public hardly has any clue what so-called good architecture is about. This will not be possible until we have a very equal society, which probably is a utopian perspective.

Despite the remote market demands in the cultural production, the production of the artists has a relation to its consumers. This demand is the source and potential for artists, explaining how to act and what to produce. The avant-garde production aims at rewards in a long-term future (Bourdieu 1996, 216). In architecture we always work with clients, which represent short-term interests. They expect an immediate functionality and try to avoid risks. Out of this, I draw a few, more or less simple, conclusions:

- Architecture will always, to a large degree, be commercial and by definition attached to commercial ends, because the client is always present and part of the production.

- Architecture can aim at a total freedom — with a pure art-for-art’s-sake attitude — only in a few very specific forms of design: in drawings of buildings that are not going to be built and in projects where they can find a client willing to sacrifice the functionality or willing to take risks. This latter is possible in small projects such as the house the architect may design for him/herself and his family and in projects like fashionable museums, where the architecture in itself is the exposition.

- Architecture has matured to such a level that artistic freedom constitutes a basic ingredient in the internal codes of conduct (of avant-garde architects). The status of these codes is so strong that the culturally selective client cannot dismiss it if s/he wants high-class architecture.
By definition, design projects with a considerable client influence are located at the commercial pole. The avant-garde production has to put form above functionality and client interests. Taken to an extreme, the dismissal of client interests would mean that it is an art work and no longer architecture. Another conclusion would be that architecture has a very limited potential for avant-garde production. It’s important and rather easy for architects to display an avant-garde attitude, expressing ignorance towards the client interests. It indicates their willingness to put form above function and actually supports their professional image. A populist painter may fight with colleagues who all reject commercial or functional restrictions, whereas most architects are devoted to the production of functional architecture and meeting commercial interests. The borderline is, of course, diffuse, indicating that there is a space for a truly avant-garde architecture. It’s not enough to claim to take little notice of functional and client interests in order to be part of the avant-garde, because this is a very common attitude among architects. Claiming the opposite, on the other hand, according to Bourdieu, would imply that the architect rejects his own culture, which is impossible, because then s/he is no longer an architect. S/he would no longer be part of the social community, of those who see themselves as architects (1998, 92ff). Placing oneself outside this collective, but still sharing the attitudes in general, can only be a rhetorical gesture — a kind of criticism.

Stevens (1998) has a rather pessimistic view of architectural theory and the lack of a science-like system for the reproduction of knowledge (and social positions) within the schools of architecture. But in my opinion, the situation is not so dramatic. This is the way it works and the question is more one of whether there are any problems and how we could address them. What Stevens indicates is that architectural theory is important and that cultivated clients are the key to success. This, I believe, shows that there might be a problem in how architects care about their culture. As I see it, architects and the architects’ institutions tend to rely on the professional practice and ignore the second-order activity of articulating architecture as a discourse available to the clients and a broader audience. I think it’s important to see this distinction. Design as a practice is important and a constitutive element in the professional education and a core element in good design performance, but the second-order activity (theory of architecture) produces an important complement to it, which I think must be seen as a kind of knowledge despite its speculative and value loaded character. Theory is an important support in design thinking and obviously to both the designer and his or her audience. The educational institutions now produce both elite architects and the mass architects who mainly produce drawings and documents. I think this is still better than dividing them up into different institutions. The problem lies in the culture of architecture highlighting the heroes, leaving little space for the rest of the architects. One answer here is, of course, to see that every task can include moments of aesthetic experience, and thus repaying design actions. The problem in a sense lies then in routine practices, where there is no place for design actions, and is thus a question of work organisation.

Notes:
1 The ‘Yale box’ is an ironic name given to the universal architectural shape given to any building as a matter of the indoctrination given in architectural education at Yale University, in the USA.
Part 2:
Case Studies
The cases

The following part consists of two case studies and an interview with a project manager. They are all very different, but still all dealing with design and building design. In the first case it’s a young couple who acts as the leading designer, in the second case it’s the managing architect and in the interview it’s about a project manager who partly acts as a designer. The interpretations put forward deal with the collaboration within the design process as well as the conflicts between the different ‘subcultures’ that meet in the interdisciplinary cooperation in design processes. As I see it, these cultural influences are part of the design competences applied within the processes. The idea here is to show the contrasts and different dimensions of design. The obvious contrast between the two case studies lies in the aesthetical tastes and the differences between the subcultures. The point is that the design competence is not universal within a society, but is embedded within different subcultures. Moreover, design competency is not even universal within the field of architecture. My discussion continues the idea of force fields and subcultures that started in Chapter 5 in discussing the ideas of Bourdieu. The architect that is designing for the young family in the first case study faces a design situation that is very different from the case study where the architect prepares a competition entry. Both of them, however, are concerned with mediating between different cultural values and technical problems, creating something new. This new design is expected to meet certain criteria and expectations. It’s partly about who’s values should dominate. In the interview with the project manager it’s the outcome as a whole — within the framework of technical and economical limitations — that constitute the characteristics of a successful and honourable design process, as measured in the eyes of the client. For the design of a competition entry it’s the success in the eyes of the dominating class of architects that constitutes the model for success. In the case of the client as a designer, it’s the road towards matching his individual preferences and expectations and the outcome of the design process that constitute the measure for success.

The case studies also present the differences between the design processes. In both the cases, and in the project management situation, the designer could be an architect. This means that even an architect has to be prepared for various types of designer roles. S/he might be the leading designer, but also have the role of a consultant mainly providing a service where s/he has to reduce the impact of his/her own education and values, and s/he might be the project manager who has to coordinate the project. In almost all projects there are ingredients of all these types of roles. The problem is that they are not so easy to integrate because they are contradictory.
CASE 1:
The Client as Designer
INTRODUCTION

On the basis of Dewey’s thinking, aesthetic experience can be seen as a central issue within the professional action of design. Combining this idea with Shusterman’s ideas about pragmatist aesthetics and popular art, I developed the idea of making a case study inquiry regarding the design process of a young family planning their own future home, a detached house. I saw them as “novice designers”, acting in a professional context, yet leading the design process by means of their aesthetic experiences. The design process was assisted by the architect-researcher (myself), but the client was seen as the main design agent. In this case it was obvious that the clients act as designers, modelling ideas regarding their future house, testing ideas and evaluating them. They applied their own judgmental skills and architectural preferences. The architect supported them with his professional knowledge, skills and exercised judgement, but the final design decisions were made by the client. The case study presents several aspects of the process: design is accompanied by reasoning, the novice designers uses various models to grasp the evolving design, and they reach a stage of consummation where they are satisfied with the solution, despite the remaining biases. This first case study results in the conclusion that design is not an occupation restricted to professional architects/designers, but a common competence. It also poses a question to the professional architects, who see themselves, with their avant-garde attitude, as superior advocates of good taste and design performance, and reluctant to accept the idea of the client as a co-designer.

From the more theoretical arguments already discussed, I shall now proceed to presenting the case study. The aim in describing the case is to illustrate the way in which the client acts. This is, at the same time, a stage where the researcher, a professional in design, is able to step outside the thinking associated with his professional thinking. Through his education and career, the professional has developed a way of thinking that is common to the profession but unlike that of the respondents. The respondents’ familiarity with their own culture facilitates the process, but the familiarity with one’s own workings can at the same time act as blinkers, so that the researcher does not notice interesting phenomena. In the interpretation I test ideas from the previous chapters: the pragmatist theory of design and aspects like modelling and the potential of finding clarifying concepts appropriate for this process. Still, I also end up concluding that the pragmatist theory of design is not enough and that there is a conflict embedded in how the client and architect relate to the design task. They look upon it from different cultural perspectives.

The first case study deals with the design of an owner-occupied (detached) house. The client is a family consisting of a young-to-middle-aged couple and their ten-year-old son. The family has some knowledge of construction, as well as a stock of ideas for design and problem solving. None of them, however, has any professional competence, and they don’t make use of means of working such as sketches or plans. The interplay between the client and architect forms the core of the case study, combined with the couple’s own contributions and the design work with which the architect contributes. The architect is at the same time also the
researcher. The discussion of the design process is complemented with descriptions of various influences: trying to find a “breathing space”, the influence of society, the architect’s own reflections on his work, the introductory process of sketching as well as production, assembly and building technique.

As regards the manufacture of components and the shaping of the building in the production stage, these are presented only in part. The construction process is described in general terms, applicable to the great majority of builders of owner-occupied houses using prefabricated solutions. The description does not include such details as the connection to the main road, kitchen fittings and furnishings, construction solutions, working methods, financing, time-tabling and interior decorating. These also play a part in shaping the house, but I have judged them less important. Funding appears to have been clear insofar as the couple expect that they can have a house of this type built without placing too much strain on their finances. The timetable was not tight, but rather gave relatively broad freedom to act. In the interior decorating stage, the architect/researcher no longer took part in the project and only had sporadic contact with the family.

As it’s difficult to ascertain the effect the different family members had on the project, I will not always distinguish between them, and instead use the term ‘client’ to represent the whole family. On occasions where it is specifically clear who has voiced an opinion, I shall use designations specific to the individuals: K represents the husband (a carpenter by profession) and L the wife (a nurse by profession).

**Method**

The material for the case study was collected by means of participant observation, with the architect simultaneously acting as the researcher. The process was recorded by taking notices and tape recording during the discussions. During the design work the architect/researcher also made notes about design steps and his own reflections. Advantageous in this method was also the possibility of catching reflections that came to one’s mind a day or two after the discussions and design situations. What has been under particular scrutiny are the moments when fragments — within design solutions and the ideas of both the client and architect — find their place and a larger picture emerges from the different material. The tape recordings were not transcribed, but the narratives from the design situations were written down rather freely on the basis of notes and later checked and filled in with details. The client was asked to read and comment on the notes but had nothing to add. Later the understanding of the design process and ideas was complemented with interviews concerning different issues that seemed important. The case study was also complemented with a number of interviews with other parties involved in the design process. All of this material has not been included due because it was judged not so important. An important part, however, of the research process has been the reflections concerning issues in the material and interweaving these with the theories, as attempts to find concepts that mirror the meaning of certain steps or
methods in the process. In fact, the case study functions as an articulation of issues appearing in the previous chapters. The idea of the case study is not to claim that it represents a universal case. It is only one case and can only represent this particular design situation, but it is nevertheless used as a means to articulate a more general theory — some hypotheses about design. What gives credibility to the reasoning put forward in the present research study is, of course, the way it is presented, and the relevancy of the material from the case studies. Thence follows a further important step from the particular case study and its basic interpretation to a more universal interpretation and abstraction, interwoven with existing theory. This latter step of greater abstraction is more of a case of rhetoric, in the sense of persuasion, and suggesting further theories which may or may not be testable. Still, within the context of tacit knowledge in design processes, these methodological steps seem appropriate and a weak but productive option for the production of design theories. These theories are not final but only preliminary and need to be checked logically by reasoning and compared with findings from other theories and case studies. In a pragmatist sense, we still have to keep in mind that it’s not the production of theories that is important but the development of ideas that can trigger new insights and fruitful changes.

The parties in the design process

The client’s design process can be seen as a comprehensive verbal act influenced by a multitude of other verbal acts. One part of this is the client conducting discussions with many other parties as a way of pushing his design forward — contacts with professionals and others experienced in construction. The family continuously take part in these verbal acts. First and foremost, they are linked to work, friends and relations and hobbies — and both K and L participate in such activities. Problems and other issues attached to them carry the family into new verbal acts. The couple must approach these unfamiliar verbal acts and co-operate on the terms of the verbal acts.

The future neighbours also constitute one party in the discussions. At the beginning no knowledge of them existed, but contact with some neighbours had already taken place at the design stage (At this stage some of the adjoining plots were not yet sold). One neighbour was preparing his land when the design started, and the other was only due to start in the autumn when K an L would already have completed their concept; both, however, would already have their houses ready to move into that autumn.

K belongs to a network of craftsmen in the building trade who work in the prefabrication sector. This network consists mainly of professional builders who do practical work: fitters, component manufacturers and planners. Contact and exchange occurs on meeting each other, for example in the workplace, but if contact is already well-established telephone calls to each other may be made. One example
of this is seen when the neighbouring house is being assembled: K knows the fitters from before, and is advised to cast the base for the garage in the autumn so that he can start building the garage early in the spring to store materials in; he takes this into account and changes the timetable accordingly.

The present chapter gives a background to prefabricated construction and how the design is organised, and describes the manufacture of components, the phases in the work and the stages in design. These are divided into a primary design stage (with no professional support) and a main design stage (with professional support). In order to complement the picture of the process, and to say something about the influence of society and the different thoughts concerning this, interviews with district planners, design consultants, the building inspector and an elected representative of the building committee were held (this part is briefly summarised at the end of the chapter).
PREFABRICATED CONSTRUCTIONS

Wooden prefabricated houses have evolved from a wish to rationalise and industrialise the building of smaller houses. Normally the argument is put forward that it’s better to be able to build in a factory than on site in order to achieve the benefits of large-scale purchasing and production. It’s not whole houses that are prefabricated, but components of the walls and roof, as well as supplementary construction details included as part of the deliveries. Normally companies buy the supplementary construction details from subcontractors; in addition, deliveries of equipment and materials may be included. The prefabrication companies control approximately half of the market for small houses in Finland. There are about five prefabrication factories within a radius of 30 km of the construction site in question, which is probably an unusually high number. Within the same area there are also representatives of another approximately five factories. The companies are of varying size: the largest employs around 100 people and controls 5% of the market nation-wide, while the smallest, where the couple make their order and where K is employed, has a staff of three and supplies ten to fifteen houses per year in the immediate area. The companies have a similar infrastructure, but still attempt to remain individual. The central issue is the manufacture of wall components: this happens on a type of assembly line, but depends heavily on elements of manual labour, and automation and mechanisation to a large extent do not carry obvious competitive benefits. On visiting the companies it becomes apparent that all agree that the houses should be able to be tailored according to the wishes of the customer; all the company owners appreciate that over 90% of their houses have a unique design. It’s also typical of the company to employ their own planners, who create both sketch proposals, documents for building permission and production plans. One can most likely generalise and apply this to the prefabrication process of the majority of owner-occupied houses in Finland. My insights into the subject are, however, gathered from the companies in the Vaasa region. This type of construction is distinguished by:

- Rapid erection of the framework of the house.
- Divided project management.
- An architectonic style created mainly by non-architects.
- Composition of form aided by construction components.
- A broad scope in ‘shaping’; that is, the houses are tailored to the customer.

The owner-occupied house projects are seldom carried out by real construction companies, but are small projects within the construction sector. On the other hand, for the families who are building the house, this is often the biggest (financial) project in their lifetime.

There is a rather strong tradition of house-builders in Finland doing everything themselves. This dates back to the traditions within the more-or-less self-sufficient farming society. Many laymen, with a certain pride, see themselves as
belonging to that tradition. Experience gained by taking part in the construction of neighbours’ farm buildings and holiday homes also exists. In this tradition there is a fundamental knowledge of building techniques, including creating damp-proofing and windshields. However, this knowledge is not rooted in theory in the same way as it is with professionals. In taking responsibility for one’s actions, there are also traces of helping each other and organising working days where friends and relatives take part without payment, but where food and refreshments are usually offered by the host. There is a well-known word for this is Finnish, “talko”, unsatisfactorily translated into English in the Finnish-English General Dictionary (1995) as “voluntary work”.

The main group among those building their own houses consists of young families. They generally build the house while the children are young and once they themselves have secured a steady income. The level of income and capital is then relatively low, which could be a reason obliging the family to carry out many of the activities themselves.

The prefabricated houses are usually assembled during the course of a day, and can be supplied with roof underlay as protection from the rain. The family can then move in within the next few months. There is a growing tendency in the market towards ever higher levels of prefabrication in factories and with shorter ordering and delivery times.

The prefabrication companies provide services for the customer in design, seeking building permission and delivering components, but do not help the customer with project management, laying the foundations or the completion of the house. The process is divided into sections, and the design may partly be carried out by companies or individuals other than the prefabrication company. Sales, design and contact with the customers can be carried out by representatives working on commission. The professional management of design and building work has thus been far more of a formality: an appointed professional has been required for managing the work, but the work itself has often been carried out without a professional actually being present on the site. Until January 1st 2000, when the new Finnish building legislation came into effect, it was not deemed necessary to have an engineer responsible for the construction; in this case, someone from the prefabrication company has been formally appointed as the manager responsible for the work.

Offers of prices and sketched proposals constitute an essential part of the market activity. The sketches are drawn up for free or for a small fee. According to information from various companies, it’s normal for clients to ask for offers on the same house from several companies. In this way, a strong exchange of models for houses occurs between the companies. The larger companies do, however, produce their own catalogues of model houses. The difference in price between model houses from a catalogue and specifically tailored ones is small. Most people in the building design process have an education in building construction, often as structural engineers, which requires four years of further education after the student matriculation exam taken at the age of 18/19. Architects are only rarely involved in
the design of these types of houses, but are then hired as freelance consultants, with the client paying a higher fee. Some of the design offers and sketches are done by independent retailers, who have no education whatsoever in building construction, but may, for example, have an education in commerce, and thus rely on the company’s design staff. Prefabrication companies usually end their participation in the construction process when the walls and roof have been raised. Assembly is carried out by two-person teams, either the company’s own employees or self-employed workers, who will, if necessary, take on any further tasks to enable the completion of the house. Construction is seasonal, beginning in spring, so that the family can move in before Christmas. Electricity, heating and plumbing designs are included in the contract, yet are mainly carried out by external consultants. As this happens at the same stage as production design, they can influence the whole design solution only to a very limited extent. The consultants draw up solutions based on the sketches, although the customers are called in to discuss the plans. Installations are only included to the extent of laying safety pipes and ventilation pipes. Other installations are carried out by installation companies that make offers based on the actions of the electricity, heating and plumbing consultants.

The manufacturer of components and the assembly

In the case study, the prefabrication company supplying the components is a small company with two working co-owners and one employee (in the high season extra staff may be employed). Like the other companies, they undertake the design of the house for customers. The building designer does not have any relevant professional education, but has many years of experience in construction and design. The company has operated for about 15 years. They have no sales representatives of their own and trade only locally. They are in competition with the larger companies and are not always looked upon kindly, as they can easily win projects from them due to their small organisation and the open situation on design copyright. With regards to production, it’s possible to produce houses equal in quality to those produced by the bigger companies despite the small scale of their operations. However, those working for the company have to be flexible and versatile.

K is employed as a carpenter in the manufacture of components. He often works in the factory alone. He begins his day by collecting a drawing for a component, and then starts to saw the necessary materials. When all the pieces are ready he measures out where pillars and windows should be placed and then collects insulating wool and windows. The inside, with its pasteboard layer, is made first, after which the component is turned around using an overhead travelling crane, given a layer of insulation and completed with the final exterior wood panelling. If something is not right, K goes to the office and discusses solutions with the planner. With windows in particular, there are many measurements to be coordinated. K has to keep many different things in mind, and needs to refresh his memory if it has been some time since he last built a similar component.
Apart from the exactness of measurements, K emphasises the rationality in arranging the work: one must have everything ready when beginning to assemble the component. He feels it’s something everyone could manage to do, but admits that it would take several days, instead of one, if one didn’t know how to organise the work. It takes approximately four weeks to manufacture all the components for a house; one component takes many days. K: “You know, it takes so much time. Just the work involved; in sawing the wood panelling first and then carrying components around, and selecting and measuring out. There are just so many bits.” The same learned rationality presides during assembly. One component after another is lifted into place, secured and fitted together. K: “Everyone does their own thing, you could say. When there were three of us from Oravais we kept switching around, so that one was on the outside doing the exterior wood panelling, and after that two of us put everything together.”

Assembly takes place approximately once a month. On these occasions all three people in the company take part and a hired crane is brought in. The components are lifted into place straight from the truck. For the house in the case study, the delivery consists of about ten outer wall components. The low outer walls of the loft are also manufactured as components and contain no insulation. Usually the buyer of the house is present, not always participating but often filming the course of events. When the outer walls and supporting interior walls have been assembled, the roof is lifted into place. The whole process is completed within a day and is finished off by covering the house with tarpaulin. Some days later, one of the company workers will return to complete the job by insulating the prefabricated element joints with a foam solution and completing the timber panelling and border mouldings on the outside.

K clearly finds it difficult to put into words what they do. The problem is not that it’s difficult to find words, but that everything is so engrained and flows without having to be described in words. Certain technical terms appear in his description of the construction technique, but K does not concretely describe how the work is carried out.
THE SITE

The primary design process turned out to be quite short, only a few months in the spring of 1999. It consisted of a few phases: buying the land, choosing the type of house and discussing issues with external parties and within the family. From the client’s perspective, the design process started in March/April 1999. The reconstruction of the course of events before the couple sought the help of professional designer — written in the present tense — is based on an interview held six months later.

The site naturally has its own previous history that affects the results of the design process. It’s impossible to ascertain more exact parts of this history, although based on discussions with the couple, local civil servants and a neighbour, certain elements have emerged. In order to create a more understandable whole, I have written it as two short invented narratives, which I have supplemented with my own knowledge of how things happened.

The history of the site

The following text has two main components: the previous history of the site and the journey of the family in choosing this particular site. The latter can also be described as the primary stage of design in the design process. Although the previous history of the site is much more complex than what is shown here, I nevertheless wish to introduce something of the character that forms the background to the design process. The latter part of the text, which deals with the journey of the family in deciding to buy this plot, will illustrate the beginning of the whole process. In the interviews it became evident that this was not a resolute decision but a combination of individual wishes, co-existence and the development of a life together. The period is important, but it’s difficult to appreciate or describe precisely, and so I have chosen a narrative style.

There was once an old vicarage in the village of Böle in the parish of Mustasaari. The clergyman’s wife had a keen interest in gardening and brought in exotic trees and bushes. She cultivated, cared for and developed the garden so that it became similar to where she had grown up further south in Finland.
Figure 4.
A few elms and maples from the vicarage still stand, but the buildings no longer exist. An old farm can be seen in the background opposite the client’s plot. The vicarage is estimated to have existed 200 years ago.

One day, long after the clergyman’s wife had passed away and the garden had begun its transformation into a historical fragment, a civil servant in the district had the idea of buying the area and turning it into a paradise, the realisation of his dreams of building his own house. On that occasion, the initiative led nowhere, but ideas had been set in motion. With bureaucratic obstinacy the civil servant continued to work with landowners and elected representatives to realise his idea of a new housing area. The area kept up with internal discussions about developments in the village, and was included in the district’s plans for long-term development. One part of the area was acquired by the district, but the rest remained in the hands of a private landowner, an old couple. Why should they sell? They had everything they needed, lived there themselves and did not want any changes in their old age. The idea took a leap forward, however, after their death, when those who inherited the farm were making decisions on dissolving the estate. The district authority was able to buy, and hence control, 5 hectares, which was seen as an area worth investing in. The surrounding area is privately owned and the plan is restricted to the area owned by the district authority. The plan will become an integral part of the village, a part full of the views civil servants and elected representatives have regarding the lives and ideals of young families in the community, despite its rather ad hoc character in the old village structure. In contrast to the rest of the sparsely populated village, it will be an area dense with detached houses. The families living there have jobs outside the home, mostly in the service sector. They commute to work and live urban lives, having little in common with the lifestyle characteristic of the farming village at the time of the clergyman’s wife, or even with the traditional agricultural life, of which a fraction still remains.
The plants planted by the clergyman’s wife are now fully grown and have been spreading seed in the surrounding area for over 100 years. This ground is rocky, but occasionally the seed fell on good soil and germinated. The agriculture changed and grazing decreased, and thus the plants had an opportunity to grow. Bushy vegetation and trees appeared in the previously open landscape. The vicarage fell into ruin, but occasionally new houses were built in the village.
The family’s journey to acquiring a plot

The family is newly established; K and L have only known each other for just short of a year. K has for a long time wanted to build a house for himself, while L has never considered it. The decision to build one emerges slowly, and the process is begun by looking at plots, though with no express purpose to buying one. The choice is quite simple as there are not many areas to choose from at a reasonable distance from both their workplaces. They rapidly decide on the Böle area, outside the city but near the centre of the district. The Infjärd area is rejected — they don’t want to live there. L does not want to build right out in the countryside.

Several months later, when reading the newspaper at his girlfriend’s house, K notices that there’s going to be a presentation of the new residential area in Böle. An old idea is rekindled in K’s mind: it would be nice to be able to build one’s own house. K has been building houses throughout his career, and has occasionally dreamt of building a house of his own. He currently lives in a small apartment out of town; his girlfriend also has her own apartment in the city. Since they met, K and L have spent the weekends together: they often make longer or shorter day trips, take walks in the area and travel to visit friends and family. While K, L and L’s ten-year-old son (by a previous marriage) are sitting together for lunch in L’s small kitchen, K suggests: “What would you say to going to Böle and checking out the new residential area?” L feels this would be a good destination for a trip, on a fine day like this one is turning out to be. Winter is coming to an end and the days are getting longer and sunnier.

Once in Böle they are given information about the area, a detail plan and types of plots. There isn’t much to see on the location itself: there are a few old houses bordering on the area, but apart from that the area is mostly in its natural state, and it’s difficult to know how big the plots are and where the boundaries lie in the terrain. The gentle rocky slope, with fragments from the time of the clergyman’s wife, appeals to them: it could be nice living here. The deciduous trees could become something, and after some blasting and levelling the ground it would look nice here — nothing much more could be done. K and L take the brochure and go back home for coffee. Only later in the week, during a walk, does K bring up the subject of the Böle area and his feelings about it. He compares it to the plots they walk past and points out characteristics he noticed in the plots in Böle. They were rocky, but could most probably be made better than the one they have just passed, which was so dark and flat. They then pass a house that he has helped build and points out that “those corner boards are nice!” They stop for a while to discuss and criticise the architecture. They are not of the same opinion about it, yet listen to each other’s arguments. They could hardly have expected at that moment that within a year they would have a house of their own standing on the planned area in Böle.

The plot in Böle is a difficult one. It’s very rocky, but also pleasant, sunny and covered with fine deciduous trees. K and L find it difficult to decide whether it could be made good: there are big boulders everywhere. The number of trees could turn out to be something exceptionally pleasant and the location is promising, with a gentle slope down to the road in the south-west. They want to keep some of the natural state of the plot, but may nevertheless blast and excavate to a rather large extent. Some time later — partly by accident — an architect (the present researcher) becomes involved in the project. When the architect visits the plot with K in August, the indecisiveness persists, but in November, with the plot partially levelled for a future driveway, garage and house, they are convinced that this may turn out to be the nicest one, despite originally thinking the higher plot bordering on this one the nicest.
The design starts by K collecting brochures. K is used to studying plans and solving problems in production, but has never planned or drawn anything himself, nor does he see himself capable of it. Various suppliers have brochures to give them, and the couple assumes that it’s possible for the customer to change the model houses in the brochures to suit their own wishes. K knows that any additions, such as skylights, bay windows and so forth, will mean added costs. They also assume that K will manufacture the components with his employer. The couple give no thought to the issue of copyrights. On first examining the brochures, they find a suitable house from a prefabrication company with a sales representative in the area, but soon reject this house in favour of a model house from another company. This house acts as a model for their own house, but will be slightly modified in order to better suit their wishes.

Only after the plot has been chosen does choosing the house type take place. One of the deciding factors the couple mentions is that L wants a simple house. The decision is made quickly and easily; both parties agree that this house type is suitable as a model on which to base their own requirements. They then proceed to work through and consider partial solutions. To do this they make use of their networks, which consist of professional builders as well as acquaintances and colleagues with some experience in building owner-occupied houses. L’s colleagues at the hospital constitute one reference group for her, in that many of them have a recent experience of building an owner-occupied house, although they are not professional builders. L has asked around concerning certain solutions, for example heating systems and interior decorating. K: “Then when she comes home and has a few good ideas from work…” L claims that they have had many long discussions, and K interposes, “So then I’ve just had to calmly accept them.” On the other hand, when asked whether they have had to compromise, K replies with a clear No!. L sees this differently; that they have had to share responsibilities. L has been responsible for the interior, while K has made decisions concerning the exterior. From the researcher’s point of view, it seems that responsibilities have been shared, so that they have been in charge of different aspects to a greater or lesser extent. The choices of heating systems and the shaping of the house have clearly been L’s to make, while the technical organisation of the heating system is more down to K, as is the detailed shaping of the exterior of the house, including the type of windows and the height of each storey. It appears that it has been difficult for them to reach agreements; according to L, one reason for this is ‘that they have such different tastes’.

In order to acquire more knowledge, L has been reading a great deal, and states: ‘I reckon I’m starting to understand this a bit’. She has read textbooks and professional literature, from which she feels she has gained a great deal. Partial decisions on shaping the building have, however, been made at a later stage, primarily based on the plans of the architect as well as details of the façades, which K has shaped when manufacturing the wall components.
THE DESIGN PROCESS

Professional design support

After their first encounters with the issue of the design of the house, the couple seek help with it. This starts with the designer at K’s workplace drawing a modified version of the chosen model plan. However, he does not have enough time to continue with the task. By coincidence, K then meets an architect with whom he is acquainted, and asks him to draw up the plans. K knows the architect from his primary school years, but has only been in contact with him sporadically since then. The family wanted to start the design process in July 1999. The start of construction was planned for the spring of 2000. K would manufacture the components with his employer in the winter, during low season.

The aim of the description below is to show how the design process is an interplay between the client and architect. The description doesn’t deal with all aspects of the process, but focuses instead on the interplay between the client and architect. The interplay consists of an introductory meeting followed by five stages, with the appropriate exchanges between the perspectives of the client and architect. These exchanges comprise different ingredients: it’s mostly a matter of exchanging sketches and comments, but also includes discussions and telephone calls. The architect analyses mainly through sketches and reflections, while the client examines, reflects, analyses and comments. The description is divided on the following themes:

1. The first design meeting between the architect and client.
2. The architect’s first sketches.
3. Revising the sketched plan.
4. A site visit.
5. Adjustments to the design.
6. Choosing the façades.
7. Drawing up the final exact plans and seeking building permission.
8. Choosing the construction technique.
9. Shaping during the production stage.

Co-operation with the architect began in July 1999. Subsequent meetings and their contents were:

July 15th — The first meeting: the client explains his wishes and provides material.
July 27th — Suggestions for the plan, with some of the architect’s own ideas.
August 3rd — The architect visits the plot with K.
August 6th — Discussion and criticism.
August 28th — The plan of the house has been reversed.
September 22nd — Final decision regarding the façades and the site plan.
November 1st — Building permit granted.

170 THE CLIENT AS DESIGNER
Afterwards the architect/researcher meets the client for discussions, raising the issue of his own research as well as discussing suggestions for solving within the tight timetable the lack of a “breathing space” or a “space of one’s own” for L.

The design work starts with a discussion in which both the couple and the architect take part. The couple put forward drawings of the model house they have chosen and modified. This acts as a basis that should need to be only slightly modified. The architect intends to retain their suggested solutions in order to save time. The architect/researcher intends to contain his own views about architecture and thus let the client’s views preside, in order to achieve a design more in keeping with the field of home-owner house building. K emphasises that they do not want a design with square windows and other unconventional solutions, the kind that architects often design. The atmosphere at the meetings is nevertheless open and trusting. The first discussions are somewhat tentative: neither K nor L want to force decisions or solutions through due to respect for the other’s opinions. They also want to respond to the suggestions and judgements of the architect.

The introductory discussion at the first meeting deals with various issues. To begin with, K and L explain their points of view and thoughts, while later the architect asks questions and attempts to initiate himself into the solution. Lastly, the architect proceeds to discuss and put forward ideas, questions and suggestions for changes. The discussions mostly concern:

- The plot, neighbourhood and regulations.
- Shaping the façades as K has imagined them.
- The solutions for the ground work.
- The size and arrangement of the kitchen.
- The position of the fireplace and chimney.
- The need to create a technical space.

Later on, during the late summer and autumn, the architect and client meet several times to discuss solutions. Usually the discussions are based on plans that the architect has altered and developed. In October, the couple want to push the design on in order to obtain building permission and to be able to lay the foundations of the garage before the winter. As the architect has not had enough time to do this, he arranges for a construction engineer to make exact drawings of the agreed scheme, including the garage, and to fill in the application for building permission. The couple is granted building permission in the late autumn and has time to cast the foundation slab for the garage. Thus they will be able to assemble the garage in the spring, after which the house is assembled in the early summer of 2000 and is completed by K during the following autumn/winter. They finally move in during the spring of 2001, approximately 2 years after the start of the design.

At a meeting after the client has been granted building permission, the architect discusses how drawing up the final drawings and the design of the garage have progressed. K explains that they have made a few changes: they are going to insert a door on the long side of the garage facing the house; they have also been thinking about a small “cubby-hole” for L in the garage as a sort of hobby room.
The first design meeting
The interplay begins already in the first meeting. The couple visits the architect at his home, and the visit takes the form of a discussion, drinking coffee at the kitchen table with the architect’s family and some general chat about the architect’s house as well as fishing and children. The first step towards employing the architect happens when K meets the architect by chance at a fishing site. The couple and architect hold the actual discussion over the coffee table; the discussions are interrupted several times by the architect’s young children, who are curious, and by L’s son, who has to be picked up and calls a couple of times to get their attention. The couple shows the architect a drafted sketch they have been given, and explain their points of view and wishes for changes. The architect participates actively in the discussion by asking questions, testing his own points of view and bringing out questions that have not yet come up. K discusses actively while L mainly listens but participates occasionally, especially in issues regarding the kitchen, the positioning of the bathroom and the fireplace. It’s clear that L has certain requirements, even though K acts as their spokesperson. The discussions were held exclusively in Swedish even though L is Finnish-speaking and the architect is able to speak Finnish; L does, however, speak and understand Swedish very well, better than K does Finnish.

What follows is a chronological account of the discussion. It was taped as a whole, which took about two hours. The discussions start with the architect involving himself in the detail plan, the orientation of the plot and the couple’s suggestion of positioning the house by the rear boundary of the plot. As a motive for this positioning, they claim that this would make best use of the plot by giving space for a garage and shed. They seem to think that one of the buildings must be positioned near the road, which the architect says is not true; it was simply a recommendation in the detail plan. The architect suggests “that it could be a good idea to check with the neighbours… how you’re going to arrange everything”. His idea is that the impression of the street would be better if one checks and adapts to future buildings on the neighbouring plots.

The introductory discussion to a large extent concerns the conditions and limitations of the plot. Knowledge concerning the plot is developed in both parties: the couple are told about legalities concerning minimum distances and requirements in construction, while the architect is oriented by the client regarding the situation of the plot, appearance, neighbouring plots, differences in elevation and the client’s ideas of how to organise the plot. For example, K asks, “Well, how close are you allowed to be to the neighbours…?” or “You can go how close to the boundary here…?” The architect answers with explanations, “No… is four metres away, if it’s nothing” and “but if you agree then with the neighbours four metres, you can go closer.”

The couple sees the distance to neighbouring plots and the small size of their plot as problems. They have heard that the neighbour to the west of their plot is going to position his two-car garage so that it blocks the afternoon sun from their plot. The architect suggests that they should visit the plot together to measure up trees and formations in the terrain. The architect wants to wait until then before making suggestions regarding the organisation of the plot.
The position of the house on the plot by the rear boundary is already relatively clear when the design starts. The couple agree, but still discuss it with the architect. K argues the point based on the trajectory of the sun: “Yes, well, that’s what we think, considering compass points.” “Wouldn’t you get most sun here?” L contributes with opinions on protecting their privacy. The plot behind theirs is reserved for public service buildings but will probably not be built on. L: “So it would be more sheltered here, because they most probably won’t build anything there.”

Figure 6. Excerpt from the detail plan. The plot in question is no. 2 in block 2 by Forskärrsvägen (Forskärr Road). How one is allowed to position the buildings facing the road is clearly given by a dotted boundary. The permitted distance from the neighbouring plots is not given in the plan but is governed by the Construction Ordinance 123 §, which stipulates:

“The distance of the building from the boundary of the construction site must be at least half of its height on the side that faces the boundary; however, this must be at least four metres. The construction committee may in particular circumstances allow the erection of a building closer to the boundary or all the way up to the boundary, if this can occur without significant detriment to the neighbour or if the neighbour has given consent.”

This ordinance is unambiguously in favour of the couple as regards the distance to the neighbour’s boundary: the neighbour cannot build a garage so close to it. However, without professional help it’s very difficult for the couple to check whether the neighbour is allowed to build in this way. From the discussion it appears that the couple doesn’t understand all the legal niceties, or that they have not been informed of them. For the architect there is a clear difference between the instructions in the master plan (detaljplan) and the requirements that have to be met: he sees more scope in the regulations of the detail plan, but also the underlying intentions. In
these regulations there is a specific formulation concerning the use of the traditional red colour for façades, but it is, in fact, only a recommendation. The same is true for the instructions on the slope of the roof.

Many regulations are given using the term “should”, but that must be interpreted differently to “must”. This subtlety of wording, however, is difficult for the couple to pick up on. For example, the first line states that the colour of the façade should be red; but, in fact, it could also have other colours.

After the plot, the façades comes up for discussion. They have drawings of façades from another house, and want a similar type of wood panelling. However, they want to have a plinth board. K wants to demonstrate how it will look on a newly built house near where they live, in which examples of how the corners will look can also be seen. It’s a house that K has recently played a part in building. However, he wants to make certain modifications: “We’re going to have corners like the ones on that house. But with smaller dimensions on the corner boards.” “190 cm is wide enough.” “It looks good!”
One problem for K is choosing the type of external wooden panelling. Which type would be best? The architect again emphasises the advantages in conferring with the neighbours in order to achieve a concordance with the other houses. Issues concerning the façades and ideas about which partial solutions are attractive recur during the discussions. K in particular has been thinking about it a great deal, but L also has her opinions. The couple feel insecure and look to the architect for support, but they obviously want to make the final decisions themselves. The architect feels these questions have been posed far too early, because from his point of view the design process has only recently begun. From the point of view of the couple, however, the process has already progressed far, and the façades are part of the whole, and where details are important. For the façades, K compares the lower
quality of a contemporary matchboard (tongue and groove boarding) façade against the simple appearance of the traditional weatherboarding of vertically placed sawn boards. He also knows that they would cost the same. Here issues regarding building permission and the interpretation of regulations again come up.

“Even though we’ve drawn a façade like this (horizontal matchboards), surely we’re still allowed to use boards and battens?”

In his answer the architect directs them to a building inspector,

“Yes, I think so, or you might have to talk to the building inspector and tell him you’re changing.”

K: “Because I don’t know what having the plinth board will look like.”

Another issue is the colour of the house. The couple assumes it has to be red, as it says so in the plan stipulations. The architect trusts his own experience in urban design, where the colour for similar areas is rarely prescribed, but at the same time he doesn’t want to support any thoughts of a deviant colour. He states, “But if it says red there, then there might well be a lot of people building red houses.” The regulations of the plan say that the colour should be red, which can be taken to mean that other colours are possible. In addition, the district had abandoned the requirement of obtaining a new building permission if the colour of the façades is altered; thus a requirement of painting the house a red colour is not sustainable in practice. At a later interview it emerges that the couple would most of all had wanted a house with white-brick façades. In the latter part of the discussion with the client, the organisation of the interior of the house is dealt with.

Figure 10.
The plan of the model house.
In addition to the modified sketches of the ground plan, there are also modified sketches of the façades of the model house and drawings of plans of both storeys. The discussion starts with the architect familiarising himself with the model house: he looks at the sketched plan and asks questions about the functions and connections. The architect: “This will face out towards the garden… there’s a reservation for a new kindergarten to the immediate left.” K makes contributions with thoughts and problems they could see in the sketch. It’s obvious that they have discussed the sketch beforehand, and that certain problems don’t yet have a solution, while others have already been dealt with. The architect, seeing the sketch now for the first time, is given the opportunity to put forward questions, and the couple appreciate it that their already resolved problems are again taken into consideration: they hope that the architect’s knowledge will be able to make improvements that they themselves have not thought about. The issues brought into question are:

- Big kitchen
- Technical space
- The fireplace
- The loft

The only real problem — for the couple — in the current sketched plan is how they will manage to include all the technology that the geothermal heating system requires. L has demanded that the house should have geothermal heating, and this
issue has not yet been solved in the sketched plan. The need for a room for technical space will have to be met somehow. There are some smaller open questions concerning the façades, a skylight, and the types of windows. When he has oriented himself, the architect voices his interpretation of the design and offers suggestions for alterations: the kitchen is rather large, and the bathroom is positioned at an impractical distance from the bedroom, behind the kitchen.

The architect uses arguments about function in attempting to reduce the size of the kitchen: “When you’re cooking… so I stand here a bit… then I go to the stove and… fetch water.” L argues against this by saying, “But there are only those windows.” It is understood that the façade makes the architect’s suggestions impossible; at the same time, she admits a familiarity with these arguments of function, as they have read about them in a book they have borrowed. The architect attempts to dispute the solution further by saying that one often aims for a bright kitchen, but which does not necessarily have to be big, as this can be achieved using an open plan solution. In conjunction with his argumentation, the architect also makes sketches, but without finding a good solution. The architect enters a similar debate regarding the location of the bathroom. He argues for a different location, illustrating the problem of a guest having to walk through a messy utility room to reach the shower. He suggests a new location, but finds no good solutions, only more problems. K asks what effects this might have on the façades. Here a difference can be seen: the couple is settled on certain issues, whereas the architect is of the opinion that everything can still be questioned. Moreover, the basis of the discussion was that the architect would only have to make small changes, so that the fee for drawings would be kept low.

It has been agreed to let L’s brother build the fireplace. It will also have an oven and a simple chimney, but apart from that no distinct shape. The architect is not consulted regarding its design; instead it will probably be designed by the bricklayer, with the couple supervising. Much later, at a meeting the following winter, L asks the architect if he has any suggestions for the fireplace — they have now realised it will be big.

Like the living room and the bedroom on the ground floor, the loft is not discussed to any large extent. The architect cannot find any obvious shortcomings in them, and the connections between them seem to be clear. The idea of a “hunting room” is mentioned as an idea, but they don’t delve deeper into it at the time. Amongst themselves they call the smaller bedroom on the ground floor the “hunting room”, mostly for fun — hunting is K’s favourite hobby. At this point the bedrooms have not yet been allocated, although they reckon that the larger round floor bedroom will be theirs.
In the discussions with the client, the small bedroom at the bottom of the picture is called “the hunting room”.

In the final part of the discussion, the architect proceeds to sketch and find solutions. While making alterations in the plan, using pencil on sketching paper, he puts forward ideas verbally and tests them on the couple. They often find it difficult to give an answer, and the discussion moves between different topics and ideas for solutions; occasionally one of them will voice opinions in favour of or against possible solutions. On going through connections to the outside, the architect criticises the shape of the porch.

The architect: “Aesthetically, I could think that porch is maybe a bit heavy. It could have more windows.”

K: “That one?”

The architect: “Yes, it would be like a conservatory. You could have just a few pillars in the corners and then windowpanes around, and then panelling above and below. And why shouldn’t it be symmetrical? A door in the middle!”

K agrees and says that he has also looked at it. The architect supports his argument by saying that porches are traditionally light in form, and are built without using insulation, assuming relatively thin walls. K says they are hoping to make use of the space in the porch, but without saying what it would be suitable for. At the end of the discussion the architect summarises what is satisfactory in the design as it stands, and what alterations should be made. This acts as a guide for the sketching, but is not definitively binding.

When the couple leaves they leave their material with the architect. This consists of information regarding the detail plan, blueprints of the model house and the sketched plan that the planners at the prefabrication company have drawn up. Notwithstanding the discussions and material, some opinions are left unclear; for example, how to solve the problem of the utility room/kitchen. A final thought is that these unclear issues might be resolved by drawing. The architect will draw up a new suggestion, which will then be the basis for continued discussions.
The reflections of the architect afterwards
In general the design is reasonable, but some details will have to be altered, and this will affect the whole. This is something I knew and which the clients probably understand. They expect me to have the ability to deal with the problems and to demonstrate solutions in sketches. At the same time, they reserve the right to check, and to intervene in and control the shaping of the design. If my sketched alterations did not comply with their view of a good solution, they will reject parts of the suggestion, my entire suggestion, or even my suitability as a planner for them. They are slightly apprehensive on the subject of architects as planners. I have made some reflections of my own based on the discussions (noted 26/7/'99):

- They assume they will have façades similar to traditional building styles, but are not entirely sure what this entails.
- The couple makes many judgements based on the plans.
- They worry about or adhere to certain details (they do not overlook effects, whether big or small).
- The couple has only recently moved in together: i.e. they do not yet know exactly what shape their lives will take, how many rooms they need, etc.

The architect’s first sketches
A few days have passed and I still haven’t done anything on K and L’s house. I should draw up something soon, so I can get the process started. I will have even less time in the autumn, when I start teaching. One day I get rid of all the course preparation material from my desk. I work mostly at home, in a large joint bedroom-study on the top floor. My desk is not really a drawing board; nowadays, when I’m not working at the architect’s office, I tend to just stretch out the paper across the desk and draw.

Designing is quite a pleasant activity — but why does it always have to be so hard to find the time to sit down and draw up sketches? Yet it has to be done. I fasten the plan I’ve been given to the desk, making sure it is to scale, and place a sheet of sketching paper over it. Then I draw up the outer walls as they stand, and continue with the interior walls; only drawing in those that I know have a fixed position. I draw using pencils with a sharpened 2mm lead. I have found that pencil is the only possible medium for me; I have tried using felt-tipped pens, as I know my colleagues make nice sketches with them, but it doesn’t work for me! It’s like solving crosswords in pen. I do, however, switch between drawing precisely and freehand sketching in pencil. I switch all the time: drawing precise lines to maintain the dimensions, and freehand sketching on sketching paper placed on top to quickly draw up and test new variations when some problem turns up. I also test in the exact drawings — erasing, drawing in guidelines and adjusting distances — but that can get too detailed. Sometimes one might consider a new structure, in which case small, detailed lines are pointless: it’s the whole and entire design that must be captured on paper. Sometimes lesser ideas emerge, but these are fleeting; when I try to remember fifteen minutes later the two or three things I thought of while I was working, I might have forgotten them. I feel secure in drawing up the plan. I follow engrained rules for measurements and furnishings: kitchen cupboards 60cm deep, about 120cm in front of the cupboards; the dining area needs a width of about
240 cm, preferably by a window. The plan is built up of modular components, which have some space for alterations, but not much. I feel slightly insecure as regards the shaping. It will be a house for normal people, and such houses are usually designed by people other than architects. In the area of the country where I live, few houses are designed by architects: it’s often building contractors or construction engineers that do the architectural design. And it’s not only just because this is going to be a house for “normal people” that I feel insecure — I have never designed a prefabricated house before. I have planned conversions and made a few plans for apartments, but not really this type of detached house from wooden components, and according to popular taste. In order to reduce the time it takes, I also only draw plans, so there is a risk that things will not “match” in the façades. By the expression “match” I mean that it might not be possible to create a harmonious façade from the design. My sketching results in a plan as well as an alternative for the position of the toilet.

Figure 13.
The architect’s sketch for the ground floor, dated 27/7/99. A smaller utility room has been created and the kitchen has been made smaller. The toilet has been moved and a closet has been placed in the space by the bedrooms.

The basic design suggestion contains three main changes from what was discussed at the first meeting:

- The toilet has been positioned so as to be directly connected with other rooms requiring water. My argument is that this facilitates the installations and thus reduces costs. K has already earlier appreciated that this is a weighty argument. I cannot, however, find a good position, as the door opens out into the dining area/hall. Here I expect counter-arguments that this is not appealing. One could, however, argue that it is functional because of its central position.
• A smaller utility room for washing clothes and so forth has been created. Despite L’s expressive wish for a large kitchen, I make the kitchen smaller, which gives space for a utility room. My arguments are related to function: a smaller kitchen is effective and reduces walking distances, and a home needs somewhere to wash clothes. Another argument is that I can fit in everything that is needed and additional cupboards. An obvious counter-argument is that the kitchen will have too little storage space. Their actual demand for change, space for a boiler and water tank, is not a significant problem, as these will fit in the utility room.

• The bedroom doors have been moved to their own anteroom, from earlier facing right out into the living room and hall. My argument concerns the protection of privacy: with this alteration the bedrooms are no longer exposed to direct view, which reduces disturbances. One obvious counter-argument is that the anteroom reduces the space that can be used in this section.

Figure 14.
The architect’s alternative solution to the issue of bathroom/utility room. In practice only a small measurement need be altered.

The reflections of the architect after the first sketch
After the first sketch, dated 27/7, I write down some of my reflections. This account is based on notes made partly directly after sketching and partly five days later. At that point I hadn’t yet received an answer from K and L. Immediately afterwards, the reflections are direct and concrete, whereas later they demonstrate that the thoughts have matured. At the same time, evidence emerges of reasoning around the whole. I, as the architect:

• Want to retain the client’s choices.
• Have made “improvements” everywhere.
• Want to better protect the bedrooms.
• Hope the client wants a more open plan.
• Wants the installations gathered together.
• Am afraid I will be completely rejected because I have reduced the size of the kitchen.
• Accept the client’s choices to a degree, yet find it difficult dealing with decorative borders around the windows.
• Am afraid the client will misunderstand something in the drawing.
• Want the clients to consult their neighbours — something they have neither thought of nor considered important.
• Consider the whole location to be important; while the clients consider their solutions individually.

On August 2nd, around a week later, when I have still not received their comments, yet more reflections occur to me:

• I have reshaped their basic plan — the “design engine” is running and allows/demands alterations where I think them a good idea, despite me arguing for limited alterations in order to remain within the given price range for the design.
• I see in my design a lifestyle that is rather centred/dependent on the family, as everything is integrated (living room-bedroom, bathroom-kitchen)
• I see a tendency towards nostalgia that appears to strive for effect. I would change the entire design of the house to emphasise the traditional style, but see the arrangement of the windows as a good place to start.
• The dilemma of style is of more consequence to me than to the client, as are the matters of the porch and window borders.
• I feel that the traditionally narrow body would not be right in a newly planned area. What is the solution to traditional houses in a new style?
• I find new solutions during the course of the work, which they guessed I would, and even expected.

The response of the client to the architect’s first sketch

The client gives a response to the architect’s first sketches in a telephone conversation between K and the architect and in a visit to the couple at their home, about a week after they received the sketches in the post. The discussions mainly concern:

1. The size of the kitchen
2. The location of the toilet
3. Technical issues

They are basically satisfied with the sketches but do not want the smaller utility room; L feels the kitchen would be too small. The arguments put forward by the architect for keeping the kitchen small do not suffice: L understands the arguments but feels it will be too cramped. She feels that their kitchen at present is far too small. K feels there are too many windows around the porch. The architect argues
that glass makes the porch “lighter” and porches should be light, that is, be small and have an elegant shape.

The meeting place
It was usually the architect that suggested to K, over the telephone, that they should meet. They usually agreed on a time, which K would check with L. The architect would mostly call K’s mobile telephone, as he was the actual contact. Later on they always met at the house of the client, in their three-bedroom flat, and held discussions in the kitchen or around the living room table; the son did not participate but was usually to be found in his room. The discussions usually proceeded as a dialogue between the architect and K, while L listened and was asked questions now and then by both K and the architect. The couple commented, explained and formed opinions. It was clear, however, that they would not make decisions in his presence, but rather when they discussed matters alone, once they had had time to reflect on the sketches themselves.

The family was at that point living in a small, relatively new three-bedroom flat in a concrete four-storey apartment block. The flat was owned by L, and K moved in at about the same time they started the design of the future house. The couple had a small bedroom of approximately 9m², and the son had at his disposal the larger bedroom, obviously intended for the parents.

Figure 15.
The family lived in a cramped apartment in this house when they began the design of a house of their own.

The kitchen was small with scarcely any room for a dining table. The couple used to offer juice or coffee and cake in the kitchen, usually after they had dealt with the main aspects of the discussion. The discussions were usually held on Friday evenings, around 6.00-8.00 pm, and were often restricted by the couple or architect having to leave for another activity. However, in practice the discussions were carried out on their own terms, resulting in the architect’s delayed departure. Various subjects were discussed until it was felt that further discussion would not contribute to further resolving the issue. Occasionally the discussion returned to issues that had already been dealt with, but from a different perspective.

184 THE CLIENT AS DESIGNER
The discussions at the client’s home were mainly held in the living room, with the architect sitting on a brown leather sofa and the couple on either side of the table, L usually in the armchair opposite, a little further away. The room was small with a bookshelf completing the interior decoration, and a small open work surface separating this room from the kitchen. The coffee table was longer than the sofa, with a glass top with stone inlay.

**Visit to the plot (3/8/1999)**

Immediately after receiving the plan, the architect and K agree to drive out and visit the plot. They discussed this already at the first meeting, and from the architect’s experience the site situation heavily influences the design. One can see that certain ideas cannot be implemented, and he strongly recommends that the house be positioned on the plot according to the need to protect their privacy and adapted to the neighbourhood. K is already on site when the architect arrives — the architect recognises his blue Opel parked on the excavated road foundations that currently serve as a road. The old road surface is still in place a few tens of metres behind and ahead, but outside the couple’s plot and the neighbouring plot is a gaping, excavated slope of mud and broken rock, approximately 1.5m high. The surrounding landscape, otherwise in tact, looks rather rough; the neighbouring plot has been partially levelled, but the plots have not been built on.

The architect is surprised by a depression of around 1m deep in the middle of the plot, approximately 10m x 10m. It’s probably natural, but is in exactly the same place as the house will be built. The plot is cleared: K has been here with his brother a few days earlier and has removed trees where the house will stand, as well as thinned out between the trees. The plot is thick with elms and maples. The architect has never seen anything like it. Unfortunately, his experience in forestry tells him that the trees have stood very close together and have thus grown long trunks without branches. The plot is rocky and hard to plan! It’s hard for him to conceive a picture of what it might eventually look like.

![Figure 16](image)

There are many large boulders on the plot; in places the ground is covered with them. In between these there are various deciduous trees. In the foreground a boulder of about 2m x 3m, further back many smaller ones.
The meeting on site is marked by two kinds of issues that are questioned:

- Can the plot be made good, or is it too rocky and thereby expensive
- Technical issues of laying the foundations, digging and filling in

There is a continuing apprehension regarding the quality of the plot. To a degree they still switch between worrying about the costs and about the end result of the rocky terrain, and trusting that the relatively high elevation of the plot in relation to the road and good illumination by the sun, along with a nice coverage of trees and boulders will give a nice plot. Even the architect is surprised by how rocky it is, a fact that he cannot hide. He does, however, support their view that it could turn out nicely.

It's obvious that K is now coming across innumerable new questions concerning technical issues and project management. He's a professional builder specialising in the manufacture and assembly of components, but does not usually have to worry about issues of groundwork, filling in, methods of laying the foundations or management of the whole construction process, and L has no experience whatsoever of building. Some of the time on site goes to K putting forward his views on the continuing construction process and on how he has imagined laying the foundations. He expresses them as statements, but often ends the statements as questions, for example, “I was thinking of doing the foundation wall in breeze blocks, three rounds should be enough, shouldn’t it?” The discussion takes the shape of a check with the architect, who answers but does not want to get too involved with this as it’s not his area of expertise, and this type of design/advice has not been agreed upon. Another issue is that there is no structural designer appointed for the design of the house. It’s clear that K rather lacks expertise, but also that he quickly builds up his knowledge through discussions with various professionals. Questions are not only asked of the architect, but also of the people responsible at the prefabrication factory and of other builders that K knows.

The architect makes notes on certain measurements and the location of trees and boulders in relation with the positioning of the house. There is also some discussion about which areas to leave untouched. The architect also suggests how close to the boundaries of other plots buildings can be erected. Both the architect and K are surprised at how close the neighbours will position their buildings: K does not like it, but does not want to do anything about it. When the architect is standing there on the plot, plan in hand, and K is clambering around between and over boulders with his mind full of thoughts on blasting and on the height of the floor plate, it occurs to him that it would make better sense to reverse the house. The back door would then come closer to the driveway, and the bedrooms would be further away from the neighbours. He puts forward this idea, and K confirms that they had considered it at the start. It’s agreed that the architect will reverse the house in the next draft. They also agree to lengthen the house by 0.5m and to move it one metre further in on the plot.

How much will it cost? The architect feels the house is rather large considering that the couple most probably does not have that much capital. He therefore asks the
couple about this, and suggests that the house might cost 900,000 FIM (150,000 Euros). He bases this on an average price of 5,000 FIM/m² (833 Euros), which he judges to be slightly on the low side. It emerges that they have estimated about 6-700,000 FIM (about 100,000 Euros) and that the price they are willing to pay depends on how much they can sell L’s apartment for. Thus far they have been able to finance everything using money from the sale of K’s apartment — buying the plot and fees. They discuss the issue at length while standing on the plot. The architect promises to prepare a cost estimation using a standard formulation for government-subsidised flats, with given cost units. K does not believe it can amount to that much and estimated a lower price as he is doing much of the work himself. The couple does not worry about the costs to any great extent: they do, however, assume they will be building a simple house, as everything extra, such as bay windows and roof surfaces, is expensive. The architect and K discuss the idea of bay windows for the living room as it seems small. They also muse over the usefulness and cost of a skylight.

**Review of the sketched plan (5/8/1999).**

When the architect sits down to make alterations to the sketched plan, he makes the kitchen bigger, even though he does not think it practical. He tries to find solutions and suddenly realises that they could easily convert the bedroom area into a small apartment. The interior wall could be made of brick and there would have to be a water supply and drainage, as well as a door. He draws up two alternatives, in which he varies the shape of the kitchen area. He does not give up his original idea, still wanting them to make them accept a slightly smaller kitchen: the kitchen in sketch 2 is barely larger than in the first sketch.

![Figure 17. Plan 5/8 1999. The house has been reversed, and the kitchen has been adapted according to the wishes of the client. Note the hatched interior wall. The architect suggests that the house should be designed so that the bedroom area could later be easily converted into a separate apartment. The client is, however, not interested in this idea.](image-url)
At this point the architect’s own reflections and thoughts emerge regarding working with couples establishing a new family:

- There is an underlying dilemma in that they are simultaneously shaping their new life together.
- There is an underlying socio-drama in which the architect has no part.
- What is the aim in the appearance of the house? What should it express?

At the first meeting it was agreed that the size of the house, 8m x 14m, is suitable, and the architect worked within this frame in his sketching. In conjunction with trying to find an acceptable compromise for the kitchen/dining area, he sees that an extension of the length by half a metre would solve two problems. The dining room would get the space he feels it needs and the kitchen could be bigger; the living room would also be broader and more spacious, which L has once pointed out as a fault. The architect puts this across as a suggestion, which is first rejected but later accepted (date 15/9/’99).

**Adjustments in the design (28/8/1999).**

It takes about three weeks before the architect takes the time to draw up a site plan to supplement the house design. He now also makes a suggestion for a loft space. He also introduces an unheated outhouse of his own accord, but otherwise the sketch agrees with what was discussed. He draws up the loft with bedrooms right out to the walls on the long sides. He recalls that they had imagined a narrower loft, but feels that they can make it broader as there is enough space for it. There will be plenty of floor space. The house is reversed and L has accepted the solution for the kitchen.
Figure 19.
Plan of the situation. In several stages the house is moved 1m down and sideways but remains in the position that the client originally imagined — with a large front yard south towards the road.
Figure 20.
Ground plan 28/8/1999. The architect has altered the plan according to the wishes of the client. As a way of testing a larger bedroom, he has tried cutting the copy in half and gluing it together with half a metre more in the middle of the house.

Figure 21.
The architect makes his first cross-section sketch. The stairs are a little problematic, but will suffice.
Figure 22.
The loft. The architect sees a possibility for rooms with extensive floor space in the loft, and alters the solution in the model plan that the couple gave him. Later the couple tells the architect that the boy has chosen one of the rooms for himself on the basis of the plan drawing. The question of whether the couple wants to have more children is never addressed as their relationship is a relatively recent one.

The architect takes A3 copies of the sketches and posts them to the couple, thinking that they will be able to study them in peace and quiet. Two weeks later, in the middle of September, the architect visits them to hear their comments. K has at that point shown the plans to the prefabrication company and to a manufacturer of kitchen cupboards. Through this the shaping of the kitchen and loft has been settled. At the prefabrication company, it emerges that if they are to build out the whole loft, they will need a ridge beam which will be expensive. The separation of the kitchen from the dining area will be constructed according to a picture that the couple have found in a brochure about kitchen fittings.
The immediate comments of the couple concern:

- Statements about familiar opinions that the architect does not yet know about.
- Questions regarding the interpretation of the symbols in the drawing
- Judgements.

The couple is curious and participates in discussing the drawings, as they have always done previously. The architect interprets this as being due to an expectation that the plans will further their knowledge of their future home.

The façades (22/9/1999)
During the discussions of the previous week, when the couple met with the architect, he suggested that the façade facing the street could be symmetrical; K and L found no faults in this. Symmetry and a simple, clear shape have been vague ideas in the back of the architect’s mind, based on previous jobs designing residential areas. This is linked to a striving towards adapting to the old traditional wooden buildings, something which will be formulated to master plan regulations in urban planning. He often feels that new houses rarely match the traditional, even when attempted or even required. In such cases, the body of the house becomes too wide, the required spaces are divided between the garage and outhouses, and the volume is too big. The architect has a preconceived opinion that small, 1-family houses that are to be adapted to traditional house types should be symmetrical with a standardised subdivision of the windows. He had never tested this thought or really formulated
it in words, although he has had it in mind for a long time. K mostly contemplates the skylight — they need light in the middle of the loft, and he would prefer it as an extension to the porch. The architect advises against this, as he thinks a porch with two storeys will look too clumsy; the roof would be big and jut out a long way from the main façade.

Figure 24.
The façade has been made symmetrical, and the whole house has been reversed in relation to the original model house.

Figure 25.
The gable façade. The distance between the windows is refined according to what K regards as possible to manufacture. It's assumed that K himself will create façade details later, something which in larger projects is usually carried out by the architectural planner. In this case, the prefabrication company uses a template in supplying the components.
The façade details are an issue that continues to keep K busy. He points out the narrow positions of the windows, solutions for the corners and other details. The architect would prefer to keep everything simple, but takes into consideration the fact that the windows need to be a certain distance from the corners of the building. They discuss details of the façades for a rather long time.

Meanwhile, K has checked with a building inspector as to what may be built within the limitations of the building permit. The architect is surprised to hear that the building permit authorities accept that the garage is not included in the total area of permitted building rights; the interpretation of the architect would be that the garage is included, in accordance with the planning regulations. K has also made use of his network of professional builders, and has thus been confirmed in his opinion that their estimate of the cost should be correct. It has also now been confirmed that the neighbour’s garage will be positioned less than 4m from the plot boundary. The architect has checked legal texts on this which state: “The construction committee (byggnadsnämnd) may in particular circumstances allow the erection of a building closer to the boundary or all the way up to the boundary, if this can happen without significant detriment to the neighbour or if the neighbour has given consent.” He himself has indeed heard this can be applied if the neighbour consents. He explains this interpretation to K and also that in his opinion, according to the texts, the construction committee appears to have the right to make such decisions; this should, however, be based on “particular reasons”. In the case in question — a carport for two cars, around 1m from the couple’s boundary to the south — both the architect and the couple feel that the location is disadvantageous to them. They discuss this, but conclude that the district construction committee is not known for taking all regulations seriously. They do nothing about the situation.

In drawing up the façades, the architect takes the original drawing of the model house as a basis, but positions the porch symmetrically in the front façade with a second storey on top.

The architect is apprehensive about the balcony, mostly because of technical issues of construction. It will be difficult to get a slope steep enough for drainage. He considers his own opinions on architecture rather extensively, as the façade challenges what he sees as good architecture. He forsakes his own ideals by mixing various traditional elements of form. The architect does not draw on the façade the kind of borders that he thinks K wants, because he is afraid that colleagues will criticise his work. At this point he realises that the thought of symmetry is a test of an idea. From his sketches he realises that the symmetry is artificial and that a uniform façade cannot correspond to what lies behind it. The arrangement of the rooms is by now so specialised, which it has not been before, that the façade would look truer if it was not symmetrical or uniformly divided. However, he decides to let the symmetrical façade stand.

A few days later, K gives the architect some opinions based on his discussions with the planner at the prefabrication company: most of it is okay. The architect tries to imagine how he would feel living in the house. He concludes that he could probably accept the design, but that he would now, with his new insight on the pointlessness
of symmetry, break up the symmetry and create a façade in which form depends on function.

The couple is satisfied with the façades, and the plan is completely accepted. K claims that the company has a solution for the balcony, but he wants it built into a small, surrounding roof, as in an older house on his street in the town. He claims that they often make balconies in that style. He takes into consideration the architect’s fears of a risk of water damage. He cannot explain or draw how it will be achieved, but trusts in the company’s solution. The architect has recently immersed himself in issues of damp and continues to be sceptical, but nevertheless draws the façade as agreed. The problem is not visible in the drawings and can probably be solved, even though the architect assumes that it will be constructed in a fashion “not fully in accordance with the building regulations”.

**Drafting and building permission**

At the end of September, quite soon after the latest discussion, K calls the architect and wants to speed up the drawing up of the final scheme. He has held discussions with an assembly team that he knows, who have erected a house in the area. He wants building permission as soon as possible so that he can cast the foundations for a garage that autumn, and thus gain time for the start of construction. The architect is not happy about this — he will be away for a time in October, and has rather a lot of work besides. They had discussed earlier that everything to do with building permission should be dealt with in the winter. The architect has argued for not rushing things. He sees advantages for the couple’s building plans and takes it upon himself to arrange for the final scheme to be drawn up by someone else. The garage also needs to be drawn up. It’s difficult to find someone to draw up the final drawings, but at last he receives a promise from a young engineer with his own engineering firm who also has a great deal of work. The architect gives him the sketches and explains the situation. He knows the engineer and has complete faith in him. The drawings are finished, and K gives a few instructions concerning the garage. The engineer fills in the application for a building permit in his own name — the architect had said he will sign the drawings, but he’s away at the time. According to the architect’s recommendation, they apply for permission to exceed building rights. Building permission is soon granted and K can cast the slab in November.

**Shaping in the production stage**

In preparation for the component manufacture, earlier drawings are examined in more detail and the prefabrication company makes drawings for each component, which exposes faults in the earlier drawings. In the façade, the porch is 30cm wider than in the plan. K sees that it’s possible to widen it in accordance with the façade drawing and, together with the planners at the company, decides to widen the porch. K has wanted a more spacious porch that could be used for something, while the architect has argued the case for a smaller porch due to reasons of appearance. The mistake has occurred in drawing up the final plans: the sketches contained only the smaller measurement, both in the façade drawing and in the plan. They make a few small alterations to the loft: some boarding is left out, the hole in the system of joists where the stairs come through is made smaller, and the door to the bathroom in the loft is moved.
Groundwork
Working the ground makes an essential contribution towards shaping the scheme. The ground elevation of the house plays an important part in the context. The plots are rather large, approximately 1,000m², so the topography is rather visible, with its small mounds and depressions. The positioning of the house, by the rear boundary of the plot, is relatively settled when the design starts.

The groundwork is carried out, using a larger digger, after the sketches have started to come together but before building permission has been sought. Large areas of the plot are levelled, in which larger boulders are blasted and used as filler. The ground height of the construction site increases noticeably. Because there is bedrock on the neighbouring plot, issues concerning the blasting of rock and additional costs are discussed. When channels are dug, the plot is shown not to be on bedrock. A rocky area of the plot is left untouched; another area, which it was originally thought would not be touched, is considerably disturbed during the digging. While sketching, the architect builds up a picture of the ground heights based on the contour lines on a map of the area; there are no indications of height difference on the map of the plot. The person digging judges the depth of the foundation by eye without following measurements given in the drawings. This is governed mainly by the ground height of the neighbouring plots: one approximately 1.5m higher and the other 0.5m lower. Afterwards, the ground heights are more equal. The district authority dictates distances (e.g. between buildings, from plot boundaries, etc) but not topography or heights.

Digging and filling in bring radical changes to the natural state of the plot — from a rocky, uneven plot to a levelled plot of an average kind. The change surprises both the couple and the architect, all thinking it rather radical. Compared to others, however, this plot has been rather sparingly levelled: it’s quite normal to remove all the trees and level the entire plot.

In conjunction with the digging, K agrees with the driver of the digger to move the garage back 5m towards the plot boundary, and to remove some of the stones. The argument is that the space behind the garage cannot be used.

Laying the foundation
The foundation consists of a foundation wall with four layers of breeze blocks and a concrete slab at ground level. Under the slab the filling is mostly natural gravel and the quality of the gravel is not good enough to function as a moisture barrier. The architect points this out but admits that damp will probably not rise here as the house is situated on top of a thick layer of broken rock. A moisture resistance barrier and thermal insulation are placed under the concrete slab. Under-floor heating coils are placed into the slab as it’s being cast. The aim in this is to reduce the number of phases of work and to save on costs without decreasing the quality; something that K has been advised by a former colleague.

The building
Together with two transverse interior walls, the outer walls constitute the load-bearing framework. The walls consist of 145mm x 45mm timber studs at 600mm
centres. Each storey is 3m high. The façades are made of vertically placed wood panelling. Supplementary construction components, such as windows, doors and the stairs, are supplied by subcontractors. The windows can be opened and are triple glazed with no ventilation hatches; the shape of the windows is a result of the adoption of a vernacular style façade. The stairs are of varnished pine, made to measure for the house (it’s normal for certain components to be made to measure). The interior walls are mostly plasterboard fixed on a wooden frame, although the walls of rooms requiring plumbing will be made of brick. All the doors are manufactured in a factory, apart from the front door, which is supplied by a small local carpenter.

The interior surfaces are mainly finished with wallpaper, whitewashed panelled ceilings and parquet flooring. The kitchen is dealt with separately and will have oak doors. The rooms requiring water will have clinker floors and tiled walls.

K adjusts a few interior walls inside the house, based on his own judgement of what is suitable. He widens the toilet adjoining the ground-floor bedrooms to 120cm and slightly reduces the size of the sauna. During a visit to the site he explains this to the architect and gives his reasons.

K completes the exterior the following autumn by supplementing it with details at the base of the roof. He has applied the same to the garage, borrowed from examples he has seen or helped build.

Figure 26.
The model for the base of the roof, also with a model for the plinth boarding.

During the manufacture of the components, K has added a wider, decorative window case model that they use at the company. The requirement of a band of sheet metal to separate the storeys was made early on, as it’s needed in joining the components. K wanted a plinth board, but only as an embellishment. Completion is carried out under the client’s own direction; K does some building in the evenings and during
the weekends, mostly alone. They have a great deal of work with deliveries at the company, and during the summer, when the house has been erected, the couple have a baby. The couple has sold L’s flat, and are temporarily renting a flat near to where they lived previously. The flat is small: when I pay them a visit they have not yet unpacked, and may not fully do so. K continues building throughout the summer and autumn. He lays the roof, completes the façades and then begins to work inside the house with the interior walls, floors and ceilings. The foundation was cast and laid in the spring and the components were assembled early in the summer. All in all, the construction process takes approximately 20 months, from the spring of 1999 to the winter of 2001. The primary design took around two months, designing the construction around four months, preparations for the construction around six months, and the completion takes six to eight months.

**Technical installations**

When the architect is sketching, they have not yet begun to plan the technical installations. K has carried out some research into what geothermal heating requires and what it will cost. In the discussions, K and the architect agree that gathering together the installations in one place in the house would be advantageous, yet the end result is nonetheless a compromise, in which the toilet is situated at the other end of the house. In conjunction with the design production, the drawings are automatically sent to a heating and plumbing planner who will plan the equipment and pipe layout. The process proceeds without the architect’s knowledge, and K answers some questions by telephone.

The house will be traditionally equipped for electricity, but, contrary to usual practices, it will have geothermal heating, with the heat being water-carried. The house will have a central vacuum, a ventilator at the top of all rooms using water and vents in most windows. The house will have an electric sauna and will not have a bath tub, only a shower cubicle. K’s nephew and his girlfriend will design the electricity layout: both are studying electrical engineering. The installation of electricity, heating and plumbing will then be carried out by professionals whom K knows.

The architect cannot give a direct answer to the question of how the design of the electricity, heating and plumbing has been dealt with: he does not know how it has been handled. The architect: “There was some talk of someone from Koskö doing the installations. I don’t know. It could be that nobody’s planned anything — that the installation engineer will do it himself. But no! They have to know all of that in component manufacture!” The client can answer the architect’s question: “Yes, the electricity planner did call up and ask a few things. The construction drawings automatically go to an electricity, heating and plumbing consultant — if you can use it, that is (the heating and plumbing plan). We’ve moved a wall, you see.” We discuss this standing in the house, while walls and floor are still missing. How it will all fit together, since he moved the bathroom wall, is an unresolved question for K. The foundation wall has been done according to the building permission drawings, and is situated a little to one side. The wall is a prefabricated component. It also entails moving the chimney slightly, closer to the reservations for pipes in the concrete foundation.
The design of heating and plumbing has thus progressed so that the production planner at the prefabrication company has sent drawings to a HVAC consultant, with whom they have a running contract and fixed commission per house. The consultant specialises in single-family houses. It’s a small company with a few employees, dealing with everything from the design and retail of materials to servicing and contract work. Within the single-family house sector, most contract work consists of floor heating systems. The company has exclusive rights on the sale of one particular brand. Most design work is carried out by the two owners: one is responsible for designing electricity layouts and the other for heating and plumbing. They are both electrical engineers, but the heating and plumbing planner has supplemented his knowledge through courses in heating and plumbing.

The client has certain criteria concerning spaces for the geothermal heating, according to an inquiry he has made with a heating and plumbing installation engineer he has planned to employ. “There has to be room for the pump and water tank,” says K. This is a problem for them at the stage when they have been given the first sketches. There is no need for an actual technical room — instead, the machinery, which requires around 1m x 0.5m, will be placed in the utility room. The architect tries to position it inside various cupboard walls; he attempts to fit it on a centrally located wall which is not in the way of traffic in and out of the house through the utility room. The client also shows the sketches to the installation engineer in order to confirm that this positioning is possible.
OTHER FACTORS

Apart from what has been described above, there is a multitude of other factors that have influenced the course of the design process. Friends, relatives and colleagues have contributed to the design process. The architect has learnt from the couple about some of these contributions, mostly in passing. K has discussed many specific practical questions with the planners at the prefabrication company, as well as certain details of building permission with the building inspector and the district surveying engineers. The neighbours’ houses, garages and outbuildings are connected with the couple’s process, but have only influenced its course and result to a slight degree. It’s impossible to ascertain where and how K and L have developed their deeper ideas and preferences. It’s easy to track down and account for some details, such as the example of a house with plinth board; the less explicit preferences, such as an open plan and the organisation of functions in the house, are concepts that K and L express based on their own experiences and impressions of the whole. They cannot easily express this in words, but need to explain it via models, opinions and sketched solutions.

Influences of society and the authorities

There are also steps of design embedded in the actions and decisions taken by society, mainly through the decisions of professionals in the authorities and politicians influencing the land-use planning. The design process is an interplay between politicians, civil servants and builders. Assuming that decision-making plays a central role in the design process, one can deduce that in society design process professionals contribute with preparatory design work and in shaping details, as well as with arguments for and against different ideas and solutions. The most important rulings are made by politicians — the politically composed groups of laymen. Government input, based on law, is relatively general and impersonal, but evaluations of individuals and groups come into play when interpreting the rules.

The control of society naturally influences the design. The two main influences are those of legislation and the so-called detail plan. Another influence, less obvious but strong nonetheless, is culture: this is in part the culture of the family, and in part the culture of the neighbourhood where the family is building their house. The latter is most likely characterised at this stage by the building of owner-occupied houses, which they all have in common.
Urban planning

The so-called detail plan specifies the positioning of the building in the terrain and in relation to other surrounding buildings. In addition, it determines the slope of the roof of the house and the specific height of each storey, which in the present case was imperative (in the storey with a loft covering 2/3 the size of the space), as well as the recommended colour. This control is relatively simple, but influences considerably the shaping of the neighbourhood. The adaptation to already existing houses, so sought-after in the detail plan, is in fact scant, as the new houses are many in number compared to those already there, as well as being larger and wider. The adaptation of the client’s house within the neighbourhood is, however, noticeable, and the client also regards the house as adapted to the older style of building.

Building permission

Control of society also occurs through the procedure of awarding building permits. Interpretation is essential to this process: without being interpreted, the law, prescriptions and plans cannot be applied. Interpretation is done chiefly by the building inspector, but is affected by views expressed by politicians. Decisions are prepared so that they will correspond to the expected judgement of the committee. The client, a layman, requires help in order to interpret and understand the rules; this help consists mainly of supplying technical-legal information. Advice in aesthetic issues is rarely obtained through the building inspector (interview with the building inspector, 17/3/2000). Design work on the houses is carried out independently of building inspection, and only questions of detail are directed towards a building inspector, often as testing questions to ascertain how much will be permitted. Without the influence and interpretation of the building permit, the house and its environment would be designed differently, under the direction of the family. For instance, they wanted the façades to be in white brick. The strongest influence lies in the legal stipulation of minimum distances and in indirect rules concerning the detail plan and road construction, as well as in the method the district authority uses in the development of new residential areas. Much of the shaping of the house does, however, occur with no regard to the laws governing technical construction and shaping. The house is designed according to contemporary views on how houses should look, fulfilling the rules and legalities of construction.
“A BREATHING SPACE”

The idea of a “hunting room” arose already in the first discussion. It’s a small bedroom on the ground floor. During later discussions I enquire about the idea — what the room would be used for. I suspect it’s something that Horelli-Kukkonen (1993) calls “henkireikätila”, which has been translated as “breathing space”. The couple’s answers indicate that it could be a room in which K can collect everything to do with hunting, his favourite hobby.

Figure 27.
They already have the hunting room — the smaller bedroom [Sovrum] — in mind at the beginning of the project, as a desirable personal room. On visiting the family after they have been granted building permission, I learn that they have discussed the possibility of constructing a small den in the garage. I suspect that L is also looking for a “breathing space”. I advise them against remodelling the garage as it would be too small for both a garage and extra room. Instead, I suggest that I make a sketch of an extension to the main building.

Figure 28.
The garage, or a part of it, comes up in discussions in the autumn as a possible place for L to have for herself — a “breathing space” for her.
In the following, I will describe the couple’s striving to create a space for themselves, somewhere where they can “realize themselves” within the context of the home. The description will primarily highlight the force that pushes the process forward. At the same time, one must realise that in a normal design process this issue would not have surfaced — it only came up here because I asked about it, and in further discussions thereafter. The thoughts presented here are vague and are mostly ‘labels’; that is to say, the couple is giving a name to something they have imagined. They do not want to decide on the room immediately, but want rather to develop their thoughts later, once the house is built. It’s a problem for L that no space will be built for her. The sketches help to clarify the thoughts, but greater importance lies in their own creative actions, for which the space may give opportunities, in the individual.

The so-called ‘hunting room’ is a small room almost 10 m²; it’s not clear how it will look. The couple ‘knows’ that it can become a hunting room, but this is not certain. It’s not even clear what will be placed in it, though one can imagine hunting equipment, photographs and a chance for K to relax by himself. I find it difficult to imagine K sitting there alone: he is sociable, and the kitchen/living room appears to be the centre of their lives at present. On the other hand, I do see the value and enjoyment in collecting one’s trophies and valuables in one room. A Jøtul wood-burning stove figures in the discussions concerning a small, extra room in the garage building — an issue particularly important for L. When I suggest an extension of the house with a conservatory, I include such a fireplace. I am not quite certain as to what to suggest in order to give an answer to her thoughts regarding her own ‘breathing space’, so I use the wishes in my own life to supplement and create a suggestion for a breathing space for L. It’s a conservatory adjoining their bedroom; and my suggestion is positively received. L sees it as a place to which she can withdraw and be alone. K agrees to it but emphasises that it will cost, and that they have to build the house first. She gives a definite NO in answer to my jocular question of whether the kitchen could not act as a breathing space. In her study, Horelli-Kukkonen (1993, 136) notes that a (traditional) brick-built solid-fuel-heated combined stove and baking oven constitutes a central source for creating an experience of the senses combined with functionality — heating, baking and being together. L wants a traditional enclosed fireplace with an oven in the living room.

According to Horelli-Kukkonen (1993, 134), the garden is an extremely important factor for people designing their own houses; L is also heavily involved in this. K is mostly interested in the house, especially the exterior. During the sketching stage, the architect makes a simple 1:200 plan of the site plan, containing the essentials: the buildings, materials, the driveway, areas that will be left in their natural state, as well as the actual covering of trees once the plot has been thinned out and levelled. However, the site plan does not provide a clear contribution or support to the shaping of the plot. The clients don’t want a driveway up to the house, but the architect nevertheless draws one in as he feels they need one. They accept the suggestion and the arguments, but they reserve the unspoken right to design the garden area differently later on, according to their own ideas.
When I travel out to the construction site early in the summer, I note that there are plants squeezed in between building materials and gravel heaps: while K is busy with the building work, L has bought plants and put them aside on the plot. Again, I suspect a striving towards “breathing”. Neither of the couple are on the site during my visit, but I later call up K and suggest that I make a sketch of the garden layout. We meet later on the plot and I ask them what they want in the garden — I ask for goals. At the same time, I again ascertain what trees and boulders still remain after the levelling, as well as measurements and distances.
The aims for the garden/plot are vague and K can only express them as a few statements. The plot has as yet not developed the appearance of a garden. On an enlarged site plan I note:

- Order and tidiness, as well as multi-facetedness.
- Whether the trees will survive: no new ones except for a spruce tree.
- A potato patch, not a big one + strawberries.
- A possible wooden gate.
- Protection from view here (= facing the neighbours and the road)
- Apple trees here (= already bought)
- Area to be used (= in front of the house) open towards a barbeque area, possible tiling.

The above formulations are mine. The positioning and its interpretation are relatively open; for example, the choice of species for the protection from external views into the plot. Something that is not noted but constitutes an essential, expressed opinion is that the untouched areas should retain their character. K talks of filling in slightly; an electricity cable must be drawn from the house to the garage. Using a photocopier, I enlarge the site plan to 1:100, place a sheet of sketching paper over it and draw up a rough freehand sketch using 6B and colour pencils. I ask an architect colleague for his opinion, as well as taking a copy home and asking advice from my neighbour, an experienced gardener.

The architect colleague sees a hint of a line in the trees along the western plot boundary, something which should be brought out. The gardener answers my questions concerning the choice of species, has doubts about the usefulness of the driveway up to the house and speaks warmly for retaining what already exists on the plot: the boulders between the garage and the house. The gardener speaks for using the path motif and emphasising it with a small terracing. He also sees vague traces of composition and shaping. I do not send this first sketch to the couple, but instead make a new one. In order to investigate the possibilities of using colour photocopying, I make a colour copy which I deem good and send to the couple. The reaction of the couple is so positive that K calls a few days later to say that they are pleased.
A sketch for the garden, 22/6/2000. When I visit them a few days later, nothing new arises. The contrast between the existing rockery and grassy areas is appealing, and the sketch suggests a certain potential for shaping in the rockery. L questions the terracing in front of the house, the idea that the gardener had suggested. Otherwise, the planting agrees well with what they had imagined.
INTERPRETATIONS

What we see emerging in the case study is that the process of design can be thought of as a collective and co-operative process, where the client of the building project plays a central, active role. Specialists and professional designers, and the results they achieve, are tools for the client. The specialists play a lesser part in the shaping of detached houses and their surroundings, but do, nevertheless, contribute to various aspects of design and decision-making. Specialists may suggest technical concerns and ways in which to develop details, but the client of the project makes the final decisions; thus responsibility for the whole lies not with a designer but with the client. Making decisions lies in the hands of the family. They are also aiming to realise their goals and to address their own individual needs, which can be seen from the consternations concerning “breathing spaces”. The clients (the family members) are laymen as regards design, yet they are masters over how the situation develops. They are able to handle uncertainty and a lack of knowledge. They can find a way of understanding how the house will be constructed and envisage how it will be used in the future. According to Lundequist (1995, 81), a designer is “one who can operate despite insufficient information”. The couple act as designers even though they have no experience of, or education in, design. Typically, builders of detached houses are also often young, newly established families, who are still developing and discovering their lives together. In the design they must conjure up a picture of their future lives. The exercise of building binds them to something that may be the greatest investment of their lives.

Some further design work takes place during the construction. Sometimes this consists of simple changes that must be made in order to enable construction to continue. Sometimes adjustments must be made to ease construction, but sometimes it is partial “proper design”, which takes the shape of alterations. Modelling is mainly done verbally or directly incorporated into the material — bearing pillars are moved or measurements changed.

A comparison with the pragmatist theory of design

I shall now make some comparisons between the above case study and the theoretical construction outlined in Chapter 4. I shall take as a basis the aspects introduced: situation, conception and testing, materials, viewing and judging, reasoning and consummation. The aim is not to attempt to prove any “truth” in the theoretical construction, though one can justifiably assert that these aspects are evident in the case study. Furthermore, I shall discuss certain concepts: modelling and testing, and the rational conversation.
**Situation**
Based on Dewey, the process begins in something commonplace yet problematic and vague. In this case, the family desires a home of their own; the make-up of the family is new; the process is disorganised; and despite K being employed in the building sector, planning permission and regulations seem difficult to understand.

**Conception and testing**
According to the pragmatist theory, experimenting is the main method of development. It’s clear that the couple are continuously trying to model their ideas and thoughts, and to find answers to their questions. In interactions with the architect, sketches are the method by which solutions and suggestions are tested.

**Materials**
Dewey discusses the media of art, and how materials are created in art. In this case, it’s the house and its material shape that are created through the process of design. In the verbal formulations and arguments that appear alongside the process, I see theories that, according to Dewey, are the result of scientific research. They are not developed further, but assist the process as aids by which to hold the discussions together.

**Seeing and judging**
Another important aspect, according to Dewey’s theories, is to be able to make judgements and to evaluate results. It’s clear that the couple do not totally trust the architect’s judgement. They make use of it, but ultimately it’s the intra-familiar judgement that decides, even regarding decisive aesthetic issues.

**Reasoning**
The arguments are part of the logic of the situation. This logic isn’t clear and strict as in mathematics, but during the design process arguments appear that are deemed thoroughly valid, regardless of whether the issues are emotional or technical. The kitchen has to be spacious, which affects the external façade and other rooms either side of it. A ridge beam would increase the cost of roof construction; hence the attic rooms will not be built all the way out to the wall limits. K highly esteems certain solutions for the façade; hence these will be incorporated into the façade, despite the criticisms of the architect (which are based on his aesthetic judgement).

**Consummation**
The goal is to find a harmonious end-point, where all concerns have been addressed, so that they are no longer a problem. In this case, many of the earlier concerns still persisted. The kitchen was not as large as originally planned, concentrating water and drainage systems within the building was not successful and the distribution of windows in the façade was not perfectly symmetrical. L did not get any “breathing space” of her own. Despite all this, they are satisfied with the end result. Even in the architect’s own opinion, the finished product is a solution to the existing requirements of an acceptable standard. The result is not an ideal solution and both the couple and the architect would no doubt solve certain issues differently if the design were to be redone, but there is no urgent need for this. Even the need for a “breathing space” was delayed, though the lack of it was clearly evident.
Modelling and testing

It’s obvious that opportunities and possibilities for the couple to sketch their future home on their own are limited. In the introductory period they can rely on visual means, the plot and verbal descriptions to develop the design. To an extent the couple made use of cut-out pieces of paper to test different layouts on the plot. To progress further they were reliant on professional sketches to make their ideas more concrete, so that they could push the design process forward. When sketches are available they can examine, criticise and comment upon them. It is through these comments to the specialist that they can forward the design. Although the couple do not make sketches, they use them in the same way that specialists do, consistent with the explanations of Schön (1983, 76ff) and Brandt (1998, 79). The sketch “talks back”, as Schön describes it. In the designing process a number of models can be distinctly seen, all in different forms. Apart from those of material form, one can assume that both verbal and mental models exist. I will not address the mental models, as they are exceedingly difficult to define, and beyond the scope of the present thesis.

The plot as a model

The first modelling is based on the plot itself. By considering this they attempt to develop the design and to find situations where problems may arise, as well as ways to solve these. The plot is in itself one of the starting points of the construction, although in the primary stage of design it serves foremost as a model for the future yard area and the family’s place in the community.

Brochures as models

Model houses and brochures become a type of modelling. The couple is able to discover and compare different solutions. In this case, the most important issue is critically judging and evaluating solutions, depending on one’s own standards. As neither K nor L can sketch, they don’t develop further the alternatives using sketches. At this point the design process is rather similar to a critic’s scrutinizing a piece of art or architecture. However, the process does result in a selection, a chosen basic solution. This they see, however, as a sketch, as they put forward various opinions on what should be changed during the first discussion.

Sketches

When specialists begin to make sketches based on the chosen model house, the modelling enters a more dynamic stage of development. The client can develop, alter and see results in the model. Representatives aid the design work and the couple’s design work acts as a type of criticism.

Façade details as models

In the production stage K plays a part in the design as he manufactures the prefabricated components himself. At this point he makes minor changes and designs details of the façades. Other houses he has seen act as models. This work is not so much a type of modelling, but more the use of a database. The models prompt the memory and have contributed to the judgement of what is pleasing and attractive.
Verbal models

In the primary stage of design, and alongside sketching on paper, a process takes place, testing various minor issues and concepts. Especially through contact with colleagues and K’s network of craftsmen, ideas and questions are modelled verbally. Another issue discussed is the shape and size of the kitchen and the closed fireplace. To obtain answers to these questions they must articulate how they believe it will turn out, and explain details and shaping. This is used only to test solutions in part. It’s used for many situations where questions arise: laying the foundations, the porch roof, the shaping of the garage, etc. The answers often take the shape of questions—a type of hypothetical assertion. They are supported with explanations of how something would look or be constructed. The same situation could sometimes be described using a sketch along with a few explanations.

Reasoning

As a basis for the analysis concerning the role of reasoning in the design process, I will take Lundequist’s (1995, 84) claim that:

“Processes of design are organised around that which one, according to Vedung, (1977) can call the rational dialogue; the combined whole of the negotiations where the parties concerned come together to compare reasons for and arguments against the formulation and completion of a project. The aim of the dialogue should be to achieve a rational debate, an exchange of opinion according to established rules aiming to investigate whether the reasons given are valid and to compare the stated reasons.”

I will make use of the dialogic aspect as a method by which to explain the rationality of the design process. The reason I use the dialogic aspect is that communication is the component of people’s thought process which is most clearly readable. However, I strongly insist that the dialogue should not be seen as the core of design. Design is something much more than a rational dialogue. What I wish to maintain is that the design process contains a rationality that binds together other ingredients in the process. From this one can draw further conclusions. If the process is rational, its arguments can be criticised and questioned, at which there arises the issue of the right to judge the validity of arguments. Reflection plays a large part in how the client handles the design process: it is in the immediate impressions on the senses, by seeing and observing, that contact with the model of the house is fashioned. Here various impressions are established and evolve. One’s own standards come into play, directing one’s attention and contributing to the conception of judgements.

Architect/Researcher: What did you do when you actually received the plans?
K: We started looking at them. We sat and looked.
Architect/Researcher: Alone or together?
K: Well, I’d say we’ve looked together. But you see, when you’re actually given a plan like this, the first time or… you don’t have time. First you maybe think everything’s fine, but then you start looking closer, and you think what won’t work in reality and things will probably change.

In this case, the client is not one person, but a couple. Reflecting apparently happens mainly together, when opinions and argumentations are exchanged. They don’t completely agree on all matters, but do come to mutually acceptable conclusions by reflecting upon them together. It’s clear that argumentation and communication play an important role in the couple’s design process. Some of the problems/possibilities are dealt with mainly through discussion. One situation that can be used to illustrate this is when L comes home from work with ideas she has picked up in discussions with colleagues (interview 7.11.1999). She lays them out at home and tests them on K. They claim to have divided up between them the right to decide, but they still make decisions together. When the architect shows sketches they make some comments; however, it’s only later, in private, that they make decisions concerning further developments and alterations (interview 7.11.1999). They use the sketches as tools by which to understand and demonstrate the solution, but arguments materialize in any discussion that leads to a final joint decision. Others contribute to the design, perhaps even without their being conscious of it. The couple draws on some of their circles of acquaintances and colleagues in finding arguments and testing solutions (interview 7.11.1999). One could regard it as a knowledge of orienteering, as Molander calls it (1995, 173). One could even regard it as a broader reflection. Reflection, modelling and testing result in arguments being created. New knowledge and understanding of problems emerges, which develops into arguments and reasons for various choices and decisions, which in turn are links in the chain of the process of design. The arguments vary in their character. They are technical and emotional, but seldom purely aesthetic. Compromises can be reached when arguments and standards are at odds with each other, or an earlier policy may be abandoned. While going through earlier sketches, a previous solution for the kitchen surfaces, at which K immediately repeats his earlier positive regard for it, which L is not at all willing to accept. In the discussions L’s point of view had gained in validity and appreciation, despite K originally thinking the other solution much better.

We are examining earlier sketches (interview 18.2.2000):

K: I suppose this was a bit how I liked it, in the beginning… I mean, I liked that!

At which L, on my asking, comments right from the heart:

L: No-o, no! I remember I was really disappointed, seeing as I thought it would be that small.

The resulting design is first and foremost a model of the future product — in the shape of plans and descriptions. Silent knowledge is inherent in design, so it cannot be described solely through statements in discussion. It must also be expressed in sketches and plans, as well as in other ways. This type of expression is readable, can be understood by all parties of the dialogue, and can be complemented with arguments. Reasoning evolves in the dialogue and the parties understand. They
build up their own impression of the situation. They evaluate and judge what they understand. If the reasoning appeals to them, they will accept the design proposal; if they consider it lacking they will put forward criticisms. The criticism can concern all statements and expressions in the design proposal. The design can be developed through the criticism. If the process is successful, one reaches a satisfactory level of acceptance for the design solution and the given reasons. The logic is regarded as reasonable and the design as good.

It's hard for the researcher to follow the rationality of the design process. In some situations there is an obvious rationality, but on other occasions it's not distinguishable. The size of the kitchen cannot be decided using simple logic based on function. On the other hand, when a decision has been made this reverts to being an almost objective argument. The process of design is based on a constant searching for mutual agreement and a willingness to communicate. Reasoning is complex, but evaluative judgements are often combined with factual arguments. Joas’s (1996) three points are fulfilled: the client is independent in his or her operations, trusts in the experiences of his or her senses (body) and works in a determined way.

There is a rationality in reasoning even when standards and other indefinable factors are included. One must, however, understand rationality from the point of view of the individual and with a connection between the ends and the means — if I act in this way I can achieve goal A, but if I act in another way I can achieve goal B. At the same time we also have explicit goals that constitute the very basis of our being allowed to operate — that our surroundings regard our actions as reasonable. We have certain goals that are stated and shared, but simultaneously act as individuals in a complex network of personal and common goals.

The design process consists of different types of goals. Firstly there are the “external goals”, which usually originate in the client; and secondly, there are “internal goals” that arise during the process through modifying the task and judging the advantages and disadvantages of different solutions. These are dependent on individuals and are controlled and altered through reflection and by the situation and its possibilities. The logic in discussions concerning design solutions is mainly based on the external goals, and is assumed to display an understandable rationality that the parties in the design process find reasonable. The logic here is not of the kind where one could conclude that all problems have been solved and the design is perfect. The problems have been addressed and handled in such a way that the design meets the requirements placed upon it. There may still be unsolved problems that have been put aside.

There is a certain time frame to the reasoning. During the process, solutions are discussed, and access to information and arguments develop as the work progresses. This means that the gravity of arguments presented at an earlier stage may wane when new tasks emerge. Technical solutions can be seen as a typical case. Certain combinations of functions may at an earlier stage appear reasonable, but are defeated by technical limitations. Other arguments previously valid may be forgotten as new criteria evolve. The arguments exist not only as objective assertions, but also as expressed in materials and as evaluative statements. Design results in models, where
demands are placed on usefulness and motives. Theories are verbal descriptions that help in the understanding and communication of situations in context. Verbal descriptions can be communicated in plans. Both descriptions and plans contain concrete statements that can be easily controlled and communicated. Characteristics and materials cannot be generalised nor completely described in words, nor can they be reduced to theories without losing some of their characteristics.

The architect has or takes the role of mediator between the culture of the client and the architectural avant-garde, and introduces ideas and reasons why it should be designed in a certain way. S/he has his or her design skills but also the reasons established in the culture of fine art architecture and in his or her education — alongside his working experience. The architect can never fully dominate the design process with his or her skills or cultural understanding and reasoning, nor can he transfer very much of his or her cultural understanding to the client. During the design process the architect now and then is able to push some ideas stemming from his or her education and professional values. There is a difference in the knowledge of the architect; between the basic design rules that s/he has acquired (for example, about proportions and what counts as acceptable) and the ideals of a strikingly good design. Most often the architect just tries to adjust the design to the basic design rules. S/he sees that it’s not possible to impose his or her understanding of the ideals of the avant-garde on this commission.

The client and aesthetics

According to Dewey, aesthetics lies in action. He distanced himself from descriptions of aesthetics and saw no point in giving any extensive description. According to Dewey, descriptions and definitions of quality in aesthetic experience should be simple, because they concern something unique — in terms of both the situation and the individual persons. A definition should guide the way so that others can find the same path (Dewey 1980, 215f). It’s not a matter of trying to tie down a perpetual quality. It’s obvious that aesthetics is centred around the individual and his or her social context, because it’s through individual experience that the aesthetic process is begun. Aesthetics is not fixed in a ready-made canon or definition. Canonic examples do occur, but they are merely details and fragments in the background. Aesthetic qualities appear in the process. They are bound to earlier experiences, standards and preferences, but these are not the aesthetics.

Design ideas are present in the process. The client points out examples of solutions for details in existing houses. Concerning the design of the stove, it’s later revealed that they found a model in a brochure that they will use, and the same goes for a bar counter between the kitchen and the dining table. These guiding examples are, however, not the aesthetics, but more of an illustration or model by which to understand what may be regarded as suitable. Then again, even simple models
facilitate the work. An architect would perhaps dedicate more time to investigating solutions and developing them on paper. In addition, one should be aware that aesthetics are bound to time and situation. As Dewey saw it, the aesthetic quality is a product of the co-operation of the individual with the product and environment (1980, 214ff), arising here and now through a process that leads to a unique product as a result of co-operation between several parties. At another time and through a different process, or with others taking part, a different result would have been achieved.

In regard to the theories of Bourdieu, discussed earlier, I think it’s important to see the distinctions from pragmatist thinking. The design and production of these houses is clearly positioned at the commercial pole of the architectural field, because the production means are more important than the artistic ends, in comparison to avant-garde production. It has to be commercially sound. Using the vocabulary of Shusterman, I would say that it’s also an example of popular culture, but it’s also important to notice that there are significant differences between different design approaches, also due to the need to match the interests of the client and their culture. The houses are tailor-made to a large degree. Regarding the architecture, I find it difficult to trace any remnants of vernacular architecture in this culture, in the sense that there is now much input from outside this subculture. I see this popular culture as a mixture of commercial interests, individual interests, local subcultures and a rather strong influence of different commercial media. The client is clearly embedded in a local subculture and this subculture influences the ideals — as a kind of tradition that might create a vernacular architecture — but the power of commercial interests and the treatment by the media is such a strong force that I don’t think it will create homogeneous expressions of the local culture (vernacular architecture) as the old timber houses have.

When discussing aesthetics in the mind of the client, the context must not be disregarded. An illustration of aesthetics should take into consideration the way in which the individuals work together. The design project and the context of the process are essential components of aesthetics. It’s obvious that one component cannot on its own realize the process. Perhaps the architect maybe able to realize it, but then the house would be his own. The client requires assistance in sketching and drawing plans, while the architect is dependent on the decisions of the client. They in addition depend upon technical, legal and production-related opinions, which are usually communicated by other parties. The solution is developed by weighing up many factors and this is itself a component in aesthetics. Aesthetics are bound to the whole, and thus technical and other factors cannot be separated; nor, for that matter, can aesthetics simply be applied as a final and separate stylisation. Actually it can —but then the design process is constituted of two separate phases, a comprehensive and integrative one and a superficial one. The latter is a design process but a reduced one.

Open conflicts arise between differing individual judgements. This occurs both between the architect and client and amongst the family members. According to Lundequist, “design [is] a question of dealing with conflicts of judgement” (1995, 84). On the other hand, respect for the judgement and opinions of others does exist.
Asking one another’s opinion is a principle component in the process of design. The client seeks opinions from the architect, the couple discusses theirs amongst themselves and the architect enquires of the client their thoughts on suggested sketches presented. The conflicts are solved mainly by the architect sketching and making suggestions and by the client making decisions.

It’s clear that the client is flexible and aware of the situation in judging what is suitable. For example, regarding the exterior, the demand for a traditional red façade is accepted, despite the couple having originally planned a house with a white brick façade, which is also commonly carried out with completely different façade details and house design. A blueprint for the room layout, according to Horelli-Kukkonen (1993, 158), evolves during childhood, which is often used as a model when one builds one’s own house. With regards to the client, one must assume that both K and L have as a blueprint an open floor plan, with a connection between the kitchen and living room. It also materialised in discussions that there was an additional issue of a counter-reaction to the small kitchen they had in L’s apartment. According to Horelli-Kukkonen (1993, 181), the home acts as a means to regulate the psycho-cultural aspirations of the individual and of the family. This is something that one suspects even in this study. The client’s aesthetic judgement is integrated with their visions of how family life will be organised, and a willingness to create a “breathing space” for the individuals is clear.

**Shortcomings in the design of owner-occupied houses**

One aim of the present study ought to be the mapping and guiding of judgements. As a professional planner I therefore wish to examine the design process as concerns builders of owner-occupied houses. In general I feel the process is reasonable and that it functions as it should. It has certain weaknesses, but results in houses in which the clients live for long periods of time. Often their architecture is criticised as not being of a high level; that is to say, as “fine art”. However, this can hardly be the aim in the mass production of family homes. On the other hand, there may be a certain motivation in directing the creation of larger units, blocks and city districts from the standard applied in family homes towards a higher level of architecture. Together they form the shared environment and that is in itself a good motive in aiming for good results.

Architects contribute only to a small degree in the design of owner-occupied houses in Finland, as elsewhere. One reason for this must surely be the costs involved. There is little profit in designing family homes, both in economic and symbolic terms. Therefore specialists with less education and lower demands as regards payment my often be employed. One necessary solution is also to rationalize the process. There is a likely deficit of architectural knowledge in the process. Other specialists in building are almost totally uneducated in this; they are taught to design
on the basis of building techniques, construction and production. I nonetheless
draw the conclusion that the system works. The client is satisfied and is possibly
not even interested in the opinion of architects, as the latter concentrates only on
high levels of architecture, or as K describes it: “I mean, we don’t want those kinds
of square windows that architects plan”. Despite the small size of the construction,
it contains the same fundamental complexity as larger projects: amongst other
things, professional design with the corresponding need for specialist knowledge;
a freestanding, abstract definition of the product that comes before the production
proper; interdisciplinary communication; control of an unpredictable process. One
conclusion I draw from following such cases is that the builder of an owner-occupied
house organises the undertaking using very meagre means. Smaller clients with
smaller projects cannot usually invest extensive resources in design and overseeing.
In order to remove causes of uncertainty, he must rely on established components
and utilise solutions already proven to work. Regardless of the problems, the process
must culminate in a solution most suited to the life of the family. The architect,
of course, doesn’t know the client, despite having known one of the couple at an
earlier period of his life. The architect doesn’t know much about the needs of the
client and how the family lives, and they live in different subcultures of Finnish
society, despite their closeness in physical distance. Time is short and the client is a
layman, so that although the family is mostly fully familiar with their needs, wishes
and examples, the process may be hampered by the lack of competence and/or the
resources of time and/or money. The ideal must be conceptualised before it can
be expressed to the architects, who can convert it to models in the form of plans
and so on. Another problem is that the architect and client have different views on
architecture. Their frames of reference and target audiences are not the same. I can
discern an answer to such problems in the working communication. Something
the architect could benefit from is a more extensive knowledge of contemporary
popular architecture. The primary objective in designing owner-occupied houses
has to be the creation of a living environment that corresponds to the needs and
expectations of the client.

The client’s access to expert theoretical knowledge and explanations are heavily
dependent on the client’s network. The subcontracting in design and overseeing make
little contribution to the project management, which the client is forced to handle.
Usually design is restricted to the building permit stage and the overseeing acts
mainly later as a control. The client must take necessary steps and make decisions in
good time to ensure the smooth continuation of the design and building process. He
is usually alone in this task. One could, of course, say it’s his own choice to preside
over the work himself; but due to the costs, it’s seen as too costly for the client to
employ a specialist to organise and monitor the design and construction works. On
the other hand, I see this as probably the biggest problem in projects of this type.
They are left alone with (management) procedures that are much more complicated
than the other tasks during the construction process. Instead of the division between
two consultants — a main designer and an overseer of the construction — stemming
from the legislation, the client would rather need one consultant hired for both
design and construction overseeing — a project manager.

Building owner-occupied houses is simultaneously building a community, yet it’s
clear that most people designing owner-occupied houses are blinkered to everything
but their own house. Based on the case study, one can probably generalise the lack of interest in integrating with the neighbourhood architecture.

The matter of aesthetic quality is something that is and will remain fraught with conflict. The client knows himself best and is aware of his own evaluations and wishes, inarticulate though he may be. I don’t believe one can design without opportunities for aesthetic experiences arising. Without these aesthetic experiences I assume one cannot design constructions or technical systems, unless one simply repeats something done previously. It’s unclear where to draw the line as to what is regarded as pure mechanical repetition, but houses are usually built as unique entities, which require the adaptation and alteration of corresponding parts. One conclusion must thus be that the design of owner-occupied houses is a situation of conflict, where various aesthetic experiences of more or less the same thing are interpreted as being different. This leads to conflicts that, using Schön’s terminology, must be dealt with. This is a principle task for the designer.

One difference between the management of the detailed plan and that of the authorities granting a building permit is that the authorities strive to treat everyone equally and to offer the same conditions in all areas of the district, while the management of the detailed plan aims to give a stamp of individualism to the area (interview with the project engineer, 31.3.2000). Through ambiguities and a liberal interpretation, the influential effect of the plan is mitigated. This gives more liberty to individual builders, but the possibility of areas with their own character arising from this is down to chance. The couple’s architect, the officials and the consultant for the zoning project, and apparently even the elected bodies involved in the project, all emphasise the need to adapt houses to their environment and to each other. The client, on the other hand, has little understanding that they should adapt their design in order to be consistent with their neighbours and surroundings — the central issue for them is their own individual design. For the client this mainly evolves from their needs, aspirations and evaluations; it’s seen as a freestanding object of design and judged as freestanding from the neighbourhood. Another interpretation is that the family does see the connection with the neighbourhood, but attributes little importance to the adaptations for the impression of the whole, and believes that they cannot positively influence its shaping through adaptation.
DIFFERENCES BETWEEN THE ARCHITECT AND CLIENT

What role should architects play in projects involving owner-occupied houses? With regards to resources, it’s hardly reasonable to commission architects to prepare a design of the house to such a detailed level that it would guarantee the combination of the families’ ideals with ample competence in design, and further, that it is constructed correctly. It’s even possible that architects’ primary interests lie in larger projects and buildings that take centre stage in the community; then again, most architects support the view that architecture is not created by extensive resources but by good workmanship. To keep the costs low, however, the design must be frugal and the use of external resources must be minimized to a much larger degree than in large projects designed by clients using professional builders. Even so, according to Meland (2000, 206f), inadequate resources contribute towards inadequate results. The design and the house should be created using simple means and with components that are suitable in many situations. When describing the content of popular music, Shusterman speaks of how the constituents must be robust. Here must still be room for the client to realize and apply his own aesthetics. The process must give room for co-operation and influence.

Various differences between the architect and client can be detected. Here I will restrict myself to a comparison between K and the architect, as they share a common background. K and the architect grew up in the same environment. The influence of the family background naturally differs from individual to individual, but it can be assumed that their culture is relatively similar. Adult life, however, has brought about important changes, with the persons concerned moving and living in environments different from those of their formative years. Both K and the architect have lived in different places and have become acquainted with different house types and architecture. In their education and profession there is a marked difference in background. The architect has been educated in a way that to a large extent deals with understanding internationally accepted examples of architecture and learning to create similar works himself. K has worked in contact with clients of detached, owner-occupied houses, and has accomplished constructions with a presumably commercial architecture, but one also fixed by the limitations of the production of prefabricated components. The architecture K is working with displays a certain homogeneity both regarding style and culture. Also leading members of the local community buy this type of houses and architecture.

There is yet another important difference between the architect and the client. The house in the project is an owner-occupied house for the client. The architect has learnt, through his education and profession, general rules concerning the design of homes. On the other hand, he does not know much about the lifestyle and way of life of the client; it’s the client who ‘specialises in the family’s living habits’. When one considers target audiences for the architecture one must assume that differences are also present here. For the architect — as for other professionals — it’s the circle of colleagues that plays the largest part in the evaluation of results. For the client it’s the people in the immediate surroundings — neighbours, relatives,
friends and colleagues — that constitute an external target audience. In answer to a
direct question the couple says that they want the architecture to give passers-by a
good impression. This difference means that the client is anchored in a popular and
local frame of reference with a broad range, whereas the architect has a narrow and
avant-garde frame of reference.

The architect’s role should perhaps, in the spirit of pragmatism, be more one of
contributing, providing criticisms in the form of mapping, analysis and guidance.
The criticism should not be about determining what architecture is or is not.
The usefulness of specialists lies in that they, with their knowledge, take part in
the reality and objects concerning many layers of society, and analyse and find
interpretations in these. The objects should not be chosen from among the absolute
elite of architecture, but from among those planned and built as ordinary homes.
This could at the same time give a mutual, inspirational exchange between popular
and avant-garde ideas.

Despite my criticism, of calling into question how architects conceive of themselves,
with a result indicating that others taking part also avail themselves of their own
aesthetics, I see certain issues that speak for the involvement of an architect. The
study contributes towards a view of the architect’s task. I would like to summarise
a few assumptions:

- The architect, client and probably also the other professional designers
  make use of aesthetic quality in a similar way
- Many of the minor processes within the design process are forms of design
  where aesthetics play a crucial role
- The client and architect do not do the same things, even if they both
design.
- The client needs the design competence of the architect

I am inclined to conclude that there are differences in how the various parties
act. The architect is better at certain things — dealing with design problems that
involve sketches, for example. Drawing up sketches and plans — modelling —
is of great consequence in design. In the case study, the architect does not hold
technical, economic, legal and appearance-related issues together within the whole,
matters that usually constitute the ingredients in the process of design. In the case
at hand, it is the client who has control of the whole; the architect mostly restricts
his contributions to issues concerning function and appearance. He does, however,
have a clear mission in uniting all the issues. The client works on his own aesthetics
and leads the project, but uses the architect to combine the relatively heterogeneous
ingredients in the design: function, appearance, law, technology and economics.
The architect’s primary function is as a processing professional, with a good
ability to deal with and combine complex and conflicting elements. Along with
this, there is, of course, the ability to envisage the whole, to compare the import
of lesser problems and not to focus on details, for example in the façades. Also
included in this is the ability to recognise and work within the technical, legal and
economic constraints placed upon the project. These constraints do not, of course,
contribute to design. According to pragmatic aesthetics, it’s the combined total of
all the elements, compiled under the influence of functional demands and aesthetic
paradigms and through a process defined by experiencing aesthetics that leads to a
good result.

Finally, I think it’s important to notice that the words “aesthetics” or “aesthetic
quality” don’t function very well in the present situation, where I try to make
distinctions between the aesthetic experience, the canonical traditions or culture-
based tacit aesthetic canons, the explicit canons of architecture expressed in literature
on architecture and the history of architecture and the academic discipline.

**The client as designer — A crisis of the architect’s identity**

In questioning the current views on aesthetics, a need to reflect upon the role of
the architect arises. The client’s right to aesthetics becomes a dilemma for how the
researcher/architect conceives of himself. What then is his or her competence? To
illustrate this, I have chosen to compose a dialogue, in the belief that this will better
illustrate the problem. The dialogue is at the same time a step into the interesting
design aspect stemming from cultural differences but which also constitutes an
important cultural framework for design competence and knowledge of top level
design codes.

The following is a dialogue between two architect colleagues. One is the researcher/
architect (the author of this thesis), the other a practising architect. The account
is fabricated, but is based on a series of argumentations that have ensued on
various occasions. The initial argument has often originated from something else,
for example a dissatisfaction in the practising architect concerning the quality of
architecture, which he has come across in the community and in his work. The basis
of the argument has been the research architect’s subject, under the working title of
“The client as designer”. The authority of the position of research is simultaneously
being provocative and questioning the role of the practicing architect, as well as that
of the research architect’s own professional role and the established view within
the architectural body. The predominant opinion is that the architect is the leading
“designer” — and it’s not easy to change one’s opinion. From the point of view of
design theory, there’s no great problem in regarding the client as a designer. It’s
simply a question of how one’s inclinations fall.

**The client as designer — or the architect?**

A: Why on earth have you put kitsch decorations like that on the façade?
F: It wasn’t me! I was pushing for a simple façade with regular window frames and
simple white corners. It’s the client who’s put them there. He builds components
and nailed them there himself.
A: People have no taste! They shouldn’t be allowed to change the architect’s plans!
It would definitely have been better with simple frames, like you said.
F: But he wants it this way! He thinks it’ll look nice with patterned frames and stylistic components on the corners.
A: Surely diverging from the plans of the building permit isn’t allowed! If you’ve drawn up the plans without decorations it has to be built according to those permitted plans.
F: The building inspector says it’ll be fine. Besides, in his experience the Swedish prefabricated houses with simple facades tend not to agree with the Finnish houses, which have a lot of carpentry on them.
A: But it’s wrong of the building inspector to let the client change the architect’s plans!
F: Well, that’s often how it goes in small rural districts. And morally/legally it’s the client’s house. So he should also get to decide how it looks.
A: But it’s not the client’s design. The creator should have some kind of copyright anyway. What if everyone did things like this? When we were doing an extension on the bank’s property on the High Street, the client came up with all sorts of tasteless ideas. He wanted bars in the big windows facing the street, for one. Bars in the windows! In that façade!
F: Yes, but isn’t it ultimately the client who’s the designer? He’s going to own the house and ultimately makes all the final decisions.
A: No, I don’t think so. I mean, he has no competence in shaping the scheme. He just makes decisions, and that’s administration. The architect has responsibility for design.
F: But you have to admit that the client influences the design! Without his consent nothing comes of anything, no matter how nice your solutions might be. If you work on lots of alternatives he’ll choose one of them and his choice decides it. You’re just a tool for him. Besides, the client is a specialist regarding his own life, tastes and activities.
A: I can’t accept that! He may be familiar with his activities but he can’t shape the building. He just makes decisions, and that’s not design!

This is how the discussions flow, and even if one understands the other’s arguments it is hard to abandon one’s own platform. This platform is anchored in one’s opinion of oneself and cannot be defeated by simple factual arguments. From the discussions and the results of the research, my conclusions are that both the architect and client can be regarded as a designer. The client makes crucial decisions, modifies and judges matters like a designer. However, he does not make use of the traditional tools in architectural design. The client leads the process of design through the position s/he takes on initiatives, judgements and decisions. It’s also the client who is the central subject when one regards design as a “rational dialogue” constituting both objective and evaluative arguments. Compiling the various arguments is accomplished mainly by the client. S/he weighs up costs against architectonic shape, building technique and all other factors to create a picture of the whole, using his or her own aesthetics and ability in design. The problem of who is the real designer still stands. The client has the final say. The architect is familiar with the ideals of fine art but does not have a monopoly on design. The architecture should be a “symposium” of many different arguments, and should also include the client’s opinions on what good architecture is. It’s obvious that there is a need for aesthetics
in the design process. All parties must rely on their own concept of aesthetics and their ability to express this. The professional designers are tools for the client in his or her design work, yet the final product is not the result of one creative genius but of a co-operative collaboration in which a variety of aesthetic experiences are brought together to create a satisfactory unity.

Notes:
1 This is approximately equivalent to the sixth form in British schools.
CASE 2:
The Design Competition
INTRODUCTION

The first case study triggered both further ideas and puzzling questions. What is the difference between lay designers and professional designers? How can the design process be opened up such that ordinary people open up the design process such that ordinary people get access to the joy of the aesthetic experience of architectural design? How are we to organize collaborative design, and why is there a cultural borderline between ordinary people and architects? This led my research into the opposite direction. What is avant-garde design? In order to make an inquiry into this, I have carried out a case study in the office of a successful architect; investigating the process, the organisational setting and the professional setting of artistically successful architects. It’s an exploration of aesthetic experience and tacit knowledge within the collaborative design process of Professor Ilmari Lahdelma (1959-), a successful Finnish architect with a reputation for winning architectural competitions with innovative solutions, and who runs a successful office with his partner Rainer Mahlamäki. One such successful competition was for the design of a new library for the city of Lohja in Finland, held in 2002, and which forms the background to the present case study. The case study involves describing repertories as well as the actions of Lahdelma in this specific context, as he works with a few co-designers who are subordinate to his artistic leadership. It’s also an investigation of the competition process, based on interviews with all major figures in the competition jury. In my interpretations I apply Nonaka’s and Takeuchi’s spiral of knowledge conversion, shifting between tacit and explicit knowledge - the means of sharing and creating knowledge about the future library in an organisational setting. The case study includes an exploration of the social context of both the design agent and the competition and an interpretation of them based on Bourdieu’s field theory.

A core issue in the interpretations of this case study is the knowledge embedded in the avant-garde culture and production practices. Lahdelma is part of the architectural establishment in Helsinki, and has been participating in various architectural institutional organisations. Also, since 2003 he has been Professor of Architecture History and Theory at the School of Architecture at Tampere University of Technology, where he had first studied architecture. The architectural competitions can, in a Bourdian perspective, be seen as an instrument for the internal development of architectural dogmas and codes. Competing architects aim to design award-winning proposals, thus allowing them to enter the realm of the “consecrators”, with power to judge what good architecture is. While the architects can develop their dogmas by means of competitions, the clients acquire cultural power by buying avant-garde design, selected by avant-garde competition jurors. One conclusion is that the skills and codes necessary to be successful in top level competitions are rather few. Architecture students are often successful in design competitions, even if they aren’t familiar with all the other necessary skills of a mature architect. On the basis of Bourdieu’s theory of art, one could conclude that the results and developments at the top of the artistic competition influence the rest of the field of architecture.

THE COMPETITION 227
At the beginning of the research I had the idea that I would need a third perspective in this investigation of design processes. I wanted to have the perspective of a design manager, preferably within the context of a big commercial project, because they usually look at design processes and architecture from a different perspective, and express values other than those of the designer. My original intention was to conduct a third case study on an engineering project, where architectural design is not regarded as a big issue. Unfortunately, this idea turned out to be too ambitious. The thesis would have grown too large both in length of execution and size. Instead, I have included an interview with a project manager, discussing his experiences and attitudes towards design management. As it happened, I came across this opportunity more by chance than by research planning - or by seeing that I was confronted with an experienced project manager suitable to clearly express his ideas about design management. I had been considering making an interview with the project manager for the library project but found no good reason to do so, because my intention was not to go into the post-competition design process. I did participate in a few meetings after the architectural competition was over, and observed the relation and actions of the project manager in the design project. Rather late in the research, however, I decided to approach the other project manager I had recently encountered. However, I see no big difference to the overall findings resulting from the interview I have included, and this second approach was much easier to do. Still, I also think it was better to include a perspective stemming from a discussion concerning an outside party. Thus the statements are much more universal and stronger, as a contrast to the ideas of the architects in this case.

Among architects, architectural competitions are held as being of great importance. They have several times heralded the beginning of a distinguished design career. Prize-winning proposals often pave the way to interesting and well-paid projects and a good reputation among colleagues. Some famous architects’ offices have been established by winning important competitions. Still, the competitions are prepared - and involve many man-hours’ work - with little chance of repay. On the other hand, there are many offices that are more client oriented, seeking their success in serving client needs. These can be commercially successful but hardly artistically. In the competition for the design of the Lohja Library about 200 architects or offices invested roughly one month of their time knowing that only five or six of them would receive a prize and some return on their time and money invested. During the case study the members of the Lahdelma and Mahlamäki office prepared a total of seven entries (most offices prepare only one entry). Three of them were proposals made by the office and three were private proposals by office employees. A seventh private proposal was left uncompleted. All members of the staff see participation as a matter of central professional interest and as an appropriate training for ambitious architects generally. The owners of the office also see it as an interesting hobby and as an allowance towards their employees. It’s part of the tradition of ambitious young architects to compete, a tradition accepted and supported by the owner-architects. There’s also an acceptance of the idea that winning is not dependent on resources - nor is it certain that any given style or idea will win. Still, the “official” office proposals are prepared using more resources. The private proposals are prepared in co-operation - trading contributions with possible shared honours and prizes, by naming the partners as ”co-designers” or ”assistants”. Most of the work is done
during the employees’ spare time, in-between the pressing daily design tasks of the office. The proposals are based on what I estimate as an average of roughly 100 hours work, costing an architect’s office at least 5000 Euros if seen as a design contract. The amount of time spent on the different proposals varies a lot. It turns out that the time spent on the winning proposal was rather short.

The task of the Lohja Library competition jury started in June 2002 when the professional jurors met to sort and rank the 190 entries into five classes, ranging from lower to upper class. The first selection is done by a group consisting solely of the professional jurors. The senior SAFA juror chaired these sessions, articulating the criticism of each scheme at the beginning. The evaluation process was seen as easy. It’s obvious that the architects made most of the evaluations and judgments in the competition based on qualities defined by architectural standards. The final selection was made under the chair of a lay juror, the chairman of the Lohja town council. Still, he himself stated that it was reasonable to trust the professionals and allow them the right to select and exercise their professional judgment skills. At the end of the selection meeting they had no problems in agreeing on the winning proposal, which carried the pseudonym “Johdanto” [Introduction/Preface]. The proposal was well received in Lohja and the town council immediately started organizing financial support for its construction. They procured the funding even if its construction was scheduled to take place a few years later. The immaterial consequences are that the town will get an interesting library - a library with an added value - attracting an interest different from that of the library clients simply looking for interesting books and other library services.

The competition jurors have been initiated into the world of the top-level judgement of architecture. Especially for the young architects this is a major qualification. For the winning designer it’s one of many prizes, yet it can be seen as a sign of his or her enduring competitiveness, attracting the interest of ambitious young architects and possible employees. It also attracts the interest of clients interested in high-rank architecture. In a Bourdivian sense, it confirms his or her status as a high-rank architect in the eyes of colleagues. Other architects will study the results and try to elicit the essential traits of the architect’s success. The proposal essentially contributes to the ongoing discourse and development of architectural theory. The prize-winning proposals for the library were presented a few months after the announcement of the results in the competitions’ supplement of the journal of the Finnish Association of Architects (Arkkitehti/ARK 3, 2003) and the completed library will presumably be presented in the same journal in due time.

I start the following presentation with a description of the office and its architecture. I then present the design competition as a design process, starting with the preparations by the organisers, then turning to the actual sketching processes, and finally ending with the process of the jury. Here I also include the comparative interview with a project manager, whom I met in another design project and who seemed to be able to express a perspective on architecture and design different from that of most architects. In the final section I go into the interpretations of the case study, discussing aesthetic experience, the architects’ business and organisational and design learning. One of the major issues is the role of avant-garde cultures
and the art of design knowledge. The rich material for the case study was mainly collected by participant observation and interviews held during the design process. I visited the office for approximately 8 days during a period of about 3 weeks, in May 2002. The duration of the visits varied from a couple of hours to a whole day. When the competition jury had made their selection I interviewed five of the jurors. All interviews were taped; some of the presentations and activities in the office were videotaped. The tape recordings have not been transcribed. The story of the architectural student was written by him and I added an introduction and translated it all into English. The designers involved in the processes were given an opportunity to read the case text and comment, but none of them wished to add or change anything. The attitude towards my research was very much open but with little real engagement on the behalf of Lahdelma and Mahlamäki. I was given access to discussions and material, and answers to my questions but with no real involvement. I was tolerated and treated well, as anyone interested in their production would be, but there were no attempts to try to promote certain ideas or perspectives. Rather was I given a good opportunity to observe, but had to ask for explanations and answers. Still, when asked about their career and previous architectural production most architects, also those outside the office of Lahdelma and Mahlamäki, responded thoughtfully – though perhaps Lahdelma was at that time one of the least responsive. What I could sense as a response to the research going on was the creation of a third entry in the final week, as a sign of their creativeness and attempting to replicate a previous success, the competition for the Finnish Forest Museum (Lusto) in 1990, where they produced an entry in a very short period of time, receiving first prize.
THE ARCHITECT’S OFFICE

An architect in Finland has a university degree, normally at a master’s level. The architectural profession is based on certain ideas and traditions. The unifying idea is the belief in architecture as a matter of art, with a strong sense of architecture for its own sake. The architect’s education provides a mixture of technical, social and economic education, but the main skill, taught by studio-based learning, is the skill to design - to combine functions, materials and values into a holistic, partly conceptualised, form. After the basic courses, the students start to produce design proposals and much of the teaching is done through inspirational lectures, tutorials and critiques of the evolving student proposals. Reading and literature generally are not regarded as essential. Courses on art history, physics, computer-aided design and building regulations are standard during the early years, some of these existing also in other disciplines within the university. One subject peculiar to architecture, however, is theory of architecture, which is a mixture of a theoretical analysis of objects, ideas, influences, and examples - often as interpretations of visual or form expressions.

The final diploma work is usually a design proposal, though also comprising a small written report. It’s possible to make the final diploma thesis as a completely written thesis, but that is rare yet not uncommon. In Finland there are three different institutions offering professional degrees in architecture, all of them autonomous departments in universities (Helsinki University of Technology, Tampere University of Technology and Oulu University). There are no other institutions offering courses in architecture, except engineering colleges offering some basic courses for so-called construction engineers. Most professors of architecture have received their position on the basis of professional and/or artistic qualifications. The lack of research and completed doctorates has reduced the funding at the schools of architecture. Internationally, Finnish architecture is recognized as interesting and successful. The most ambitious students participate in design competitions, both as part of their education and during their spare time when employed in an architect’s office. One young successful architect estimated that he had participated in 50 competitions. Several architects that I’ve interviewed say that the education in Helsinki is primarily a preparation for designing competition entries. A relative large number of offices and professors appear to participate in architecture competitions on a regular basis. Open competitions often attract about 100 entries and there are about 2000 active architects in Finland. In open competitions only about five entries receive some financial reward.

In May 2002, when my investigation took place, the office of architects Ilmari Lahdelma and Rainer Mahlamäki had about 20 employees, including the wives of Lahdelma and Mahlamäki. Their office has been located in central Helsinki since 1999, in a part of the city close to the ship-building yards. The main commissions of the office are public buildings, such as university buildings, libraries and schools. Most of their commissions are the result of the office winning architectural competitions. At the time of the present investigation, a library was under construction and a building for the student’s union in Jyväskylä University.
was about to start on site (a prestigious contribution to the campus from the fifties designed by Alvar Aalto). One major commission that they have received in the normal way - through personal and business relations - is a large building for a private foundation. Lahdelma and Mahlamäki lead the work in the office. They both make design proposals and monitor the whole design process. The staff does most of the design work, but the two partners continuously follow the projects, taking part in the meetings with representatives from outside and discussing with their own project managers. The staff consists of architects and students. The only non-architect is the office secretary, responsible for administrative tasks. The members of staff are rather young, with about 50% of them students.

The beginning of Lahdelma and Mahlamäki’s career dates back to the time when they were studying in Tampere, nearly 20 years ago. They had organized a workspace outside the school. With the name 8 Studio (i.e. it had eight members) they won a competition in 1986 for a health clinic for elderly people in Hausjärvi. This success was followed by numerous competition-winning design proposals. They, with different combinations of designers, won as many as ten first prizes within five years. This was also seen as the beginning of a successful era for the comparatively new department of architecture in Tampere (founded in 1969), and they became an icon in the field of architecture in Finland, with both admiration and rivalry. Before this, the department of architecture in Oulu had been challenging the dominant position of the oldest and most prestigious department of architecture in Finland, Helsinki, by adopting a neo-vernacular design strategy, with students and architects from Oulu winning architectural design competitions, leaving Tampere as the only one without notable success.

During the recession, in the beginning of the 1990s, there was a general lack of commissions and the members of the 8 Studio agreed that the group had to split up. Lahdelma and Mahlamäki, together with a third partner, established a joint office and moved to Helsinki, where there is a much bigger market and where they already had some projects running. This was a time of suffering and uncertainty in the profession due to the recession. It wasn’t certain that they would be able to continue, despite their successes and their impressive list of works constructed. From 1986 onwards Lahdelma and Mahlamäki have been teaching in Tampere and Lahdelma later also in Helsinki. In 2003 Lahdelma was appointed professor of Architecture History and Theory at Tampere, though at the time of the competition design he still taught in Helsinki. Mahlamäki has been Professor of Modern Architecture (I-II) in Oulu since 1997, and since 2000 he has been Head of the Department. Their involvement in architectural institutions also includes periods of membership in the sub-committees of the Finnish Association of Architects (SAFA), including the Competition Committee. They have both several times acted as jurors of architectural competitions.

Lahdelma and Mahlamäki have a 15-year-long history of success in architectural competitions in Finland. Their office is probably one of the most successful offices ever in Finland. Nowadays participation in competitions is a luxury for them because of their many different pressing commercial projects and teaching duties. Still, the owners see it as a way of staying “fighting fit” and they support their employees in
their attempts to participate on their own. The staff is young and include up to 50% students, depending on the office workload. During the last year or so, some of their employees have started their own offices - with the endorsement of Lahdelma and Mahlamäki, who indeed see it as a normal development. The office has continued to prepare competition proposals, and to participate in competitions on a regular basis. It’s difficult to tell precisely who enters architectural competitions, because the competition entries remain secret, but there seems to be a distinctive group of mostly young architects and students - a kind of avant-garde - regularly competing. Other well-known offices also like to participate in competitions and contribute to the status of the whole competition institution.

The office of Lahdelma and Mahlamäki is situated on the sixth floor of an old building on Tehtaankatu [Fabriksgatan/Factory Street] near the shipyard on the southern seashore of Helsinki. It’s located in a red-brick building with an unusual stepped gabled façade, though with a rather anonymous office building atmosphere in the interior. The office space is divided into four small offices and one large space, where most of the employees sit. One of the smaller rooms with a large table is used as a meeting room. Part of the large space is furnished as a kitchenette, with a few small tables. The large space is divided with partition walls and filled with large drawing tables and computers. The overall impression is that there is very little spare room, and that all desks are filled with paper and drawings: it’s a workshop - a production unit - not a fashionable office space. There are some hints of stylising. For example, there are a few examples of modern furniture and a few walls are painted black, but these elements aren’t enough to generate a fashionable impression. It’s often a bit too warm in the office. The atmosphere is calm and concentrated, with most people focusing on their own work with occasional interruptions when discussing something with colleagues.

The working atmosphere is open and liberal. There is no checking of arrivals and departures. Most people stay all day, though some arrive later and some leave later. The staff has a respectful attitude towards Lahdelma and Mahlamäki. Their office remains open and people approach them with different matters in a causal way. They are involved in most projects and need to be briefed, and are asked to make judgements and decisions. Still, the employees obviously avoid asking too much from Mahlamäki and Lahdelma. They ask each other for advice or the office manager. The employees seem to care for their relationship to the bosses, even if it’s difficult to think that it matters much to the bosses. The wives of Mahlamäki and Lahdelma act as a link between the bosses and the employees; not in the sense of formally constituting a link between them, but by being part of the working community. As a secretary and senior architect, they represent the owners as members of the team. Mahlamäki and Lahdelma are definitely bosses, in the sense of taking responsibility, leading projects and with ultimate decision-making power. Architect Mikko Kaira is a peculiar case in the office. He’s a former partner, who now has his own separate office, yet shares one room with the employees of Mahlamäki and Lahdelma. A student, Petri Saarelainen, also has an office space elsewhere together with other students, where they prepare student projects and entries for architectural competitions. This kind of design community of students seems to be quite common.
A day at the office

On 29th May 2002, the second but last day before the deadline to the architecture competition, I observe the life of the office for a whole day, from just before 8.00 to 18.00. At that moment about half of the staff is involved in the Lohja Library competition. When I arrive there are only two employees in the office. One is preparing for a meeting, due to start at 8.00, and the visitors will be offered coffee and buns. At 8.00 Mahlamäki and three employees arrive. Mahlamäki will attend the meeting. Most people fetch a coffee and sit down at their desks. Somebody comments on the presence of champagne glasses in the kitchen. There was a celebration the day before, during a break. I hear snippets of conversations, such as: "shelter regulations", "slips on the table", "oh, you’re doing that one". Two of the visitors, arriving for the meeting, discuss an accident between two bicycles. I can hear some music in the background, the whining of computers and a printer starting up. At 8.30 the telephones start ringing. Somebody explains that he has slept only four hours, and that he came by bicycle to the office. It’s a very nice day outside, but in the office you don’t notice it. The blinds are mostly closed and you cannot see very much through the windows. After 40 minutes at the meeting Lahdelma takes a break to have a look at a cross-section for one of the competition entries. About 9 people gather for a coffee break. Mrs Mahlamäki announces that they will celebrate the granting of a building permission with rose champagne. The employees gather for a break and chat in a friendly manner. The bosses are not present. At 11.00 a young man comes and offers sandwiches to those wanting a fast lunch. Some people go shopping, while others go out for lunch. The day continues: all the time the soft clicking of computer mice can be heard, the telephone ringing, people walking around, going to ask for something or getting photocopies. Nobody takes much notice of what the others are doing: each concentrates on his or her own projects and tasks. Lahdelma has a simple lunch in the kitchen and reads the business newspaper. Afterwards he discusses a 3D-illustration with the consultant temporarily working in the office on a lap-top computer at a corner of a desk. Mahlamäki has gone home to discuss a door, as he is the chairman of the residents’ board in the apartment block where he lives. The atmosphere in the office is mostly calm and silent. People pass along the corridor between the offices. Lahdelma catches one of the employees in the corridor and says he has a job for him in the afternoon. Lahdelma’s wife drops into his office to have a word.

At 15.00 there is a briefing with two architects, who will work on the design of the joint entry by Lahdelma and Mahlamäki. Both Mahlamäki and Lahdelma are overloaded with work, but continue to evaluate, reflect and propose solutions. Mahlamäki is checking offers, accounts and making calls for the school project and clients. Once he even closes the door to the office, to make a confidential call. From time to time Mahlamäki and Lahdelma circulate in the office. They observe, discuss and propose improvements to projects and decide on materials. By 18.00 half of the staff has gone home. The rest is still working. The bosses are still working and discussing with each other. One, preparing an entry on his own, says: "It won’t be anything, just fun!" Another says: "I’m satisfied! It’s looking good." He still has to draw one elevation and a perspective. He has slept only 4-5 hours each night. The student, Saarelainen, who will eventually be awarded third prize for his competition
entry, says that he, too, is satisfied with his entry. The pieces have found their places, he states. He can explain his solution very well, but it seems that he still hasn’t yet got the full picture. He has consciously prepared simple plan drawings (Lahdelma has, too). The concept Saarelainen has chosen for his entry has been demanding. The next day he will finish the presentation drawings.

The architecture of Lahdelma & Mahlamäki

The present study is a design theoretical investigation of design processes, but in order to enrich the picture of the design processes I believe it necessary to include some simple interpretations of the architecture of a leading architect’s office, in this case the office of Lahdelma & Mahlamäki. The interpretation focuses on the architecture of Lahdelma, but due to their close cooperation it would be difficult to claim that the architecture would be his only. It should be noted that their architecture is rather often published but seldom presented in combination with analysis and criticism. This seems to be typical for this kind of production. Indeed, detailed criticism of contemporary architecture is rare in Finland. I will present my own interpretation of Lahdelma’s winning entry for the Lohja Library architectural competition and the views of the competition jury. I will complement this with some interpretations of a few well-known earlier examples of their architecture, combined with interpretations by a few other authors. My own interpretations are based on a simple structure, consisting of:

- Basic information
- Immediate impressions
- Distinguished features and references to theories
- The unified whole and possible deficiencies

The above structure is related to Dewey’s ideas about art criticism (1980, 298), in the form of a mapping of the object. Personal impressions are important as an initial substance for the mapping as well as the evaluation of the unified whole. The intention is to provide a means for others to have a deeper experience of the same object. Such a perspective, however, would be in conflict with the ideas of Bourdieu, who claimed that the researcher has to distance himself from the internal myths of the art field. My defence is that I don’t intend an investigation of the kind Bourdieu proposed. My own point of departure is the pragmatist philosophy of Dewey, where there is no categorical exclusion of influences. They can provide raw material for the process of inquiry and possess an energy potential (Hickman 2001, 69). My intention is to provide and guide an experience of architecture. This could be said to lie at the outskirts of research, yet is an essential part of the understanding - though it’s by no means the most essential part of the present study. By including this interpretation I don’t distance my research from the internal dogmas and myths of architecture in Finland. I include them as part of my perspective on the design
processes, and thus as part of the view of the design situation that I would like to generate in the reader’s mind. I am not a professional critic and I have only the basic knowledge of architectural theory. I haven’t found very much secondary criticism of Lahdelma’s and Mahlamäki’s work. One description I will cite is by Timo Koho (2002), in his book about contemporary Finnish architecture, though it contains little critical analysis.

A certain kind of composition of form (sommittelu in Finnish), which I find hard to describe, is the characteristic feature I detect in Lahdelma & Mahlamäki’s prize-winning architecture. Three of their earlier well-known winning competition entries all exhibit this kind of intention. The Finnish Forest Museum, Lusto (1990), is an early competition-winning work of Lahdelma, Mahlamäki and Mäki-Jyllilä. That same year Mahlamäki also won the competition for the Kaustinen Folk Arts Centre. Another later competition-winning example of a composition of form is the Soinisen School (1994) by Lahdelma. One more competition-winning example is the extension of the Student Union building in Jyväskylä University (2001). All these buildings have a very strong three-dimensional architecture; what I term a composition of form. The main shared characteristic is not any particular material or typical form, but rather the composition as such and its expressive idea, as well as some kind of matching with the site that is contradictory or provocative, yet still in an acceptable way.

Figure 32. Simplifications of the building plans of schemes in which Lahdelma has been centrally involved. From left to right: Lahdelma’s competition entry for Lohja Library, the extension of the Students’ Union building in Jyväskylä University and the Soinisen School in Helsinki. All these diagrams are based on the original proposals.

Figure 33. Diagram of the plan of the extension to the Vaasa City Library (the dark rectangular form in the upper right corner). The extension has a regular form, but was nevertheless a surprising solution, in the sense that it was a glass cube tightly pressed against the old neoclassicist library with its stuccoed exterior walls. It’s an efficient solution, and forms an extreme contrast of new against old, on a site where there was sufficient space to build less densely.

With my own knowledge of the design process, I think the above works are partly the result of a strong effort to generate a proposal out of the given situation;
connecting outlines and directions, lines and movements in the urban setting. These examples also have a complex interior that still seems to meet the requirements for functional organisation. On my visits to these buildings I have been a bit disturbed by their almost decomposed interior and narrow spaces, yet they all seem very well organized. The School, with its different corridors, levels and open spaces, initially appears a bit confusing and it’s difficult to see the conceptual idea. Still, as I see it, the architects’ strength lies in the successful combination of an expressive and somewhat provocative form with a good organisation. As a result of the initial investigation of the site and urban setting, the buildings are very well adapted to the context. I think they have a quality of “rootedness” (Juurevuus in Finnish), to use an expression used by Lahdelma himself when asked what kind of features he likes in architecture. Lahdelma has difficulties in expressing ideas about architecture in general and couldn’t name any architecture or architect that he would regard as exemplary. This was not due to arrogance or ignorance but rather, I think, his way of seeing architecture as something that has to be seen, analysed here and now, in each individual case. The discursive treatment would allow for only a shallow or unsatisfying analysis due to his lack of verbal expressions to explain the architecture.

In the competition for the Finnish Forest Museum, Lusto, Lahdelma won first prize together with Mahlamäki and Mäki-Jyllilä, but also the second prize with a proposal on his own. This entry is described as “Powerful, energetic and as a whole a restrained proposal, with a delicate and sparing relation to the situation” (Architectural Competitions in Finland, 10/1991). The winning entry is described as “An intimate and at the same time sympathetically monumental proposal, which is economical in its relation to the surroundings and preserves the existing landscape” (Ibid.). Later, in the competition jury’s evaluation report, the idea is described as: “A rigid, geometrical cylindrical shape placed free standing in the ground, and has been developed into a polished and distinctive architecture, and with interesting combinations of materials” (Ibid.). One significant feature is that there are no allusions to traditional timber buildings. The architecture displays a clearly modern use of materials, and is constructed as a concrete structure with wooden cladding in a modern fashion. Koho (2002, 78) cites Mahlamäki on this issue, who states that they aimed at creating an “abstraction”, in both this case and in the Kaustinen Folk Arts centre. According to Mahlamäki, “The great principle of modernism still reigns in architecture: the architect has to produce something, that hasn’t yet been created.” (Ibid.). Koho draws the conclusion that these criteria are met in both cases: “They [the architecture in each case] have developed very individualistically” (Ibid.). This is, of course, a reasonable result of an expressive composition of form. In both cases one can assume that the client also wanted a landmark-type of building. In the competition report the goals are restricted to the general sentence used in most competitions briefs: “The goal of the competition was to find an architectonically, functionally and economically high grade, overall solution [for the national Finnish Forest Museum] that fits well into the surrounding forest landscape” (Architectural Competitions in Finland, 10/1991). Mahlamäki also states that public buildings in Finland, at least to some part, must adhere to cultural demands. It [a proposal for a public building] must not be in conflict with the worldview of the audience; it must meet their expectations.” (Koho 2002, 80).
**Johdanto – The winning entry**

The design programme for the Lohja Library was presented earlier in this chapter, as was the organisation of the process. The name of the prize-winning entry, Johdanto, is Finnish and means ‘introduction’, ‘preface’ or ‘preparation’ (Sadeniemi 1992). My interpretation of the scheme is based on my experiences following their design process and on studying the competition proposals and jury report.

My first impression of the final proposal was that it was strange architecture, something of a fantasy building in a storybook for children. It had a disproportionate street front in glass and closed sides, with no material expression. This impression was based on the preliminary drawings, where the material structure was still missing.

![Figure 34. An illustration of the glass street front, submitted as part of the competition entry.](image-url)
The distinguishing features of the competition proposal are:

- There is a large open main floor on the upper storey - but which is not as accessible as it could have been, according to some ideas of library design.

- The organization, with the entrance located at the centre of the building, is perhaps a complicated but smart solution to the problem of circulation, with clients coming from two sides but still with a need to limit the public entrances to one main door.

- It will be a building with large red-brick walls, adopting the Finnish tradition of brick as a dominant material in public buildings. The material also relates to the Lohja old church and the town hall, both close to the library site. The architects have been, and are still, working on new buildings at the university campus designed by Aalto in Jyväskylä, all in red brick.

Figure 35.
View from the courtyard (the west façade).
Figure 36.
Site plan above.

Figure 37.
Ground floor
The composition has an interesting shape, and its functional organisation is well done. It is an odd solution on a very problematic site - a too large volume in-between buildings of very different types and sizes. The longish shape, standing independent on the site, is a combination of an infill and a house-in-the-park concept.

The socio-contextual frame is based on:

- A general trend at creating a symbolic position for both the municipalities and their leaders by buying high profile architecture, rendered possible
by the wealth of a growing town and the general independence of the municipalities but also by the supportive attitude of government policies.

- The political controversies and decisions leading up to the selection of a difficult site.
- The given form of design competitions, leaving little space for non-professional preferences.
- The will of Lahdelma and Mahlamäki to participate, despite their obvious diminishing interest or need, to participate in competitions. They do not need this project for their business but they are still interested and motivated - they might potentially regard it as a commercially promising project, professionally demanding or as necessary for the image of the office or their own self-respect.

The evaluation of the jury was expressed as:

“The entry takes up the site successfully. The scheme works as an individual object in the townscape, yet responds to the context with subtle aspects of its orientation. The facades of the building create a dialogue with its surroundings. Excellent solutions have been found to the questions of scale within the town block. The building is in harmony with the perimeter blocks of residential buildings as well as with surrounding buildings with a more diminutive scale. The jovial lanterns on the roof are a vivid detail on the outside and a humorous feature of the interior, too.”

“The building has the clear status of a civic building in the townscape. Its architecture respects the adjacent Luoma House and its relationship with the residential blocks allows both elements to have their own “breathing space”. Openings towards the town centre and the church are imaginative and appropriately located. The red brick cladding is in harmony with the surrounding buildings. The elevation composition is both controlled and vivid, and the entrance invites people into the building. The organization of spaces is logical and the building well-functioning; interior views even dramatic.”

Figure 39.
Elevation towards the main street.

Figure 40.
Elevation towards the inside of the block.
Figure 41.
A photograph of the model, with the surrounding residential buildings and the other civic buildings in a more diminutive scale.

The early architecture of Lahdelma and Mahlamäki clearly displays a deconstructivist tendency, typical of the late 1980s, whereas both the Soinisen School and “Johdanto” don’t have the striking expressions of deconstructivist architecture, with longish elements penetrating some bigger volume. There is a trace of the latter, but the forms have melted into a more unified shape, still expressive but not as raw as in the earlier examples.
THE DESIGN BRIEF AND THE JURORS

Design competitions are rather popular among architects and students of architecture in Finland. The competitions are organized in cooperation between the Finnish Association of Architects (SAFA) and the various clients who approach SAFA looking for proposals. The clients prepare the design brief and elect some members of the jury. The majority of the members of the jury must be professionals. The competitions are either open or restricted to a limited number of invited parties. The competition for a new library in Lohja was an open competition.

The competition programmes in Finland have a standard format. They’re also simple enough to allow students to participate. It’s quite common for students to participate in competitions, and not uncommon to gain a placing, honorary mention or even win them. As far as I know, few architects dislike such a system. For the clients, however, having a student win the competition might become a disadvantage. The competitions are secret in the sense that entries are submitted with pseudonyms. However, some architects have ways of designing that are displayed in a personal drafting (or signature) style, which might be a feature that could override the demand to keep the entrant’s name secret. On the other hand, there is always the possibility that students pick up on this personal drafting style and thus try to improve their possibilities for success.

Architectural competition briefs are prepared as a collaboration between the client and SAFA. The room programmes have a standard format, published in a booklet with pictures from the site, a design programme and explanations regarding the organisation of the functions. The design brief normally includes a historical background, some maps and theoretical descriptions of the intentions and the site. The design brief is a proper-looking document of about 20–30 pages with maps and drawings in larger formats and as computer files. The programme is also usually published on the Internet, but in order to acquire the drawings and maps you have to pay a fee of about 100 Euros.

In the case of the Lohja Library competition, a student of architecture, Katarina Ruokonen, working for the city of Lohja, was asked to prepare the design programme. She collected the information, which had been discussed during the preparation
process - the decision about which site would be the best had been prepared as a consultant project. This preliminary programme was accepted by the end of 2001 by the board of the municipality. At the same time, they nominated the members of the jury.

The nomination of jurors became a problem for the municipality. It was to be a competition made in accordance with the rules of SAFA - the institution dominating the field of architectural competitions, and blacklisting competitions initiated without their approval. The SAFA rules allow the clients to nominate jurors of their own but the competition committee nominates two of the jurors. In this case, the town council nominated five jurors, three politicians from the major political parties, the director of the department of urban planning and the director of the department of education and culture. The latter had a background in education and the former was a surveyor with a long experience of town planning in Lohja. The chairman of the city council, Reijo Siltasaari, was elected as chairman of the jury, though he had no experience of design competitions. He had been a teacher and rector in primary schools in Lohja for many years and had twice been involved in school building processes. According to him (interview with Siltasaari, 1.11.2002), it had been clear for many years that Lohja needed a new library and when the site was chosen it seemed reasonable to arrange a competition because the site was a difficult one. The advantage of the site was that it was close to the schools and other cultural buildings - the church and city concert hall.

The next step was that the design brief was checked by the SAFA Competition Committee. They realised that the nominated members of the jury would include a majority of laymen. The SAFA rules require that the professional designers have a majority (SAFA 2004, 48), and at that moment there were only four architects in the jury, with a total number of nine jurors. A surveyor, Heikki Rouvinen, head of the town planning unit, was not accepted as a professional designer despite his long career in town planning. The head of the library, Martina Aminoff-Remes, was accepted as a professional member, but not the head of the cultural department.
in Lohja, Bror Ahlgren, because of his lack of experience in architectural design. This rejection of the nomination of the Lohja board was an embarrassment to the town council (Länsi-Uusimaa 6.7. 2002), but they agreed to fix the situation and the compromise was that the secretary of the jury, the student of architecture, Katarina Ruokonen, was appointed as a full member of the jury (interview with Roukonen 1.11.2002).

Excerpts from the design programme (Kilpailuohjelma Lohjan pääkirjasto, 2002):

**Open Architectural Competition for Lohja Main Library**

**Background**

Lohja lies in the vicinity of the Helsinki Metropolitan Area, 55 km west of the capital. The present main library of Lohja, dating from 1961, does not any more fulfil the requirements of modern library services. The function of the Lohja City Library is to form a versatile service network that enables the residents of Lohja to acquire information, promotes learning and contributes to their recreational activities. The execution of construction drawings will commence immediately after the competition results have been determined.

**Competition site**

The competition site in the centre of Lohja, by the medieval stone church, is one of the prime sites of the town. Apart from the Church of St Lawrence, the context is dominated by cultural, educational and administrative buildings. The only existing structure on the site is a small storage building. Other buildings of the town block include a protected 1930s Functionalist building, Luoma House, at the western side; a 1950s health centre and a 1930s timber building, housing the Lintula Day-care Centre, in the east, and two residential blocks at the southern edge, one dating from the 1960s and the other from the 1920s.

**Competition objectives**

The goal of the competition was to find a scheme combining architectural excellence, functionality and financial viability that would complement the townscape and provide a feasible basis for further development. The building should be both inviting and representative of its status in the townscape. Particular attention was to be paid to the needs of elderly library users and children as well as the requirements of the modern information society.

**Design brief**

The new library building was to be planned as an integral part of the area’s “cultural campus”. The old stone church nearby brings a strong historical dimension to the location. Consideration of the context was one of the most challenging tasks of the competition. Functional flexibility and adaptability was also among principal design criteria. The projected net floor area is 2,686 m².

The library is, above all, a place of meeting. It is a centre for learning and local information services. The library space was to be organised into encounter, service and study zones. Future information sources will be increasingly interactive and customers must have a possibility to handle and work on their own material in the library.
Areas of particular attention included:

townscape and architectural features of the scheme (quality of architectural design, interaction with context, organisation of site and supplementing the existing townscape)
viability (scheme’s potential for further development and functional adaptability)
economy over life span (building system and construction, maintenance and operating costs)

Another task was to nominate the two SAFA jurors. Some proposed candidates declined the offer to take the position as SAFA jurors - due to pressing workloads and similar reasons. After some setbacks, the SAFA competition committee nominated two architects, Erkki Partanen (born 1952) and Marko Kivistö (born 1970). Both these jurors had experience of preparing prize-winning proposals in competitions.

Erkki Partanen was the senior juror, and with previous experiences of being a juror. He was born in eastern Finland and had no relatives involved in architectural design before he started his studies at the architectural department in Helsinki. He worked in architect’s offices while studying and also participated in competitions. Partanen founded an architect’s office, together with Sinikka Kouvo, in 1982, the year he completed his diploma in architecture. He has received prizes in about 20 architectural competitions and says that most of their commissions have come from winning competition entries (Interview 30.10.2002). He, like most architects, explains his career in terms of architectural objects. The architects’ office of Partanen and Kouvo has designed several cultural buildings in two small towns, Kankaanpää and Kajaani, but has also been responsible for more prestigious projects, such as investigating the alternatives for a new concert hall in Helsinki. Partanen and Kouvo still, however, enter architecture competitions. Partanen’s first appointment as a competition juror was in 1986, for an ideas competition for the centre of the town of Kerava. At that moment, when he had been invited to be a juror on the Lohja Library competition, his office had just heard that one of their projects was being called off, at a point when the design process had almost been completed. The workload of their office varies over periods and they have had between 4 and 12 architects working for them, depending on the workload. Partanen states that he isn’t in architectural design ‘to make money’ (Ibid.). He sees the competition system as something unique, and as the only true way of acquiring commissions. He also sees the competition system as a ‘smooth hewing’ of architecture - new ideas are brought to public distribution and reused by other designers (Ibid.).

Marko Kivistö, the other SAFA-nominated juror, had only recently received his diploma in architecture, but already had a rather long career working in an office, and had participated in design competitions on a regular basis. He also sees the formal education as secondary and the professional experience as the best way of learning. His previous job in an architect’s office has been profitable in that sense. He also sees his professional development as a process of growing into an environment or culture. This circle is constituted through interrelated contacts and some sort of shared attitude towards architecture. He mentions names like Kareoja, Erholz, Lahdelma & Mahlamäki and Jokela. He studied in Tampere and believes he got few influences from lectures about architecture and much more from experiences and working in a close relation with older colleagues. In Tampere he noticed over time
a shift in attitude, from a more given canon, in which the students were expected to produce architecture, towards a more supportive attitude - supporting students to design their ‘own architecture’. This is also one thing he picks out in Lahdelma’s production. Kivistö regards Lahdelma as a pioneer, but finds that in competitions others reuse the ideas of successful architects such as Lahdelma. Two typical attitudes from his working experience is that the business aspect of the architect’s offices has been a matter of trying to survive, and that architecture is a continuous ‘unsuccessful business’ characterized by a skill in handling and defending artistic ideals without ending up in ‘uncompromising positions’ (Interview 12.12.2003). His estimates that to date (at the age of 32 years old) he has taken part in about fifty competitions.
THE DESIGN PROCESSES

The competition case study has entailed studying a multiple design case, where most of the staff of Lahdelma and Mahlamäki was involved, preparing seven different proposals for the same competition. Three of the proposals are prepared as official office entries, two of which are prepared as individual proposals designed by the two partners. Four proposals were prepared by individual members of the staff during their spare time. The last proposal by Lahdelma and Mahlamäki emerged in the final stages, initially out of a discussion between the partners, and was drawn up within one week. In my study I concentrate on the proposal by Lahdelma, originally chosen as the main target of this study, which also turned out to be the favourite of the jury, winning the competition. All proposals are different and the three prize-winning proposals are very different.

Lahdelma and Mahlamäki started on their proposals for the competition rather late. Lahdelma had been discussing the programme and the site with a student preparing his own proposal (which gained third prize). Lahdelma had made some very simple sketches, positioning the masses on the site, which was made problematic by a lot of difficult features. The site was narrow and contained a mixture of architecture in different styles in the immediate surroundings. Lahdelma obviously had the competition on his agenda but kept most of the processing in his mind, while continuing to work on the normal design projects. There was a large project going on at that time, with design meetings and the coordination of the staff and workloads.

I visited the office two weeks before the final day when entries had to be submitted. Lahdelma hadn’t yet produced any further sketches - which was very surprising. Most architects would have tried to have a well-defined proposal by this stage and would have been working on presentation drawings. I was surprised by the open atmosphere of the office. When they were off duty they continued working on their own designs. They shared their general ideas with colleagues, discussed different issues and shared ideas and arguments elicited from the programme by sketching and discussing. The architects and students take it for granted that there is no given winning solution, and all prepared proposals based on their own ideas. These were all very different. I sensed a shared understanding of the value of working with design and a conviction that architectural competitions are important - both central aspects in their attitude towards professional life. They shared their interpretations of the relation of the site to the surroundings and other ideas in short discussions. But mostly they were working on other projects. Lahdelma delegated the further design work to two students. Later the students stated that it was very easy to continue the development of Lahdelma’s proposal and that his sketches were easy to translate into finished drawings.

The design process of the partner, Mahlamäki, was not at all as straightforward as that of Lahdelma. At some stage they were even close to giving up the proposal they were working on, and returning to an old idea previously dismissed. Mahlamäki produced many more sketches, tried out different variations and made major changes at a rather late stage. Still, he received an honorary mention for his proposal.
One week before the deadline for handing in entries, the colleagues met in the office and exchanged thoughts about the competition and the proposals produced. Suddenly they started wondering whether it might be possible to shake out a very different proposal by placing the building at the other end of the site - a very unlikely position within the framework of the programme, because of the complicated position far from the main street. When they knew the programme very well and could easily design a third shared proposal, they found several supporting arguments for this solution and decided to push it forward. According to one of the jury members, this proposal was also considered interesting, even if it didn’t get any prize in the final evaluation. There was no hesitation in the office regarding whether they could make a proposal in such a short time. They had done it before and they trusted they could do it again. They have a routine in producing design proposals and there are also other professionals in the office with experience from recently completed libraries.

The design process of Ilmari Lahdelma

The design process started in February 2002 and ended in early June. The actual sketching and drafting were done in May. I followed the progress mostly at a distance and on the basis of discussions and sketched solutions. Due to the limited size of the study - I did not continuously follow Lahdelma’s work - the presentation of the design process is restricted to a selection of events occurring during the design process. It’s mainly a selection based on moments open to observation; generally moments when Lahdelma has been explaining his proposal to his co-designers or to me personally in my role as researcher. It’s obvious that many parts in the design process comprise mental processes, particularly in the beginning when only briefly supported by sketching and discussions with others. The beginning of the process can be seen as a chronological set of steps taken by Lahdelma, while the later design process is a cluster of activities, parallel and cooperative activities aimed at producing the necessary representations. These activities incorporate the typical sort of analysis used in early design phases, enabling Lahdelma to exercise evaluations and sketches in searching for a refinement of the proposal.

The early individual design process

The process started with a discussion between Lahdelma and a student in his office, who had been provided with the design programme. Through these short discussions he got a preliminary understanding of the task, and they made some sketches on a map of the site. This was in April 2002 - the final date of delivery being about six weeks later, at the end of May. The next stage was the mostly mental processing by Lahdelma. Up until our first meeting on May 16th he had spent only a few hours
sketching on the project. Complementary to the moments of traditional design work, he had been reflecting on it at various occasions, e.g. while watching his children at a game of football. Most efforts were spent on arranging the complex site, fitting the programme into it, in-between very different existing buildings.

Figure 44.
Site Plan. To the right one, in the middle, one can see the old medieval church, below Johdanto, the left is the modern town hall, in the form of a cross. Close to the site, on the right side are some minor wooden buildings and two large blocks of flats. Above the school built in red brick.

The shape of Lahdelma’s building was already determined when we met for the first time (picture 2). He had produced only a few sketches but was rather sure that he would stick to this idea. His last input had been to stretch the wall facing the inner yard and create a bay window, with a view on the upper floor towards the old church in the distance. This would generate a bit more space, suitable for the local collection, as given in the programme. Over the following week he didn’t work on the scheme, due to other pressing projects and meetings. Lahdelma admitted that there were still some problems with the entrance, situated in the middle of the building at a narrow part of the site.

Figure 45.
To the right. One of the few sketches from the early stage, searching for an overall shape of the building.
During the following week he presented the concept to one of his employees, who continued the development of the proposal. Before the employees started working on the scheme, Lahdelma prepared some more sketches. Lahdelma had developed a rather contradictory idea of a solitary building adapted to the idea of a closed street front detached from the surrounding mixture of architectural styles, but still attached to the urban environment and its pattern and signifying elements. The site seemed too small, however, for this solution. During that week Lahdelma concentrated on checking a few issues: most of them were small solitary explorations of various areas of the building, later forcing them into the predetermined shape. Later that same week he produced simple sketches within a few hours; the final plan drawings, a sketch for an elevation and a site layout.

Figure 46.
To the left. One or two sketches later, with the idea of a bay window towards the church emerging (triangular extension to the right), as a place for the local collection, connecting the local medieval church to the reading material about local history.

Figure 47.
Lahdelma sketching; trying to find a solution for the entrance and stairs. The idea was to keep the process of entering into the building fairly complicated. This would be done by a plan system that would keep people flowing through the building in a circular fashion from one section to the next.
Figure 48. A second sketch, where Lahdelma resolves the problem of the entrance. This same sketch also shows for the first time the overall organisation of the ground floor.

Figure 49. Lahdelma decided very early on a given shape. He also had the idea of using the roof elements he had been using before. The two rows of trees in the upper part is called 'the apple tree garden'.
The final moment of the first stage of the design process was the handing over of the scheme to Lahdelma’s employees to continue. Due to the lack of time, two students were appointed to continue his proposal. The ‘handing over’ of the scheme consisted of Lahdelma explaining the solution by means of sketches and an oral description of the ideas incorporated in the proposal. There were a lot of ideas by then, and the meeting with the two students took about one hour, during which Lahdelma was talking most of the time. The presentation was systematic. It started with the site layout and continued with the organisation of the main facilities, described as movements into and within the building. The adequacy and completeness of the proposal were surprising - later confirmed by one of the students, seeing it as characteristic of Lahdelma’s art of designing. There were still some open questions: the possibility of daylight being brought in from the roof, the need for a bike shelter, and the shape of the end of the building. During the presentation, Lahdelma continued checking with the room programme - an instrument he finds useful and appropriate in its format. The students asked a few questions, trying to understand his explanations. Their task was to continue by preparing drawings, checking and drafting, on the basis of Lahdelma’s sketches. They had to develop solutions to features still in an unsatisfactory state. Simultaneously, they had to continue on the other projects that had been assigned to them earlier. Up till this moment Lahdelma had done very little sketching, and yet the design was virtually complete. Particularly notable was the way in which detailed sketching of details, such as the stairs, was forced onwards until a satisfactory solution was achieved. Another notable aspect was what I take to be the generation of a solution within short time. This is a matter I can only speculate on, in that it’s unclear to me whether the easily arrived at solution was based on an extended conscious or unconscious reflection, or on an existing pattern or matrix, or on an existing library organisation scheme that could easily fit any form - or a combination of all these.
Figure 51.
Photo, Lahdelma pointing out something in a sketch.

Figure 52.
Above. In handing over his scheme to his employees to continue, Lahdelma uses the competition programme and explains his solution by referring to ‘matching the demands of the programme’.

Figure 53.
The only sketch for the elevations, with some indication of materials and climbing plants growing on the brick wall.
The later stages
After the delegation of the design to the two students, Lahdelma continued his own sketching, but also monitored the progress of the students. He had very little time for this, but during that week he spent one or two hours a day on it. The aim was to make refinements and to retain the original ideas of the design. The students, and later on also a consultant, were producing the necessary drawings, simultaneously checking and trimming different aspects. Lahdelma sometimes used their preliminary drawings for continued sketching. He would ask them plot out precisely certain drawings and he would then spend some time sketching over printouts of them, reshaping parts of the proposal. Sometimes he would sit down with each of the students for a period of 15-20 minutes and discuss the design and the drawings. He would ask questions and propose changes. Mainly it was a combination of talking and using the drawings as a reference, pointing at different details of the drawings on the computer display or print-outs.

Figure 54. Lahdelma later often sketched on top of printed copies also adding annotations.

Figure 55. Every now and then, Lahdelma stops at the desk of some of the employees to discuss the drafting, the problems and the presentation of the proposal. Here together with Marko Santala, discussing the elevations.
Almost immediately after one of the students had drafted the first plans, a consultant started the construction of 3D models - interior and exterior perspectives. Here he is discussing one interior with Lahdelma.

**Parallel activities**

Parallel to the step-by-step design process undertaken by two students, there were different activities supporting the process and the development of the design. The creation of three-dimensional illustrations could have been the last step in the process, but due to the tight time schedule, they were made in parallel with the design work of the two students. Another complementary process I distinguished was the organisation of resources. Lahdelma was confident in his progress and had an overall picture of the rest of the process, but at that moment they couldn’t spend much time on the competition. There were too many other projects going on in the office. Still, they didn’t work very much over-time, but instead Lahdelma adjusted the schedules, forcing the projects into tighter schedules, making the processing more efficient. Three major aspects of Lahdelma’s organisation of the process were:

- Finding time for his contributions.
- Hiring consultants.
- Rearranging the schedule of other projects.
Most of this organisational work was part of the daily routines of Lahdelma, running this office with about 20 employees, but with a very close contact with the design work. Most of Lahdelma’s time was spent in meetings and discussions, as a combination of design and the administration of projects.

Some specific features
The design process had a specific organisation due to the circumstances, and mainly due to Lahdelma’s lack of time. In terms of alternatives, he could have done it by himself or he could have engaged in a more reciprocal design process with a junior member of staff, who could then have had more responsibility for the design. The professional institutions from which Lahdelma has made his professional career and reputation have one feature in common: the competition proposals have been produced in rather large design teams, producing many proposals. He sees all members of the staff as possible members of a competition team. According to those who have known him since the beginning of his career, it’s typical for him to let his proposals mature mentally, with little sketching. He himself states that it’s typical of him to find a solution fairly quickly and to stick to it. Another feature is that he has a preference for strange or demanding solutions, or an ability to process alternatives that seem difficult - as in this case of a second proposal for the same competition, initiated and produced together with his partner and some employees, during the very last week before the hand-in deadline.
The design process of Rainer Mahlamäki

The design process of Rainer Mahlamäki is differently organized and develops in a more complicated way than that of Lahdelma. Mahlamäki is the head of the department of architecture in Oulu University and the spring, when the competition took place, is a very busy period, with meetings and presentations of diploma projects. He only spends extended weekends in the office in Helsinki. He arrives in Helsinki on Thursday or Friday and returns to Oulu on Monday. He also spends some time sketching or checking the material in the evenings in Oulu. Due to his position, he participates in competitions only once or twice a year. In this particular case, Mahlamäki had arranged that a young architect, Susanna Pietikäinen, would be engaged in the design process from the beginning. Mahlamäki led the design process, but Pietikäinen was given greater freedom to make proposals and ideas. Basically, Mahlamäki made conceptual proposals and Pietikäinen checked them according to the programme, through detailed sketching.

It seems that neither of them is satisfied with the process and the intermediate outcome of it is stressing Pietikäinen. There are continuous new ideas coming from Mahlamäki and there is a flexibility to even reject the preliminary solution and develop an idea they had tried out only briefly. Mahlamäki sees his role in this case partly as the one who comes and straightens out and structures the proposals after a few days of development by Pietikäinen. The early sketches are dated at the end of April (20.4). When I first meet them on May 16th they have very many sketches. Pietikäinen is not sure what it’s going to look like, whereas Mahlamäki thinks the concept is settled and will stay like this in the final stage, the preparation of the main drawings. About two weeks before the hand in, Pietikäinen starts drawing plans and elevations on the computer. During the whole process she continues to work on other projects. In the final week two more employees are attached to the project. Pietikäinen has met Lahdelma on the Saturday and agreed on materials and discussed about the shape of the roof, which she has been developing during the weekend. They have added details, made changes in the plans and tried to generate a feeling for the materials in the drawings. As a single architectural reference, they have a picture of a chapel from a book.

Figure 57.
Mahlamäki at his desk. Opposite to him is the desk of Lahdelma.
Figure 58 and 59 above.
Examples of two very different ideas. The solution to the left will finally be the competition entry.

Figure 60.
An early elevation, with the saw-tooth roof, which was sketched by Mahlamäki.

Mahlamäki stresses the directions (lines) found in the site and urban context. In combination with a synthesis of form development and functional organisation, they are the basic ingredients of the conceptual design. All the conceptual sketching is done by freehand sketching. Particularly important in the urban context are the approaches towards the library. According to Mahlamäki’s analysis of the site map and Pietikäinen’s views after visiting Lohja, the site is presently an area which people simply pass through, and they try to integrate this aspect into their entry.
Figure 61. In the later stage, the discussion also turns towards the interior and the experience of the interior spaces and materials. Here a discussion with Pietikäinen regarding the materials in the interior on the basis of a sketch by Mahlamäki.

Figure 62. The final task is to present the proposal. Pietikäinen and Mahlamäki discussing sketches.

Figure 63. Mass model of Mahlamäki’s entry.
Figure 64.
Ground floor.
The story of the student of architecture

As a complement to the case study of Lahdelma, I followed the design process of the student of architecture, Petri Saarelainen, who was an employee in the office of Lahdelma and Mahlamäki. He won the third prize with his entry named *Halo*. He had already developed his entry to a rather mature stage when I finally interviewed him at length. Below the interview is his personal description of the process, written down almost one year later. I have translated it and added the pictures and some footnotes. The translation tries, as far as possible, to reproduce the language of Saarelainen, as representative of the language of someone who is trying to enter the realm of Finnish architectural consecrators.

During the interview, which took place in the second but last week of the competition period, I ask Saarelainen about his relation to the field of architecture. He studies in Helsinki and met Lahdelma when the latter worked as an assistant on one course in the department of Professor Markku Kommonen. He shares a work room (‘työhuone’ in Finnish) with seven other students from the same class. They all simultaneously study, work and participate in competitions. They have also had some success in competitions, and one of his friends is now continuing on a winning competition entry. There is a degree of synergy between the students. Sometimes they might learn something that they can use in another project. Working in an architectural office is almost completely routine - with hardly any ideational sketching - but offers money and a learning process. Saarelainen works full time in the office of Lahdelma & Mahlamäki. He has been working there for about one year. He states that the formal studies have hardly contributed anything except for improving his ability to sketch up ideas. He has acquired his knowledge of the building process during his employment. He thinks the students are very well aware of the dominant atmosphere at the departments of architecture, where competitions are seen as a natural element in an architect’s life and that there is a mythological idea of a hero architect. He also believes that it’s possible to have success with this approach and to be able to establish an architect’s office on the basis of a competition success.

Saarelainen applied for a job in Lahdelma & Mahlamäki’s office because he likes their architecture. The very first time he tried to get a job, after his second year of studies, he tried their office but didn’t get offered a job. Before he got offered this job he worked in two smaller, yet rather well-known offices in Helsinki. He explains his entry into this office as: “It happened to be the right time” [that they needed somebody]. When he first tried to get a job with them he knew of the office only on the basis of publications, and sees their architecture as a motivating factor. Until now he has only participated in one competition in the office. The previous year (2001) he entered 3 or 4 competitions, most of them together with people from the joint work room. He claims that the collaborative design process is “efficient when a consensus is reached” [regarding the idea] (interview 22.5.2002). Competitions, he states, are a ‘hobby’, ‘demanding and fun’.
Saarelainen has chosen this competition because it has a suitable size, the time is right and because he finds the library theme interesting. He hasn’t previously worked on any library projects while working in the office of Lahdelma & Mahlamäki. It’s quite common for students to choose a competition as the theme of their final diploma project. Saarelainen says that many do, but not all: he guesses that maybe one-third of them take a competition as their diploma theme. One advantage is that one can get a fully developed design brief; another is that the competition time table forces the student to get on with the work.

The story of Petri Saarelainen:

“I started the competition allowing myself time, because I had decided to continue with the competition entry as a diploma project and to refine it as far as possible already in the competition stage.¹ The first idea was to propose an efficient orthogonal volume as a solution to the difficult structure of the city space.”
“I wanted to create a high central hall, filled with light and suitable for a library, and to divide the building into two different volumes, where it would be possible to open up views to beneficial directions."²

Figure 67. A series of sketches, the changing masses and proportions.

“The most difficult problems in the design were the tight site, and two very different scales. The tight site gave the efficient quadratic plan. Thus the different three-dimensional modelling sessions and the sketching made by hand took most of my time. I tried also many and very different approaches towards the problem offered by the site, and once I aligned the base of the roof according to the height of the roof
of the adjacent four-story apartment building, Lohjanlinna. At this stage the volume had taken the form of being high at the edges and connected to the adjacent building by a small wing."

Figure 68.
A late sketch.

“During the whole design process, we had compared competition proposals and discussed problems in functional and urban structures. Thanks to these, I too had the opportunity to get some distance from my design and to develop it.”

“I still had, in some way, to take up a definite position to the lower buildings of the site. I finally succeeded in resolving it by lowering the base of the roof in its movement around the tall central hall (Picture D). Thus the library building constituted a mediating element between the existing big differences of roof heights at the site.”

Figure 69.
Elevation to the main street.
Figure 70. First floor.

Figure 71. Final mass model, as presented to the jury.
“Tasku” - The third proposal

During the last week the office produced a third proposal for the competition. It all started one afternoon when Mahlamäki had come back to the office and they started discussing the competition situation. There was a question of whether they had checked out all possibilities. At that moment they realized that they could try a solution with the library building at the back of the site. They made some sketches and discovered that there were many directions and aspects that could be integrated in this odd and demanding solution. They decided to leave open the decision of whether to take this idea any further until the Sunday. On Sunday they had tried a few more sketches and decided to allocate resources to this proposal. The office manager was to check the solution in the plans and they would try to do most of the design work themselves.

Figure 72.
The first sketch.

Figure 73.
A sketch.
Figure 74. The final sketch produced by Mahlamäki. In this entry it was very difficult to distinguish who had contributed, because the design process was a mixture of discussions and sketching where each of them drew simultaneously on the same idea but in different drawings.

Figure 75. A discussion among the people working on this entry, together with Mahlamäki (momentarily not participating due to a phone call) and Lahdelma.
Figure 76.
Elevation to the main street.

Figure 77.
A perspective drawing made by Mahlamäki, illustrating the court yard.
THE EVALUATION BY THE COMPETITION JURY

The competition evaluation process started in June 2002, with a check of acceptable entries. No entry was disqualified. At this stage only the professional jurors met for the evaluation. This reduced jury consisted of the two SAFA jurors, the head of the library, the architect from the town planning department and the student of architecture, who was also the secretary of the jury.

The next step was a first sorting and ranking of the 190 entries. Normally competition entries are sorted into three classes: upper, middle and lower classes. In this case, because of the large number of entries, they divided the entries into five classes, with a semi-lower class and a semi-higher class. Little time was spent on each proposal during the two days of preliminary selection. The evaluation started with the site model, continued with criticizing the plans and the organization, and finally the elevations. The senior SAFA juror chaired these sessions, articulating his view of each entry.

The head of the library, Martina Aminoff-Remes, had spent some time considering functionality, producing arguments and a list of good proposals. The major frontier during the evaluation was between her and the SAFA jurors. Her major interest was the functionality. She had prepared for the task by visiting other new libraries and by discussing with colleagues. Still, the evaluation process was fast and easy. In a later discussion, comparing possible entries for the prize category, Aminoff-Remes realized that they were going to leave one of the very best solutions - in functional terms - out of consideration because of its lack of architectural strength. She then successfully managed to get the proposal lifted to the upper class.

When I meet Marko Kivistö the competition is over and the entry “Johdanto” has been selected as winner. Kivistö is a novice in the role of competition juror. He presents a picture of the judgment process as coherent and rational. He finds that the qualities that were used in the evaluation to a large degree grew out of the qualities. By looking at the different proposals the jurors established a (shared) understanding of the good and bad solutions and used this as a standard to measure the others with. In the final stage there was more checking of details and attempts to devalue and raise certain personal favourites by means of personal preferences and arguments. In the top ranking it was a question of measuring architecture against functionality, where the entry “Johdanto” satisfied both aspects, whereas the other competing entries could not meet the requirements in the same way or other. Afterwards, the two SAFA-nominated jurors went through all the entries once more and wrote a critique for each of them. No such critique was made during the real evaluation process. As Kivistö sees it, in this later process the evaluation has matured, with the judgement based on the previous, collective discussions and the knowledge of all the entries and their qualities. In this rather rapid procedure, Kivistö picks out urban structure, functionality, space and elevations as issues that are checked. In the later stage this was done systematically and he sees it as a tool for deciding on the ‘reciprocal order’. This order and critique he sees as important tools for those
who participated but didn’t win. He finds that the difference in status between the winning entry and the others is immense, but the ranking order between the others receiving a prize is of no big importance. They display the best expressions of each type, which means that there might be others that are just as good, but which are left out because there is no point in picking out five similar entries. The multitude of ideas is the interesting aspect here.

Kivistö finds it surprising and reasonable that the workmanship (drafting and illustration) played such a small role. A sketchy proposal was checked with the same seriousness, and some pieces of excellent “workmanship” were left because they didn’t match the most important criteria. He also found that the illustrative perspectives played a very marginal role. They functioned only as a kind of final checkpoint. The site model and the plans were the most important tools. In Kivistö’s opinion, the competition programme needs to be open, so that better solutions, which only appear due to the competition system, can be taken into account. The authors of the programme cannot cover all ideas that are possible in a competition, and thus it’s better to leave it open. In this case the number of storeys was left open, and in his opinion there was no entry with a satisfying single storey solution, though potentially it’s the best solution for a small library. He states that he can often agree with the decision of competition juries on the winning entry, despite the multitude of solutions and possibilities, and a personal understanding of the competition, generated through the preparation of an unsuccessful proposal.

Excerpts from the evaluation of the competition entries in general

(Architectural Competitions in Finland, 1:2003):

**General assessment**

The submitted entries provided a diverse range of possible solutions. The best entries even included several alternative and feasible solutions for the relatively complex contextual framework. The overall standard of the competition was high despite the intricacy of the design task. The entries showed that the required room programme could be accommodated on the competition site. However, finding a balance between the varied aspects of the townscape was difficult.

**Alternative solution types**

The entries for the Lohja Main Library could be divided into three main categories. Most of the schemes where the building is organised along the street axes were two-storied. In the best proposals the authors had succeeded in creating a new spatial centre of gravity, an entrance square, on the side of Karstuntie road that emphasised the status of the new library within the urban fabric. Another basic type was a 2–3-storied block that was freely situated on the site. In many entries the scale of the new building was successfully adapted to the other buildings in the block. The alignment of the new light traffic route through the block was successful in these entries.
The third basic solution was a relatively compact 3 storied “building in the park” organised about a central space. The assets of these entries were the clarity of interior spaces despite of the fact that activities were located on several levels. In the best proposals the size and the orientation of the new building was such that even the smaller buildings in the block retained their own identity and park-like surroundings. In these entries the light traffic route could also be successfully realised.

In addition to these three basic types there were also a considerable number of differing solutions. Some entries included a new park or a square on the Karstuntie side. Although these alternative schemes were interesting, the jury did not consider them to have potential for further development as the demands on the yards of the existing residential blocks were excessive.

**Lighting**

Tried and tested structural solutions were generally employed to ensure sufficient daylight. In deep plan buildings this had been solved appropriately with rooflights. An eastward opening alternative with views of the church was one of the most successful. In entries with westward views the problems of evening sunlight had usually been overcome by a system of blinds. The best proposals had succeeded in creating an interior atmosphere that is conducive to concentration while bringing the surrounding cultural landscape as part of the new main library.

**Spatial organisation**

Spatially the entries represented a wide spectrum of trends of modern library building. In the most frequent and traditional solution public spaces had been divided onto two main levels. Locating most of these spaces on the first level usually resulted in the character of a large “lobby space”. Horizontal links were long and the spatial character lacked zest. Organising the spaces more equally on two floors facilitated the spatial aspect of planning. Reflecting the building’s overall character in the interior as well as the visual and functional connection between floor levels were considered paramount. Solutions organised on three levels were spatially slightly easier to handle than the former models. A compact mass and spatial organisation about a central space was one way to create a heart for the building that would help orientation within.

**Recommendation for further action**

The jury made a unanimous decision to recommend that further development be based on the winning entry “Johdanto” with regard to further design instructions and the design commission be awarded to the author of the entry.
The evaluation of the winning entry

(Architectural Competitions in Finland, 1: 2003):

1st prize. Entry no 78 "Johdanto" awarded EUR 24 400
Author: Ilmari Lahdelma, architect SAFA Arkkitehtitoimisto Lahdelma Oy
Assistants: Marko Santala, B.Sc.(Arch.), student of arch. Mia Bungers, B.Sc.(Arch.), student of arch.
Modelling: Arttu Hyttinen, Adactive Oy.
Scale model: Seppo Rajakoski

The entry takes up the site successfully. The scheme works as an individual object in the townscape, yet responds to the context with subtle aspects of its orientation. The facades of the building create a dialogue with its surroundings. Excellent solutions have been found to the questions of scale within the town block. The building is in harmony with the perimeter blocks of residential buildings as well as with surrounding buildings with more diminutive scale. The jovial lanterns on the roof are a vivid detail on the outside and a humorous feature of the interior, too.

The building has a clear status of a civic building in the townscape. Its architecture respects the adjacent Luoma House and its relationship with the residential blocks allows both elements to have their own “breathing space”. Openings towards the town centre and the church are imaginative and appropriately located. The red brick cladding is in harmony with the surrounding buildings. The elevational composition is both controlled and vivid, and the entrance invites people into the building. The organization of spaces is logical and the building well-functioning; interior views even dramatic.

The evaluation process is described as running smoothly, with few conflicts, by all parties. Erkki Partanen couldn’t provide any clear answer to the question about his architectural preferences or important influences. He views his studies and position as an architect mainly as a result of dealing with architecture and a mutual learning process among students and colleagues (Interview, 30.10.2002). The evaluation of the design entries is also a process without given preferences. Partanen also states that they all were avoiding too early judgments - he doesn’t have a ‘model solution’ in mind when judging - leaving the evaluation process open for discussion and the exchange of ideas. In his experience, the entries start to ‘evaluate each other’ in the sense that they are compared and ranked against each other, and not selected straight ahead on the basis of their own qualities. In this evaluation process, Partanen distinguished three types, complemented with some examples of cross-breeding between these solutions. He calls “Johdanto” a “block-type solution, with its individual distinctive line” (Interview 30.10.2002). The scale models acted as an important evaluation step, and where “Johdanto” was found to be particularly appropriate. Partanen’s view of the entries placed in the middle class was that they are all well made and have no deficiencies, but there is ‘nothing
turning on’ in them either. The professional jurors were also discussing how far the entries carried a ‘message to the perceiver’. In the later meetings “Johdanto” was seen as one of about ten entries that were going to be in the prize-winning category, “Johdanto” competing with three other entries in the final stage for the first prize. One thing Partanen mentions is that the plan in “Johdanto” was not overdone - it ‘felt natural’ (Ibid.). It was thought to have the appropriate level of detailing. Later, when I participated in design meetings in Lohja, almost one year later when they were developing the winning project ready for construction, I noticed that the lines in the new plans were more elaborate than what could be detected from the simplified plan drawings of the competition entry.

The relation to the neighbourhood was important in the evaluation process, but according to Partanen the functional solution had to reach a certain basic level, otherwise it could not be accepted. Some deficiencies can be accepted and left to be resolved in the later design process. In a discussion about the rather complicated entrance situation, Partanen stated that “solving a rather complicated problem well” often makes it a good solution (Interview, 30.10.2002). The whole committee attends the two last meetings. The team of professional jurors doesn’t put forward any proposals in the first of these meetings. They present the ten best entries, but postpone any further selection till later in order to let the others have time to make up their own minds. However, they seem to have felt that they favoured the same entry.

The lay jurors joined the professional jurors for the two last meetings. At the first of these they were given a presentation of the 29 entries in the upper class, where they sorted out nine entries that were to be awarded prizes. Siltasaari stated (interview in Lohja, 17.11.2002) that he had been overwhelmed by the large number of entries. They went through all the entries in the upper class and the SAFA jurors gave a description of why each of these was selected to be in that class. They also presented some entries from the lower classes so as to provide a contrast. At this stage they didn’t give any hint of which entries they preferred personally. According to Kivistö, they even delayed the presentation of their views till the final stage. Siltasaari said he was very satisfied with the results because he personally - without spelling it out - favoured the winning entry and the one that got the third prize. In the final meeting the entrants were given a ranking and the jurors agreed immediately on this. The biggest disagreement came when one of the lay jurors proposed a minor shift between two entries positioned next to each other. According to Siltasaari, the jury was surprisingly unified in their judgement. One conclusion was that when the professional jurors agreed on something it was very difficult to try to change the ranking order. Siltasaari also found the response in both the local press and the Lohja city council to be positive - young people in particular were fond of the architecture and gave positive feedback.
THE COMPETITION

THE PROJECT MANAGER’S PERSPECTIVE

In the Finnish construction industry it’s rather common to hire a project management consultant (byggherrekonsult in Swedish, rakenmuttajakonsultti in Finnish), who is responsible for the management of the design and construction process on behalf of the client. Project managers are usually construction engineers by education. Architects tend to see these consultants both as helpers and as obstructions. Traditionally, the architects have seen themselves as the trustees of the client and these project managers tend to stand between the client and the architect. They have no real financial responsibility, but take command of the design process and influence design decisions. In one sense these consultants also free the architects from the responsibility for much of the coordination of the design process and control of the production of the other (technical) designers. The project managers act as design managers. This means that there are three central agents in the design process: the client, the project manager and the architect. In the case of the architectural competition, there was no real project manager before the design competition. After the competition a project manager from the construction department of the City of Lohja was appointed to the project. I think most Finnish architects would agree that the role of a project manager is an important issue in a discussion concerning the architectural design process. Especially in low budget projects, these managers impose restrictions on the architects rather forcefully and sometimes with little respect for the architecture (this was also the case one of the SAFA-appointed competition jurors had faced). In order to address this issue, I have here included an interview with a project manager who has experience from both strictly commercial projects and from projects where architecture is seen as very important.

During the last two years I have been engaged in the process of coordinating the renovation of an old rural church. My role hasn’t been that of a designing architect but that of a member of the renovation committee. The committee has five members, including the vicar. As regards building design, most of them are laymen. The work of the committee has been assisted by a part-time project management consultant, project manager Christer Öhman, and later also a team consisting of an architect and three design consultants. During the construction process the capability of the project manager to shift between perspectives caught my attention. It was during the discussion concerning the colours inside the church that I noticed that the project manager (and the contractor responsible for the painting, too) were able to make a shift and express the views associated with the preservation authorities, views that are also common in the reasoning of architects - where the old architecture is treated with great respect and existing dysfunctionality and even ugliness are accepted, and where things like original nuances are important and the texture of materials should not be altered. The particular case was a peripheral discussion concerning one part of a wall, close to the pulpit, where the panelling had been cut and repaired. What was left was a one- to two-millimetre-wide cut, straight across the panel. To me it was clear that there was no reason to correct such a minor irregularity; indeed, it would be a mistake in the eyes of the National Board of Antiquities (NBA) to replace it, but for the rest of the committee this was a defect which should be corrected (i.e. the panel should be removed and replaced with new full-length boards) so that the
wall would look good. In this case the project manager agreed with this lay opinion but he was also able to express the thinking of the preservation authorities (who were not present). I would say that his personal opinion was in line with the lay opinion, but his professional understanding was in line with that of the architect and the preservation authorities. This incident brought my attention to the relation between a designer attitude and the thinking of the project manager. For this reason I asked him if I could interview him as part of my research. He agreed, and we spent about two hours together, where he tried to articulate his understanding of design management. The interview had the form of an open discussion, structured by myself (as an architect/researcher) by means of a simple organisation and a few questions. The interview started with a question about his career. It went on to his current position as a project manager in an engineering company, which has projects all around the world. Later the discussion turned towards the church projects he has managed in recent years alongside his normal job, which has included the construction of power plants. Finally, I showed him some pictures of Lahdelma’s production (Lohja and Vaasa public libraries and the Soinisen School in Helsinki, all designed in the office of Lahdelma & Mahlamäki) and asked about his relationship to architecture. We ended with a discussion concerning the differences between design and design management, and the problem of mechanical engineering designers as project managers, which he sees as a problem in his current position.

My original intention was to extract a different perspective on the design process, which I would then turn into a fictive dialogue, as in the final part of the first case study. Due to the rich material I got from the interview and Öhman’s acceptance that it didn’t have to be anonymous, I have chosen to present the material as such, allowing the voice of the project manager to be as expressive and reflective as it was during the interview. This choice of complement to the case study means that the perspective of the project manager is not attached to the case study of Lohja library or to any specific process or context, or to the particularities inherent in a design process. However, throughout the presentation there is all the time in the background the two types of projects he is currently working with, the church renovations and power plant projects.

**Project management**

Christer Öhman graduated as a construction engineer in 1975 from the local polytechnic and started his career as a structural designer in an engineering office in Vaasa. In this office they produced both architectural design and structural design, mostly for housing projects and industry. The office was owned by two practising partners and had about a dozen employees, depending on workload and market demand. After three years Öhman became a partner and the CEO of the company. He continued to work in this office for 16 years and his main task in the office was design management, leading and coordinating design projects. One of the biggest projects during this time was the construction of a complete new village in the Soviet Union for 4000 people.
In 1991 Öhman left the office and started a new position as a lecturer at the local polytechnic, teaching structural engineering, building design and project management to construction engineering students. Parallel to this, he had an engineering practice, designing housing and other medium-sized buildings and structures. From time to time he hired one or two engineers to work in his office. In 1997 he left the teaching position and the ongoing design projects and began a career as a project engineer in the engineering company where he presently works. The engineering company produces diesel engines and sells them as power plants and for vessels. Öhman acts as a civil project manager in teams coordinating power plant projects in such different countries as Honduras, USA, Cambodia and India. The projects are often sold as turn key projects or as engineering procurement constructions. This includes a lot of contract negotiations and an extensive responsibility for the project. Öhman operates in a team consisting of a mechanical project engineer, an electricity project engineer and a contract project manager. This team has a vast freedom within the frames specified in the contract, each responsible for his part. His work starts with the conceptual design, supporting the marketing teams with layouts and technical specifications. One major task is to interpret the contract specifications and create a matching system and detail designs. The specifications are mostly only given as specifications of functions (in contrast to the design briefs for building design, where normally the number and size of the rooms is specified or, as in renovation projects, a remedial programme is agreed [åtgärdsprogram in Swedish]). This means that very much of the conceptual design work is done by the project managers, with the civil project manager responsible for the architecture and the structures. The client or the management of the company doesn’t interfere in this process as long as the project runs as expected. The civil manager normally buys the design work from a partnering consultant (architectural layout and structural engineering). Each project manager is responsible for his part and the coordination with the other engineering project managers and there is no formal hierarchy. Still, the engines and the technical equipment are the core features of these engineering projects and thus the role of the civil project manager is to provide structures and an envelope for the power producing units.

The power plants usually have a bolted steel frame enveloped with lightweight metal panels. The engines and the construction normally consist of standardized prefabricated elements and modules. Still, the power plants are tailor made according to the wishes of the clients. It depends on the clients and the use of the power plants how the plants are equipped and shaped. All this is put down as contract specifications and interpreted and detailed in the design process. One client might want to have a power plant for a textile production unit, asking for both electricity and steam, while another might ask for a barge-mounted power plant for peak electricity production. Due to the complexity of the engineering and subcontracts, there is a vast amount of drawings produced by external companies, which have to be integrated into the design of the power plant. The partnering design office supporting with the layouts (the architectural designs) acts as an architect, but most of the design decisions concerning architectural aspects are, according to Öhman, taken by the civil project manager who is the only one to visit the site. He is the “architect” of the power plant, even if he doesn’t make any drawings. Due to the strong utility orientation of the projects, the design process is clearly one of ‘form
follow function’. The architecture is generated from the engine units with their element structures and the many complementing components like filters, chimneys, cooling towers and storage tanks. The construction components are normally bought in Finland but much of it has to be arranged and bought locally, too. The USA, he says, is a very complicated market for the management of design, due to detailed regulations and licensing systems requiring different licenses in different counties and states. Knowledge of these competences is hired. The projects are executed within a very short time span, 6 to 24 months, and the time for the design process is one to four months, which is included in the total time mentioned above. The civil engineering part of the projects accounts for only 10-15 % of the total cost and varies between a few million euros and about ten million euros.

Figure 78.
Power plant.
Design management as a hobby

Öhman also takes on the management of local projects under his private office, predominantly church renovations. These proceed at a slower pace and, he claims, often in a pleasant atmosphere. Still, he conducts these projects on a commercial basis. He normally starts from a remedial programme, where the outer walls or the roof have to undergo some renovation or the installations have to be renewed. The architectural design is limited to a few changes and detailing, and normally including precise specifications for painting and furnishing. Painting and the choice of colours is mostly specified in cooperation with a conservator. Renovations in old churches (in these cases timber structures) are supervised by officials at the National Board of Antiquities (NBA) and those at the episcopate. These officials check the design drawings but rarely visit the site. However, they occupy a strong position and can reject proposals if deemed too radical or too expensive. The NBA is often seen as a problematic institution by both the local community and the local press, posing restrictions and uncompromising preservation statements that seem alien and costly to ordinary people.

As a project manager, Öhman produces a preliminary assessment of the condition of the church, hires consultants, compiles preliminary remedial specifications, organises meetings, and prepares timetables and cost estimates. His role in the process is also to mediate between the sometimes radical proposals of the lay members of the local renovation committees and the preservation and architectural interests of the architect and NBA. In these projects Öhman finds that he would never propose any changes to the architectural design unless motivated by technical or economic reasons, whereas in the power plant commissions he clearly decides about architecture and colour, also against the ideas of the initial architectural designer. In this church renovation the renewal of the external panels has been debated. I myself, as an architect, defend the value of the patina of the old boards, whereas the other members of the committee tend to see a total renewal as an improvement, making the church look good. In such cases Öhman doesn’t interfere with opinions on taste as much as he points out technical matters. He knows that according to the NBA it’s better to preserve the boards, but points out the problems and costs of the contractor, as well as the problem that the boards can no longer be used in their full length due to damages at the lower part. Later the contract specifications also provide reasons for Öhman to interject: changes in the specifications in a later stage lead to a demand for cost compensation from the contractor. The architect, on the other hand, prefer to leave certain issues open until the construction has proceeded so far that a decision can be made on site. This is, of course, problematic in drawing up a contract. The design and design management process is continuously a dialogue between functional and technical improvements, taste and external regulations, especially those stemming from what are regarded as the somewhat incomprehensible NBA authorities. The fire regulations and the building code are much easier for the laymen to understand and accept. In the church renovation the project manager acts in a close relationship with the designers, but where the client also can make decisions. In the case of power plants, the client is detached from the design process and the designers and the project manager dominate the design process, whereas the client continuously has the final say in the church renovation design.
Competences and services

Öhman jokes that in his next life he will be an architect because they have a right to chose and judge, thus dominating the design process. He has experiences of successful architectural design projects and I think he has a sense of the architect’s reasoning and architectural knowledge generally. When I present the drawings of Lohja library he is aware of the status of such a design and would not dismiss it, as might younger engineers or engineering students, who find such architecture all too strange. Öhman also states that he was more radical in his opinions in his younger years. He still reacts against the big glass facade of the Lohja public library, seeing it as a thermal problem and points out the problem of constructing a flat roof with the proposed roof lights and the minimal roof height.

When it comes to the question of what is the core competence or where Öhman sees the honour in a successful project, he points out the overall progress. The unified whole of the process, constituted by such elements as time, money and a satisfied client, determine the characteristics of success. The project must be kept within the given frames of time and money and the client’s satisfaction is also for him a good measure. Architecture or the common good is not mentioned. I address this question by explaining the client’s ignorance of neighbourhood architecture in the first case study or of the value of adjusting one’s own scheme to the existing architecture, as was also the case in the first case study, and he can see this as a problem. Öhman also regrets the lack in certain cases in developing countries of any adaptability to local factors in the power plant architecture, which is best-suited for Western industrial areas. They apply World Bank standards on pollution in any case, but obviously there are no standards for cultural or architectural adaptability. As a project manager the architectural dimension is embedded in the client’s interests, but it’s by no means such a central issue for Öhman’s performance as it would be for an architect. It’s only when the client expresses such expectations that Öhman sees it as a need to set up things like design competition processes, which he does see as valuable in such cases. Peculiarly enough, Öhman is convinced that a good process need not run smoothly. On the contrary, he expects that conflicts will arise and that some participants in the process will press certain issues to such a degree that the project manager has to forcefully interfere. That’s all normal in a design and construction process, he states. Consultants tend to delay projects, some contractors will try to achieve as much as possible out of the contract and the interaction between people is sometimes problematic, and there is a multitude of different attitudes and perspectives.

One particular point Öhman makes concerning design management is that design managers are often selected among experienced designers, but that this often tends to lead to distorted design processes, especially in engineering projects where the design manager might have a long standing career as a mechanical engineering designer but little experience and education in interdisciplinary team work, at least less than the civil engineers have. There seems to be no real professional education
for engineering project managers in Finland. Most of the engineers are trained as designers or production managers. One change Öhman traces in his career is a shift from a trust in the rational methods of engineering towards a mediating role, with a generalist’s knowledge of technical matters. He regrets that he sometimes lacks patience. Sometimes, he thinks time and reasoning might prove a better way of coming to turns with complicated problems and designers.

Due to my experiences from the first case study, I also in the discussion with Öhman raised the issue of project and design management in private housing projects. Öhman has sometimes taken on such projects for friends. The building code requires that there has to be a site manager (ansvarig arbetsledare in Swedish). He agrees with the conclusion of my first case study, namely that the client feels like a very lonely figure in the project management process and that this isn’t simply a question of site management but that it would be worthwhile for a lay client to hire a project manager to take responsibility for design management, including cost estimations and tendering processes. According to Öhman, the idea with site managers and main designers (huvudplanerare in Swedish) in the Finnish legislation doesn’t really meet the needs of small private clients.

Figure 79.
Maxmo church. Before renovation.
Conclusions

One particular thing I would like to pick out in regard to my interview of Öhman is the relation between design and design management. The design management can either dominate or be subordinate to the architectural design. In the case of such commercial enterprises as power plant deliveries architectural design is only a secondary issue and the main target is client satisfaction, and time and cost management. It’s when the client has a genuine interest in architecture or is forced to meet certain standards that the design manager reacts and acts accordingly. What I also detect in this attitude is the design manager’s flexibility. He can identify the values of both preservation and that of the local client. Still, he sees himself as a tool for the client. This means that some of the problems architects blame on project managers actually stem from the clients’ neglect of values that the architects see as central. Or, if we take it the other way round, project managers should have access to the competences taught to students of architecture, too. Learning a lesson from Öhman’s management approach would mean that architects need to check out the framework for their design commission at an early stage, and to address the questions of what kind of architecture the client expects and what are the limitations. Normally I think architects tend to keep this issue to themselves and more or less unconsciously assume that every object will be designed according to the highest architectural standards, which means those of the architectural avant-garde.
INTERPRETATIONS

Due to the interesting implications I have found in the structures of the competition system in combination with Bourdieu’s field theory, I have chosen to remodel the organisation of this case study. Instead of a close study of the individual design process I have chosen to keep the presentation of the design processes short - leaving much of the detailed material aside - and will instead concentrate on the articulation and understanding of the design process from a pragmatist perspective, and open the discussion concerning design learning and the structures leading up to innovative avant-garde design. I will here present some preliminary conclusions from the second case study. In the next chapters, dealing more clearly with the impact of the pragmatist philosophy on architecture and design theory, I will return to the case-study findings. Below are discussions concerning interpretations based on theories and the case study, ending in some conclusions. The section starts with outlining some pragmatist concepts. After this I discuss the organisational setting of the architect’s office and my interpretation of organisational learning in the office and in the design process. The third part is a discussion regarding the type of avant-garde evident in this second case study. Finally, I present some conclusions from this case study, which I will continue with in the chapters 8 and 9.

The pragmatist perspective

Even if aesthetic experiences remain mostly inaccessible to the outsider, I think we can relate the theory of aesthetic experience to the design process of architect Ilmari Lahdelma, and thus gain some improved understanding based on the combination, though the empirical evidence remains distant. The case study can contribute to a transformation of Dewey’s aesthetics in regard to design theory, by interpreting and mirroring some of the ideas in his theories onto the design process studied. In the next section I will make use of Jackson’s analysis of various issues in Dewey’s aesthetics because it gives a synthesis of various ideas coming from several of Dewey’s writings rather than just Dewey’s Art as Experience.

In the case study of Lahdelma I am unable sense the aesthetic experience myself, at least not in the same immediate manner as he himself could, because I am too distanced from the process. Aesthetic qualities are personal experiences, and my experience is the experience of a passive perceiver, whereas Lahdelma’s experience is that of the active designing agent. Still, in the case of the competition entry, I can trace a moment similar to my own experience with the garden design mentioned earlier. When I first met Lahdelma he was convinced that he would stick to his concept. When presenting it to the students working in his office one week later he made a straightforward presentation of the project. Lahdelma was confident about his proposal, despite certain unsolved issues. During his presentation he
even mentioned some of these open issues. There was also a strong emphasis in his description on assembling different aspects of the site and the situation into a unified solution. The most striking moment of piecing bits together that I myself got access to was the invention of a bay window. This window, close to the main library facilities on the upper floor, allows a central position for the local collection, with a view of the old church, as well as offering an enlargement of the total space available without destroying the original idea of a free standing building only “imaginatively” connected to the neighbouring buildings. I didn’t trace joy, but rather a conviction and satisfaction with this solution, both by Lahdelma and one of his co-designers. I think Lahdelma had had an aesthetic experience in an early stage and that the design idea had been transformed into a unity. The stage when he decided to stick to his idea and had found the idea of the bay window seems to have been a consummative stage. It seems that he continues on a design problem until he finds a satisfying solution. That is his explanation for what he had been doing to the proposal between the first sketches and our later meeting, when he had produced more coherent sketches. I would like to interpret this as a conclusion that he works on a piece of the project in a consequent manner until he is satisfied, in the sense of having a consummative aesthetic experience.

**Aesthetic experience as a process**

The aesthetic experience is not a short moment of insight, like Archimedes’ exclamation of Eureka! It’s easy to think of it as the final moment of insight and a shift in thinking, but Dewey included the whole process of doing and creative elaboration within the concept. The aesthetic experience is a build up and fulfilment and Dewey often returns to the idea that it’s not a harmonious or simple pleasurable activity, but includes “an element of undergoing, of suffering in its large sense” (1980, 41). It’s a process of maturation, which might be painful. It’s obvious that Lahdelma has to work on his proposal, despite the seeming readiness of his initial idea. He had been working on it up to our first meeting, when he had only some simple sketches to show. He continues up to the moment when he hands over the work to his employees, yet continues through the whole process. His concentration is still intense when discussing the drawings made by the co-designers, and he makes changes in the design up until the very end. Seen in the light of the grand project of Dewey - using aesthetic experiences as a way finding a way of a harmonious and fuller life - I am inclined to conclude that Lahdelma hasn’t found the right incentives for this through his experiences. His occupation with architectural design and his cooperation with young architects seem rewarding, but the workload seems to reduce his potential for enjoyment and individual development.

**Accumulation of meaning**

Dewey made a clear distinction regarding meaning in science and art: “Science states meanings; art expresses them” (1989, 84). Thus we have to see the meaning as related to expression, but because design is also accompanied by reasoning we find the meaning in the mixture of expressions and verbal statements. The meaning lies not purely in the expression of the architecture, but is also included in the reasoning during the design process. The process of reasoning is, as in any artistic work, disrupted in the moment the object is finished and handed over to the audience. The reasoning before and after need not be interrelated. Jackson has analysed Dewey’s
explanations regarding meaning, and makes a distinction between intrinsic meaning and extrinsic meaning. The latter is related to the instrumental role of an object or an event. In architecture, as well as in design in general, it’s natural to talk about the utility, functionality or usefulness of an object. The library has to fulfil the function of a public library. The “intrinsic meaning is also instrumental” (Jackson 1998, 28), yet serves to enrich the experience. Its meaning is enjoyed for its own sake, in opposition to the practical use. Here we also find one of the criteria for aesthetic experience. When the intrinsic meaning is strong, the situation is aesthetic (Ibid.). Jackson brings the example of a teaspoon. If we only see it as an instrument for stirring with, it has primarily an extrinsic meaning for us, whereas if we use it and enjoy it, and experience it as a contribution to our social life, then it bears an intrinsic meaning. In the case of the library, it’s obvious that in a competition with a well-known architect producing interesting architecture, the intrinsic meaning will be much bigger than if it would have been placed in an ordinary office building, among some rather anonymous offices. As one can understand from this, the interpretation and evaluation of the object varies, depending on the context, but also depending on who is the perceiver. There is no need for a definite choice between the intrinsic and the extrinsic meanings; we can perceive both (Jackson 1998, 14f) and switch between them, and it would be unreasonable to exclude the other. The point is that they need to co-exist in design. A teaspoon that has no use is hardly a teaspoon. A construction that cannot accommodate any function can be a work of art but hardly architecture in the normal sense. In the case of Lahdelma, it’s obvious that he integrates the programme into the design. He refers to it as useful and returns to it on several occasions, e.g. when handing the work over to his employees. On the other hand, it’s obvious that the integration of function with form is central in the design process. The bay window with its linkage to utility, form and placement in the library is one such example. It acquires more meaning through this combination of function and form. The creation of a main upper floor is another example that has undisputable advantages for the staff’s monitoring of the visitors, but also provides the building with a large space and a higher exterior mass, accentuating its status as something special. Unity is, of course, a key aspect. It’s important that the disparate elements - such as space, utility and cultural habits - can be unified within a whole, thus increasing the meaning of the whole. Thus the design process is a process of selecting and rejecting, intuitively feeling and knowing what fits together. Lahdelma stresses that they use all the time available to trim the design - if necessary, they use the two final weeks allowed only for the construction of a card-board model to test certain features that might turn out to be important in a later stage. This is, I think, somewhat removed from the conventional understanding of design or its traditions, in that it sees the finishing, with drafting and the model construction, as rather mechanical modes of production.

**Knowledge and pleasure**

Dewey’s aesthetics includes a denial of pleasure as the main target of artistic works, for both designers and perceivers. Knowledge adds to the meaning of the object (Jackson 1998, 31). Immediate sense experiences are important and joy and enjoyment are important constituting elements in Dewey’s conception of aesthetic experience (1980, 40ff), but it doesn’t exclude knowledge and intellectual reflection. In our reasoning, we refer to the extrinsic reasons but through the artist’s interaction
with the material these reasons grow inseparably into the design object and enrich the whole (Ibid.). This growth of value Dewey calls a “gift of the gods”, because it’s much more valuable than the separate pieces of the initial materials. A house is more valuable than the building materials, but not only as a shelter. It can, through skilful design, grow into a highlight of culture, in the form of, say, a church or library. I will use one of Jackson’s examples (1998, 29f). If we know a lot about tea ceremonies - or a certain kind of architecture - it will most certainly contribute to the perception of meaning in the experience of an object. We will appreciate certain types of cups and the organisation of the tea drinking ceremony in a certain way. In the case study it’s to some degree difficult to trace the integration of knowledge, but Lahdelma often refers to current ideas in library design; for instance, explaining to one of the students when handing over the project about ideas such as the rule of excluding toilets from the library departments, except in the children’s department. One personal experience is the moment when I realize that the constructions for the rooflights are unintended yet appropriate copies of rooflights of Le Corbusier’s La Tourette Monastery (1957-60). Lahdelma also enjoys the application of these roof elements, which he himself traces back to a previous design for an exhibition building. It’s not a mechanical application, but when he sees that they will fit the design, he accepts it gladly.

**Objects, events and situations**

In architectural design it’s normal to produce objects. Also, it’s possible to think that one can design events and situations. For Dewey, there is a distinction between the situations as a “larger system of meanings”, where the objects and events are created or emerge (Jackson 1998, 15). The idea is that we never judge objects or events in isolation but always in a context, in a situation (Dewey 1980, 193ff). The situations are distinctive and unified by a quality as a whole (Ibid., 36). It might include conflicting elements, but they contribute to the quality of the situation. The objects and events are to be seen in the context of a situation, and influenced by its qualities. In a broad perspective, we have to realize that the objects belong to a wider world (Ibid., 195). This means that the object is never free from context: the objects don’t occur in a vacuum. In the case of this particular design process, there is a design situation consisting of the actual working conditions, the projects done and those under progress, the staff and the professional institutions and Lahdelma’s relationship to them. I raised the question of architectural preferences several times in my interviews, and Lahdelma did his best to present some answers, but he couldn’t tell precisely. On the other hand, he soon shifted into the realm of Finnish architecture, its history and current tendencies. He knows it well, but could hardly relate his works to it. His contextual situation, referring to design, seems to be tacit. He knows the situation but he cannot explain it. The design is most certainly a result of previous library designs and previous competition designs. In the second entry, designed during the last week of the competition period, they attached the office manager to the process, due to his thorough knowledge of library design and his experiences from monitoring the construction processes. In the interviews with the competition jurors, several jurors expressed their acquaintance with other works of Lahdelma - the competition entries are produced in a very small community of architects, with a great interest in competition - but they didn’t recognise his work from among the others during the evaluation process.
Emotion

Emotion is an important ingredient in Dewey’s theory of aesthetics. He called it the “moving and cementing force” (Dewey 1980, 42). It belongs to the self, and is active in the process of selecting and rejecting. It generates the unity of the materials through the creative process. The emotions are always contextual, and Dewey ascribes “agental force” to the emotions, which Jackson interprets as meaning that “emotion works like a filter through which perceptions are screened” (1998, 11). Translated into the design process, it means that design is never possible without emotion. We can never just mechanically add materials. We have to make use of both our perception and our emotional apparatus in order to be able to synthesize the perceptions and the materials of the design situation. Emotion doesn’t denote expression of feelings as such, but is the “reactive glue” that enables Lahdelma to make a synthesis of disparate elements, and sometimes even to shift from the given regulations of the programme to solutions that match the whole solution better. He had reached the conclusion that it would be better to put the main library functions on the upper floor, despite the indications in both the programme and the general knowledge that it’s a good solution to keep all main functions on the ground floor. Jackson (1998, 14) draws the conclusion that “the capacity to consider an experience as discrete, lacking a past and a future, is of particular importance in coming to appreciate art objects”. The point is that we sense and make sense of a situation; we extract it by means of immediate emotional sense-making, “without thinking per se”. Neither is it a discursive process: it’s an emotional process (Ibid., 20f). That’s the reason for the tacit nature of design thinking, and matches Hillier’s idea of knowledge staying in the same mode from the designers pre-understanding to the design situation. The reasoning doesn’t pass through any discursive transformation, but accumulates through felt perceptions and emotionally-based sense making, before it is applied.

Inquiry and technology

Aesthetic quality wasn’t a single issue in Dewey’s argumentation. He focused on the human ability to experience situations, to process information of different kinds, to distinguish inherent features and problems and to process the understanding of it into an improved situation and a better understanding of it: the means is controlled inquiry. Inquiry is central in Dewey’s theories, especially in scientific processes (1980, 1938). Inquiry is the scientific method per se, in its experimental and explorative sense (1938). It’s directed towards a specific situation, exploring it through experimentation and reflection. One important feature in inquiry is rationality - an intelligent control of inquiry by the construction of an internal logic or reasoning based on findings generated through inquiry. This explorative and in a broad sense instrumental process of inquiry was termed technology (Hickman 1992). Dewey also emphasised the making and the use of ‘tools’ as a means of exploring situations. By ‘tools’ we have to understand anything that in a broad sense can be instrumental to improvements of our understanding and the situation. In the case study we have the sketches as instruments, as well as the final presentation drawings. A somewhat surprising instrument is the computer display, but it is often included in the discussions. The room programme also functions as an instrument. There is a lot of instrumentation during the design process, supporting the inquiry into the situation, both as a whole and into the intermediate solutions. Complementary
to the traditional methods, I find that the architect’s office is used as a technology for preparing entries for the competitions. Lahdelma seems to have a broad set of repertoires for producing design proposals. He could have done it on his own, but he did it instead by monitoring the rest of the process, doing it, he argued, in a more cooperative process. In the beginning he used a simple discussion with one student as an initial approach in order to gain knowledge of the task. One possible conclusion could be that he is very skilled at using all possible situations for design purposes with little effort.

The traditional design methods are well known: sketches, drawings and discussions, possibly including a cardboard model. It could be that the smooth and simple liberation from further design methods supports Lahdelma’s successes.

The architects’ business, according to Mintzberg

The organisational setting of the architects’ business can be studied from different perspectives. I have started with an organisational interpretation based on Mintzberg (1979). The main perspective will be the interpretation of the architects’ business as a profession together with its special knowledge. I will broaden this perspective with Nonaka’s and Takeuchi’s (2001) perspective on knowledge conversion, because the professions base their authority on their special knowledge, and it seems that the architect’s office of Lahdelma & Mahlamäki acts to enforce the organisational learning within the office. I will also add a second broadening perspective, the idea of polarization of cultural fields from Bourdieu (1996).

I will present a basic analysis of the organisation of the office based on Mintzberg’s classification schemes (1979). According to this, the office is an operative adhocracy (Ibid.), and its main task is to operate in varying projects. Mintzberg sees the consulting business “where the approach is innovative” as a typical example of “adhocracy” (1979, 448). In the case of the office of Lahdelma and Mahlamäki, most of the work is a matter of routine, but the ideology of the firm is to be innovative and to adapt their avant-garde design skills also to the major production. The owners/managers act as members of the project teams, with coordination as a second responsibility (Mintzberg 1979, 440). The organisation is highly organic (Ibid., 432) with very few professionals other than architects. Much of the coordination is based on a mutual understanding and acceptance of a common interest in an ideologically coloured production (Ibid., 435). It seems that the owners don’t have a monopoly on innovation (Ibid., 436) but are supportive towards proposals and developments put forward by the staff. The decentralisation is selective (Ibid., 432), allowing the project members their freedom, but with the owners closely monitoring the process (Ibid., 447) with an unchallenged authority when different opinions arise. They have reached this level of authority due to their artistic successes and their responsibility as owners of the office. It seems that both Lahdelma and Mahlamäki are skilled in
handling human relations and design teams (Ibid., 447) - a conclusion I draw after observing them on different occasions inside and outside the office, and based on the fact that none of the staff expressed any negative comments. In this office the avant-garde ideology is very strong and shared by all members of the staff. I find the avant-garde ideology of the office to be very much like the idea included in the mission of a missionary organisation (Mintzberg 1979, 479, Bruzlius & Skärvad 2000, 193). It becomes the basic interest of most members of the organisation and the driving force for the owners.

The design commissions won by the office of Lahdelma and Mahlamäki, at that moment at least, was based on a large portion of prize-winning design competitions. Alongside the normal activity of marketing, this office manages the unlikely process of acquiring a substantial number of contracts by competing in open design competitions - which is by no means typical. I believe they have achieved this by decentralizing the expert design tasks to a high degree and by allowing the members of the staff the opportunity to participate in competitions. This enlarges the potential for innovation and highly skilled design performance, and constitutes a continuous training. As I see it, the architectural education in Finland, with a strong indoctrination concerning the ideals of the avant-garde, is also a contributing factor. Finally, I think the history of the office and the background of the owners, working mainly in teams, is a reason why they are so successful. Most architects’ offices are small, but based on these same structures. The difference is that most of the structures get formalized when they grow older or bigger, restricting the communication and participation in prestigious design projects to a few skilled experts. The office of Lahdelma and Mahlamäki has managed to let the whole staff be involved in this training and learning process to some degree, and they feel motivated. The typical problem they face, however, is that especially younger members of staff don’t always understand their tasks, are less conforming, and lack knowledge of both internal principles and even general design knowledge. This is notable in the process of Mahlamäki’s entry, too, where the co-designer was facing the problem of working alone while Mahlamäki was away at his position at the university during the week.
Organizational learning according to Nonaka and Takeuchi

Nonaka and Takeuchi (2001) have been advocating a new theory of organizational knowledge as a means of explaining innovation: “The cornerstone of our epistemology is the distinction between tacit and explicit knowledge. The key to knowledge creation is the mobilization and conversion of tacit knowledge”. They have introduced four modes of knowledge conversions: socialization, externalization, combination and internalization. One point they make is that knowledge exhibits similarities to information but it is also different from it (Ibid.). Knowledge is about beliefs and commitment, and it’s also about action: it’s knowledge to some end. It’s also about meaning and is both contextual and relational (Ibid.). According to Nonaka & Takeuchi, “organizational knowledge creation is a continuous and dynamic interaction between tacit and explicit knowledge” - described as a spiral progress shifting from different modes of knowledge. This spiral process gives us a frame for interpretations of case studies and as a means of explaining the relationship between a successful designer and his staff. I will present an interpretation based on Nonaka & Takeuchi’s ideas, seeing the design process as a setting for organizational learning.

Socialization: from tacit to tacit

“Socialization is a process of sharing experiences and thereby creating tacit knowledge such as shared mental models and technical skills” (Nonaka & Takeuchi 2001). “Apprentices work with their masters and learn craftsmanship not through language but through observation, imitation and practice” (Ibid.). The important point is the sharing of experiences. It also occurs between designers and customers. Learning craftsmanship by working in an architect’s office is a common understanding of how to develop the professional skills of young architects. The young architects and students in this case also share this conviction. There is an obvious momentum of sharing experiences when Lahdelma discusses the programme with the student at the beginning, but also when he sits together with the co-designers and discusses the different half-ready drawings. The history of Lahdelma’s office also shows that some architects that have been working in his office have also been successful in architectural competitions, which I take as an implication that they might have learnt something more than the basic skills of an architect. In this office, on the other hand, the third office competition entry and the early history of Lahdelma and Mahlamäki’s careers show that it need not be a master-apprentice relationship. It can also be a cooperation based on equality. What’s important is a mutual sharing of experiences. Thus Lahdelma receives or is confronted with ideas, traded among junior architects and at the educational institutions. Normally an architect doesn’t cooperate with other architects as much as with professionals of other disciplines. The cooperation with professionals from the same profession remains very limited. In the open and sharing atmosphere of this office there is a potential of about 20 professionals sharing ideas and insights. The point, according to Nonanka and Takeuchi, is that it’s a sharing based on a means other than language. Most architects working on their own have few options for ‘sharing design’ knowledge other than studying journals and visiting ready objects. There are few opportunities to share knowledge on a more immediate and processual level.
Externalization: from tacit to explicit

“Externalization is a process of articulating tacit knowledge into explicit concepts” (Nonaka & Takeuchi 2001). This takes the shape of “metaphors, analogies, concepts, hypotheses, or models”. The expressions are often inadequate, though they promote reflection and interaction. According to Nonaka and Takeuchi, “externalization holds the key to knowledge creation, because it creates new explicit concepts from tacit knowledge” (Ibid.). The metaphoric communication enables an interaction that is open enough to let us exchange thoughts on subjects that have no determined explanation, and issues that contradict each other, in order to develop it. “Once explicit concepts are created, they can be modelled” (Ibid.).

In the second case study, the architect Lahdelma seems to be able to express his ideas: he produces detailed explanations when he hands over the design task to two students, despite his few sketches. Lahdelma uses mainly concepts that are related to the site situation and the half-ready proposal. His presentation at handing over the project consists of three elements: the situation at the site, the programme and the interpretation of his own proposal. He uses some metaphors and explains the shape of the library as “brick-wall-like sides, ending in glass” and the front yard as a “bricked world”. He explains his conviction that it’s rather impossible to have all the main functions of the library on a single storey. The organisation is converted into a journey through the building, expressed by sentences like: “changing the direction several times you arrive in the hall […] you enter the library through the gates, here is the service centre […] either you continue, i.e. to this area, or you take the elevator or the stairs up to the second floor, to the adults’ section” or “from the stairs you arrive here”. Later on he reflects on different issues, expressing his thinking in short comments. This externalization enables the students to understand the design and generates a set of reasoning - a logic supporting the design work. The co-designers are supplied with a rather consistent theoretical description of the reasons constituting the design. They not only see the design, but also get to know the reasoning behind it, which is a key to knowledge creation according to Nonaka & Takeuchi (2001).

Combination: from explicit to explicit

The exchange of explicit knowledge is based on communication between individuals. It’s a process of “combining different bodies of explicit knowledge” (Nonaka & Takeuchi 2001). This combination can lead to the creation of new knowledge, e.g. by means of sorting and categorizing. We create more knowledge by rearranging what we know or what others tell us. A typical example is the formal education through lectures. According to Nonaka & Takeuchi, a combination is used when mid-range product concepts are used in order to generate a corporate vision or vice versa.

During the design process the designers exchange knowledge about the proposal. In the beginning it’s Lahdelma who explains his ideas and the programme. Later the communication develops into dialogues, where the different co-designers discuss different problems and solutions with Lahdelma. This exchange functions as a vehicle for testing ideas and the shared understanding. They are discussions, but mostly involving drawings - used as instruments - showing the problematic shape
or organisation. Later on, after they have won the competition and continue the
design process, the same kind of interaction occurs between the representatives of
the client and the architects. Sometimes Lahdelma explains one of the ideas behind
his proposal; sometimes it’s the head of the library who explains how something
is organized in a library. They rearrange their knowledge of the library’s shape and
organization and find new and better solutions. This development would hardly be
possible without explicit knowledge and its communication.

Internalization: from explicit to tacit

“Internalization is a process of embodying explicit knowledge into tacit knowledge”
(Nonaka & Takeuchi 2001). According to Nonaka & Takeuchi, the conversion of
explicit knowledge into tacit knowledge is easier when it is based on stories or
documents - helping other people to get access to the knowledge. They also claim
that it’s related to learning by doing, in contrast to the formal lecturing method.
People internalize what they experience, thus the conversion into tacit knowledge
needs to be related to more bodily experiences.

In the case study I believe Lahdelma internalizes the programme. He reads it over
and over again. He later compares the sketches with the programme and he seems
to have the programme fixed in his mind. Due to my observational status, I cannot
know for sure whether he has internalized the programme. Similarly, I cannot know,
but I suppose, that the co-designers adapt to Lahdelma’s ideas and internalize his
explanations - expressed in the handing-over session - presumably advanced by
their own design efforts, working on his proposal.

In this case it’s a process of converting Lahdelma’s individual tacit knowledge
into a shared explicit external knowledge of the team. The members of the team
combine the knowledge, supporting the drafting with reasoning. But the knowledge
is also converted into personal tacit knowledge. It’s in this mode that the design is
trimmed into its final shape. The socialization is difficult to trace in the case study.
During Lahdelma’s discussions with the co-designers at their computers, he applies
his tacit knowledge in a very hands-on-like situation, focusing on different features
in the drawing, asking questions and expressing his wishes and ideas in an intimate
dialogue - sitting close together with each of the co-designers.

Knowledge conversion in the case study

It seems that the design process is a combination of explicit and tacit knowledge,
and that all modes of knowledge conversion are important. All of them are means
of sharing and improving organisational knowledge. One speculative conclusion
could be that it’s the conversion from tacit to explicit knowledge, by explaining
and reasoning about different features of the design, which contributes to the
organisational learning. This, of course, contradicts Lahdelma’s claim that he
could do the competition entry on his own. Lahdelma stresses this option - that he could do the whole design by himself - which he has done many times during his career - keeping most of the knowledge on a tacit level. On the other hand, it seems that he can adjust to a cooperative form of design, which - according to Nonaka & Takeuchi’s (2001) knowledge spiral - yields both improved and new knowledge. There are different modes of knowledge, modes different from the traditional theoretical type of knowledge, but the major point isn’t the existence of different types of knowledge but how they are converted and how the design process is converted into a organisational learning process presumably liberating more resources.

In the case study there is evidence that the main driving force is the interest in participating in this battle, with the ideology and the ideas of the avant-garde as the foremost aim. Lahdelma stresses the necessity of serving the clients with a good professional service and makes vast efforts to keep the office and the ordinary projects going. One of the jurors also expresses the understanding of their active participation in competitions as a hobby, whereas one student expresses the general opinion of newcomers, that winning a design competition would be the optimal beginning for a career, establishing an architect’s office.

A different avant-garde movement

In contrast to Bourdieu, Dewey was not interested in the avant-garde or fine art. Bourdieu’s analysis doesn’t exclude Dewey’s ideas, but Bourdieu focused on the avant-garde because he saw them as crucial for social organisations. For both of them there is a basic type of aesthetic quality, applied by man in different situations and art objects. According to Bourdieu, the artists and people with a higher education or a similar social background have acquired dispositions that provide them with better means to judge art according to the standards of the art elite. There is, so to say, a different level of aesthetic judgement, based on social background and education. They set the stakes for good art and architecture and they dominate the others. The less successful architects remain consumers of the architectural ideas proposed by these leading architects. Returning to the ideas of Dewey, one finds that he emphasised ordinary experiences. It’s particularly interesting to reflect on Dewey’s ideas about universal aesthetic experience and democracy in combination with Bourdieu’s analysis of avant-gardist elitism when considering the seeming anomalies in the education of architects in terms of formal pedagogy versus practical training as well as the conflicting viewpoints of architects serving clients’ needs versus personal avant-gardist quests.

Albertsen (2002) explains the participation in the field as a game with an agreement on the rules of the illusio of this specific field. It’s an attitude indoctrinated when
still a student, and fully accepted by most of the participants. In the case study I followed a distinct type of ambitious architect who believes in the necessity of regular participation in architectural competitions. Most architects don’t compete on a regular basis, but among these artistically ambitious architects it’s a common attitude. All of them - the architects, the students, the employees and the architects acting as professional jurors - express a devotion to the idea of architectural competitions. The students are clearly outside the establishment, while the senior juror and the owners of the office are part of the establishment. One student has chosen a particular training process, combining work in the office with formal studies, and participating in competitions both privately and in the office. His goal is a first prize, seeing it as a key to an office and a real project of his own. Some of his friends have had successes in competitions and he sees the competition as a realistic opportunity for success. In his opinion, doing competitions is a nice hobby but it also demands a lot of work. He has realized that it costs a lot of time, but he refers to the success story of the architects of a recently established office, whose owners have previously been working in the office of Lahdelma and Mahlamäki and have had several successes in different competitions.

Recollecting expressions and thoughts from the taped interviews, especially with the younger agents, I become aware of certain dogmas surrounding the ideas of those within or aspiring for a position in this group of avant-garde architects. One is the acceptance of the necessity of working in a successful architect’s office. Another is the acceptance of the need to participate in competitions on a regular basis. They see regular production of competition entries as an art of training, improving their skills. A third idea is cooperation. One can cooperate and discuss ideas. There’s no real danger of losing anything by having an open attitude: on the contrary, you save time by cooperating and you can process even more entries. The office of Lahdelma and Mahlamäki has won many competitions and is well known for their organization of work, producing many entries for the same competition. And most of them claim that competing is a hobby, contrasting competition design with the demanding but routine work in an architect’s office, emphasizing the detachment from economic rationality. One specific trait is that they know the main protagonists among this group of ambitious architects. They are all aware of the successful competitors and their prize-winning proposals. Mostly they are mentioned in conversations only by name and object, indicating some interesting feature displayed in a competition entry. The content and qualities of the competitions are not thoroughly discussed, but you are supposed to know the name of the designer, the different competitions and the programme. As I see it, it’s a way of expressing an agreement on the illusio, by stating that you know the task and the winning designers of many competitions.

Albertsen (1998) sees the field of architecture as codified. Bourdieu (1996) also mentions the penalties that the academies can set, seeing them as signs of autonomy. The Finnish Association of Architects (SAFA) has at its disposal the right to exclude members acting against the internal rules of the association (Vuosikirja – Årsbok 2002). On the other hand, there’s also the peculiar rule of letting anyone interested in architectural competitions enter. The junior professional SAFA juror states: “a young dynamic architect with a lot of ideas can reach convincing results without the experience necessary in normal office tasks”. You might see architectural students
winning competitions but never anybody without any training as an architect. It seems that one has to have a training in architectural design in order to be successful.

The true consumers of the production of these competing avant-garde architects are other architects (Bourdieu 1996). Albertsen (1998) argues that the field of architecture has a mixture of commercial and artistic interests, and that the architects are more dependent on capital and investment potential than other artists. The construction of a building requires a large sum of money. In the case study I found that the competitions are part of a “genius system” allowing the architects the authority to exercise purely artistic judgement - as a kind of art for art’s sake - and with the client willing to pay whatever comes out of it. There is both the involvement and acceptance of lay jurors, but the real judgement lies in the hands of professional architects. The client’s representatives hand over the right to judge to the professional jurors. They trade their commitment to finance the construction with architecture of a high symbolic value. This value is added both by the architects and the competition jury. In a Bourdian sense, the clients act like the bourgeoisie buying paintings. They’re not in this cultural field themselves but would like to improve their own cultural position by owning pieces of high artistic standards (Bourdieu 1996). Both the architects and the head of the Lohja library state that the arguments for the organizational advantages were given little weight in the ranking process, if combined with a lack of architectural strength. The disadvantages of entries with strong architecture were dismissed with the claim that the organizational weaknesses and problems can always be solved later on. One is made to believe that architectural weaknesses cannot be solved afterwards, or that they are so important that they cannot be traded as long as the entry fulfills a certain level of functionality.

I think it’s necessary to question Albertsen’s (1998) claims that the field of architecture doesn’t have the simple polarization between commercial and symbolic powers which is typical for the art field - Albertsen advocating professionalism as a third dominating feature based on professional codes. Bourdieu’s idea of a simple polarization seems adequate, emphasizing the artistic aspects and leaving functional and other technical issues subordinated to the artistic qualities. The idea of professionalism is not a disparate mode of thinking, but a mode of thinking inherent in the attitude of both commercially- and artistically-oriented architects, and is an important feature in the tradition of all professions. Stevens also draws the conclusion that we can identify two forms of capital in the field of architecture: “The first is professional or temporal status, in which architects compete for material or economic success and professional power. The second is intellectual prestige or status, in which architects compete to be recognized as great creators or thinkers” (1998, 88). A more favourable interpretation towards professionalism is to say that we can have different subcultures within the field of architecture, and within these there can be different relations. I think this could be an appropriate differentiation within the design fields in general, especially within the new design fields, such as software design. On the other hand, I still think that there is no potential to reach the same status and position by means of professional performance as there is by success in designing artful architecture.
There seems to be an inner circle of active agents continuously reshaping the thinking regards matters of architecture. There is no given canon of style, but by submitting entries to competitions the elite architects contribute to the stock of examples that constitute the mass of entries that are then reciprocally ranked. The modification/evolution of the stock of examples is strengthened by jurors coming from this same compound of successful architects. But the evolution also makes the competitors apprehensive about the results of the new ranking. Different from other architects, they are convinced of the necessity of competing as the only appropriate way of developing their skills and as the only true art of being an ambitious architect. However, these architects are not necessarily integrated within the architectural establishment. They belong to this circle because of their ambition to practice architecture on its cutting edge. I here use the word ‘circle’ because it seems that they have certain interests in common, and they seem attracted to certain successful architects and their production. They have a kind of communication of ideas in common, sharing the same ideology. One could call it a movement, but then one has to realize that it’s a movement based on the idea of being artistically ambitious. It’s a kind of avant-garde movement, but organized by the idea of an attitude towards a sub-culture of architecture, and not by any clearly defined artistic ideals like postmodernism, structuralism or minimalism. This avant-garde is *not* to be defined by the traditional qualities associated with it, such as being innovative, experimental, and heterodox. These concepts are important in this kind of avant-garde but they don’t constitute the defining pattern, according to Bourdieu’s way of defining it (Bourdieu 1996). It’s obvious that there is little concern for bourgeois values, such as profit or stability. Making money is necessary but is not the main thing. Serving clients is important but should not replace the respect for architecture.

The establishment shapes the avant-garde and the development of its thinking and production less than the internal competition among those fighting for a position within it does. The members of the establishment choose jurors, accept members and lay out rules. Due to the system of open competitions and their anonymous entries, the development and judgement are left to the individual agents trying to get access to the honour of winning, or as jurors - finding the proposals that will attract the interest of the true readers, showing the juror’s “eye” for the avant-garde development. According to Bourdieu (1996), there is a symbolic value inscribed in discovering a new artist.

I think the architectural field is similarly polarized as other cultural fields, in congruence with Bourdieu’s field theory. I agree with Albertsen that the competitions exhibit the *illusio* of architecture. I have traced a distinctive inner circle of devoted architects who see the institution of competitions as their major tool for training and testing their ability to design, producing the new icons and thinking within the field. Based on my knowledge of the field, I see few other avant-garde activities within it. There are a few attempts to try out very different ideas, mainly in the area of education and diploma works, but these do not reach the level to be judged and published by the high ranking institutions. In published form there are hardly any other approaches in Finland to developing avant-garde ideas.
What is the point of a rather independent avant-garde? Is it reasonable to allow a small group of architects to agree autonomously on the development of architecture, with an emphasis on purely artistic values? Bourdieu (1996) saw it as a question of belief dependent on changes in the distribution of power. I think that the codes and values are beyond the reach of the board of the architectural associations. They can influence the artistic values - setting standards for the procedures - but they cannot set the standards on what is good judgement. The jurors are free to judge and the entries are anonymous. It’s a complex mechanism generating a strong architecture, thus supporting the rest of the field with symbolic value, which is an important trading good in the activities of the rest of the architectural field. The clients are interested in the symbolic values also at the commercial pole. Reading Bourdieu’s theories, I am apt to think that this is the actual source of strength in the field of architecture. According to Bourdieu, the value of art is regarded according to its autonomy (Broady 1996). It’s obvious that the competitions generate more interest than normal commissions or even competitions with invited participants. The public and the consumers also believe in the illusio.
CONCLUSIONS

Features characteristic of the architect’s office in the second case study are: a shared ideology, a minimum of administration and formal structures, and a lot of direct monitoring combined with a far-reaching decentralisation. Furthermore, there’s a willingness to support learning and development - distributing knowledge of artistic ideas and reasoning to all members of the staff. Lahdelma and Mahlamäki have created a dynamic learning organization devoted to avant-garde production. The large ordinary architectural production is necessary in order to be able to support resources for the regular production of competition entries. It’s not a pure trade off to say that the ordinary production is only a supportive function. It constitutes an integrated whole, but is extremely one-sided with artistic production, trying to meet the corporate expectations of the profession and a position in the establishment. The aesthetic experience is probably not as well-rounded as Dewey wished for. As I saw it, there was little time for reflection and bodily experiences. It was a process with much personal stress, with positive human and social interaction, but with an emphasis on production in an office work space. This I would want to contrast against the aspiration of becoming a successful elite architect, living a well-rounded life. The office could manage their business with less competition efforts, but the owners see it as an interesting hobby at the core of their professional activity. In this case, it has paid off. They claim that there are big fluctuations in their business, but they have managed well some years now. I am apt to agree with the conclusion of Bourdieu, i.e. that they don’t do it for commercial reasons but for the sake of art and for the prestige among architects (2000). They see it as a game and they have also spent resources on competitions without winning.

Lahdelma and Mahlamäki have created an organisation body producing design proposals as a matter of routine, thus liberating larger resources than most competing offices. The liberal attitude towards employees participating in competitions - even supporting them with plotting facilities and sometimes even with criticism and advice - supports a shared understanding of problems and intentions. Secondly, their management is combined with a tight observation of the intermediate results, applying their personal design skills when necessary. The major work is left to subordinates but the chief designers follow the progress. Different ways of design work are used for improving the design proposal. The project management, the discussions with the modelling consultants as well as the results of software modelling are all used to trim and sharpen the features of the proposal. It’s all part of the design process.

What can we make from all this? My answer is that there is specific knowledge inherent in the design processes of the avant-garde. Due to their active and regular participation in competitions, the avant-garde designers acquire knowledge of inherent and continuously changing rules. There seems to be a kind of tacit knowledge generated at the cutting edge, which, combined with a rather simple knowledge of traditions and general rules of the field - the skills of ambitious students seem to be adequate - enables the agents to approach the very top of the design field. The only way to stay competitive seems to be by “learning by doing”,

THE COMPETITION 299
because the traditional method of science - eliciting facts, described as theories and learning through reading - is too slow in a rapidly changing context. This, of course, doesn’t prohibit a scientific investigation of the phenomena, but their usefulness for the agents of the avant-garde remains limited.

Another way to explain design is to make use of Wittgenstein’s concept of language games. The field of architecture consists of numerous language games (Lundequist 1999). The avant-garde is one such game that is open to anybody who knows the rules. The knowledge of design practice is a frame of reference and a repertoire of experiences and ideas. Social interaction, design activity and perceiving design objects condition the learning of these language games. The learning is based on cases presented to us, not as theory but as concrete cases of design (Lundequist 1998).

Avant-garde, professionalism and design management

If we consider the different kinds of knowledge traced in this second case study it seems that there is a specific kind of knowledge that’s embedded in what we could call rituals. We can also call it repertoires. It also contains some explicit knowledge. In this case the design activity is framed by the idea of design as a matter of art for art’s sake, which is often ignorant of rules stemming from external positions, ignoring time and budget limits, and with a notorious wish to challenge existing traditions. One interpretation could be that the learning of design competence in cases like this, concerning demanding artistic design, is taking place on a non-linguistic level. Lahdelma or Mahlamäki are rather successful without conceptualizing what they do. They hardly talk about the process as a matter of what they do. I assume that the learning takes place in the process of students and employees seeing what and where Lahdelma and Mahlamäki put their attention and what they do when they try to trim the proposal. In the early stages it’s very difficult to follow the design process, because it’s a very private process, but in the refining process at least Lahdelma interacts very closely with the people working on his design, sitting next to them and pointing out and discussing ideas. In this sense, the language plays a role but it’s not a linguistic process concerning the design process (except concerning the production and time frame) but most of the time the language is used as a support in the discussion about how to improve the entries; it’s giving attention to solutions and problems, mostly those that are still unresolved. It’s not easy to get any answer about architecture or theory of architecture from Lahdelma. He cannot explain what he is doing in any kind of distanced reasoning. It’s only in the context of an object that he can exercise his mastery.

The only thing the agents of the avant-garde are really good at is innovation. They sometimes produce remarkable innovations, changing the thinking of a whole field or culture. I think this innovative potential is hardly available at the commercial pole,
or in the institutionalized formal education. This contradicts the idea of enforcing innovation by simple commercial means or by scientific education. Based on Bourdieu’s thinking, I assume that innovation asks for a strong avant-garde and an autonomous professional field, where the agents are forced to perform excellently in their practice by symbolic incentives. Here I think we can see significant distinctions, between different aims and the training of designers. We can aim at training:

A. **Avant-garde designers**, who will have to learn from a master or an avant-garde design context.

B. **Designers** with a robust design skill, but with less emphasis on avant-garde design. The training concentrates on the routines, and the refinement of the designs and practices of the profession.

C. **Design managers**, who will need to understand the design process on a linguistic level. The training will include a need to understand the aspects of: avant-garde design, the routines and practices but also the design process on a conceptual level.

I think the ideal among the architects is to see group A as the only acceptable one, and that there is something wrong and degrading about being an architect from either group B or C. I don’t think this is the right conclusion to make. The truth is, of course, that only a very few reach the necessary skill for a position in group A and the fact that most of the training is devoted to this makes the profession vulnerable to criticism concerning central design skills in the later design phases. However, I don’t see the degrading Stevens (1998, 219) claims to have taken place among architects, where computer aided design would be a dumping ground for less successful architects. In a sense it’s the same fetishism for fine art that we find everywhere, and where anything else is seen as trivial. In a pragmatist sense it seems very restraining on one’s choices in life to take this perspective. It would be more ideal to say that we can practice design in a joyful and rewarding way also in the less fashionable projects and in the later design phases. When it comes to reading or interacting with the flow of avant-garde practices and ideas, I think it’s necessary for all of the designers, down to those executing the most simple design tasks, to be familiar with some of the knowledge inherent in the avant-garde practices.

I distinguish between three major elements: economic incentives, artistic incentives and management skills. The first of these seems less important, whereas a combination of the two others is necessary for success in the elite of the field - measured by the symbolic values of the field and the positions one can reach. Commercially- and client-oriented architect’s offices can be commercially successful - mainly if they are large - but when it comes to the biggest success of all, including both well-paid and prestigious projects, one has to address the ideology of the field. Those primarily interested in commercial success can never reach the “real” success where important clients take an interest in avant-garde architecture, spending more money buying both utility and a strong architectural expression. Here I think it’s interesting to speculate on the relations between avant-garde design knowledge, interactions within avant-garde cultures and language games, innovative design and aesthetic experience. One can hypothesize that there is a relation between aspiring for the symbolic capital (and thus a position among the consecrators) and the potential for
success, and that this relation is more important than money and innovation in any design field.

The commercial business is a trifling but necessary and important matter in the practice of avant-garde architects. A commercially successful office can use resources for the unprofitable production of competition entries. A professional management of projects and business relations is advantageous but it must never replace the joy and trust in the avant-garde ideology, and there must remain a continuous interaction with the avant-garde ideology through design practice. Here I think the flexible attitude of the project manager is insufficient. We need the chain of client-management-avant-garde-designer to facilitate a design process that can produce innovative results. I also think it’s advantageous that the management has this avant-garde attitude and, due to the tacit embedded cultural understanding necessary for innovative production, an interest in a close relation to the other designers, as found in this case.

Lahdelma uses computer-aided design methods. He can use computers for word processing but he himself doesn’t know how to produce drawings using them. However, he actively takes part in this process by sketching on printed drawings and by discussing the entries and images displayed on the computers proposing changes, materials, perspectives and illustrative gestures. It seems that he has got used to following up the design process and design in a management manner. Both architects stress their capability to produce entries on their own - related to their previous career as young architects without any or with few staff - but Mahlamäki also declares that the demand for better illustration techniques has increased. With their shift to a design management method, they are able to monitor more proposals and apply better technical devices and competences. However, the design is still, to a large degree, the result of their individual design thinking. The peculiar thing here is that the economic incentives are of little importance. The office of Mahlamäki & Lahdelma is as successful as any client-oriented office. They add value to their projects by means of an avant-garde profile. There is a great deal of talent in their management methods and they are well aware of the demands expressed in the commercial market by their clients. Their major interest is, however, the “illusio” of architecture (Bourdieu 2000, Albertsen 1995, 2002.

The avant-garde professionals of the field autonomously define the ideology of the field. This ideology is a key to the understanding of what is seen as interesting or not - it’s a kind of standard by artistic means. This understanding is a prerequisite for innovative design in the field of architecture. This poses the question of how far truly commercial- and client-oriented design projects can be innovative. I think it would be interesting to study other fields of consultancy in order to trace their ideology and their avant-garde, e.g. in software design and in organisational design or reform. I also see the lack of depth in my speculative conclusions and think further investigation is needed, for example regarding how the avant-garde designer addresses client needs, and how the relations between commercial demands and artistic interests in the avant-garde office are constituted.
Design knowledge

This case study is a narrow analysis of a specific part of the architectural field. However, I think much of the standards of the field in Finland are set by this group, and it forms the driving force of the field, but it’s also situated in a dynamic context with many external powers and influences. What conclusions can be made? I am apt to accept the idea of a polarization emphasizing the values of the avant-garde. I think the idea of professional codes and values, serving ideals external to the profession, is subordinate to those of the avant-garde. The internal codes oriented towards internal values are the most important to the corporate identity. These values and codes are developed autonomously, whereas the traditional codes of professional performance are created in reference to the professional context, including partners outside the profession. The idea of a polarization is not in conflict with the idea of professional knowledge; it simply proposes some refined understanding of the professional knowledge. As I see it, polarization is in conflict with the idea that professional ideals would constitute a field between the commercial and the symbolic poles. I think professional competence is an important issue; important at both poles and forming the basis for professional performance, but that there are nuances within the competences. The generation of the most central knowledge and codes of the field takes place in the design practices of the most successful architects, winning design competitions.

It’s difficult to draw a borderline between knowledge and the codes. The codes are socially- and historically-established rules and strategies that aspiring agents have to know. They are part of the knowledge necessary in the design practice. The universities have the responsibility for the basic education of new professionals. There are two mechanisms for integrating this central knowledge into the education of the students of the profession. First, the teachers are selected among practising architects, and they are also allowed to maintain a practice alongside their teaching assignment. Secondly, many students combine their studies at the university with practice in an architect’s office.

The responsibility for the specific knowledge of the professions has traditionally been given to the organisation of the professions. This responsibility has been shifting towards the educational institutions, which, of course, can be problematic because the universities and the professional organisations have different interests (Burrage, Jarausch & Siegrist 1990). In this case, it seems that much of the generation of the specific knowledge of the profession is left to the competitions as an institution of design practice. This is not unfamiliar in the theory of professions. The physicians have a science-based education but knowledge gained from practice can support professional success (Collins 1990). The distinct feature in architecture is that the architectural competitions produce the specific knowledge. This knowledge is not institutionalizable in the professional codes: due to continuing changes in aesthetics, the basis for distinctive rules of beauty or correct taste has eroded. The solution is a competitive institution where the specific codes and knowledge are developed. By selecting new teachers from among the successful architects, the educational institutions try to respond to their responsibility as the bearer of the knowledge of
the architects’ profession. One problem is, of course, that the scientification of the educational systems has left these professors very empty handed in the academic competition, where the best scores are given by research merit. Two responses to this problem has been to start research initiatives and to try to convince those in control of funding that artistic design is a special case. The problem is, of course, that the trust in science is very strong among the representatives of the funding authorities.

It’s important to try to sort out the use of knowledge and competence in the case study. As I said in connection with the theories of Bourdieu and Stevens in chapter 5, the top level knowledge of architecture is produced in practice among successful architects and the schools of architecture have problems in providing this knowledge due to their role as a reproducer of the internal dogmas and ideas. Nevertheless, it’s common for offices to hire young architects and students. This is, of course, a means of getting cheap labour, but in the case of the office of Lahdelma and Mahlamäki it seems that they also constitute a productive avant-garde force. Mahlamäki and Lahdelma to some degree integrate the young architects into innovative design work and, indeed, the student of architecture won third prize in the library competition. And one hardly hears of any engineering or even art students being involved in architectural competitions. Entrance into the educational system is a promotion into a certain design thinking and culture. One advantage with students is, of course, that they are eager to try their new skills and tend to be more experimental than older architects, who establish routines and design repertoires, and get used to thinking in certain ways.

**Dewey and elite design**

What can we make from the case study in regard to the perspective of Dewey? Finally, I think it’s necessary to have a look at the relation between the pragmatist theory and the avant-garde production. Dewey wanted to open or broaden the opportunities for aesthetic experience, profoundly to ordinary man and his practices. I don’t think it’s enough to say that architecture is enjoyed by everyone due to its innate public character. I doubt the potential of public interaction as a means for opening up the design process to more people. I think we need the avant-garde production as leading stars and as a means of valuable cultural production. I think we could say that the competition system has features that, according Dewey’s ideas, are advantageous. It’s a social system promoting refinement and aesthetic experience, which are important goals in Dewey’s philosophy. The large production of competition entries allows for a broad examination of potential solutions. The selection process promotes reasoning and an exchange of values and experiences. Both the larger audience and the design professionals follow the results of the competitions. This promotes an exchange and development within the field. Despite the elitist orientation, one has to agree that for the community this elitist selection process and the outcome of the competition system are advantageous. It influences
the standards of the whole society and it has been an important trademark of the Finnish nation for almost one hundred years - promoting both trade exports and the nation’s self-image. However, we have to remain critical. There are problems and deficiencies and it’s important to detect them and to continue to criticise and develop the system and its organisations. Despite my favourable conclusion regarding the elitist system, we have to realize that it’s problematic. The larger audience has difficulties in reading and experiencing the architecture of this avant-garde. There’s also a tendency that the elite isolate themselves within their artistic realm, and the development continues detached from the rest of society. These are questions with reference to both case studies and the interpretations of Dewey’s theories at large. For that reason, I will end this discussion here without any further conclusion other than that we need criticism, investigations of existing goals and interests. I will return to this discussion in the final chapter, discussing the impact of Dewey’s philosophy on design theory and architecture.

Notes:
1 The students at the Department of Architecture at the Helsinki University of Technology (and likewise in the schools in Tampere and Oulu) can enter architectural competitions for their final diploma scheme and get support from the teachers when the competition stage is over. The later stage, the preparation for submission for the diploma, might call for further studies of problems, detailing and adjustments. Saarilainen’s diploma work was supervised by Professor Markku Komonen, in Architecture (studio) 3, Public Buildings.
2 This is an idea that also occurs in Lahdelma’s proposal.
3 Saarilainen worked on this proposal together with other students in their own work room, but also discussed it with his work colleagues and employers.
4 Interview with E. Partanen, 30.10. 2002
Part 3: Conclusions
In this third part I will try and pick out some conclusions regarding the impact of pragmatist philosophy, as well as the issues presented in the earlier chapters, on architecture and design theory. I have chosen to make to some degree a distinction between architectural and design theory because of their inherent differences in terms of dealing with different themes, though they stem from the same discourse. In the end design theory turned out to produce more interesting ideas, and for this reason the second chapter in this part (9. A Theory of Design) is more comprehensive than the chapter about the impact on architecture. However, I think there’s still much to investigate in both areas regarding pragmatist philosophy as well as Bourdieu’s field theory, and both chapters end with some conclusions regarding further research. The core theme in both chapters is the questions of where to position the praxis of each field and how to relate to central issues in each area.
THE IMPACT ON ARCHITECTURE
INTRODUCTION

There are two interesting paths of thought to which I would like to draw attention. Firstly, the pragmatist theory changes the traditional understanding of aesthetics. Aesthetics is something far beyond simple theories of the judgement of taste and of the beautiful in nature and art. It’s something that’s present in large and small scale activities and is needed in our day-to-day dealings in life. Secondly, in the aesthetic theory of pragmatism there is a fundamental understanding that aesthetics is something that we all share. Aesthetic experience can be developed through criticism and the experiences of others, making it an enriching experience. Aesthetic experience does not remain private, but is social and can arrive at a level of inter-subjective recognition through communication. First I present some conclusions from the case studies. I then extend the discussion regarding the avant-garde and differentiate between different approaches. Finally, I address the question of what kind of impact the pragmatist philosophy of Dewey could have on architecture.

THE CASE STUDIES

The two case studies together present a comparison. In the first case study the “leading designer” is a non-professional designer, while in the second case the designer is a successful professional. The first design case study involves a process where the researcher — as an architect hired by the client-designer — partly can get an inside understanding of the design process, yet the client’s design processes remain partly hidden. In the second case study the distance from the researcher to the designing agents is larger and the study is more of a participant observation. In the beginning of both cases the designers do a lot of design thinking, and use only a few supporting sketches. In both cases the early conceptual solution is tested by means of sketching, prepared by professionals; the development is supported by reasoning; and the design processes are collaborative. In the first case the conceptual solution is in the hands of the client-designer, whereas in the second case the architect owning his own office is the author of the solution. In the first case the construction, the economics and the production are discussed during the design process, not as the most important things but as influential aspects. However, much more time is spent on analyses and reasoning about functional aspects and potential experiences of the future architecture. Still, the overall solution is the most important. In the second case the construction, the urban situation, the communication and the functions are the foremost aspects considered. In both cases the initial discussions started with the site and the layout of the plan. Also in both cases there is a distinctive step from the initial sketching to the later production of presentation drawings. The design process still continues during later phases, too. The two case studies reveal the gap between high and low in the field of architecture. It also reveals the existing interest and importance of the
avant-garde. In the first case the client has no desire for the elite architecture of the avant-garde. They want architecture appropriate for their culture and way of living. In the second case there are some laymen in the architectural competition jury, members of the political and bureaucratic elite. The real consumers, however, of the design production are other architects. There is little if any evidence of adherence to the values of non-professionals. This attitude is underlined by the words of the chairman of the SAFA Competition Commission, facing the annoyance of the client as some of the latter’s nominated jurors aren’t accepted by SAFA as professional jurors: “It is normal, in international competitions, to have only professional jurors” (Länsi-Uusimaa, 6.7. 2002).

Dewey pressed hard for a broadening of the aesthetic experiences and for allowing all men access to them. The idea of an isolated realm of art, with absolute artistic values, doesn’t seem convincing within this perspective. Aesthetic experiences are present in the case of the client as the designer — not as a type of elite, fine art architecture, but as constituents of a creative process — based on such disparate ingredients as facts, restrictions, desires, values and forms. I am inclined to insist that this is typical for design processes. It’s with the aid of these experiences of aesthetic quality that the client manages to make his decisions, which in turn enable the architect to proceed. Aesthetic qualities are not given and concrete. They belong together with experiences, judgements and lessons learnt in a continuous process; they are the changeable product of circumstances and development. One must keep in mind the differences between the architect and client. The client’s thoughts on architecture are anchored in a popular, local frame of reference, while those of the architect are concerned with the avant-garde. I am inclined to draw the conclusion that the aesthetic experiences of the young family aren’t trivial. To the family they are highly important experiences. It’s for the elite — and those only interested in the ideas of the architectural elite (the “true readers”) — that they might seem trivial. It could perhaps be interesting to explore deeper the ideals of the client as regards architecture and aesthetics. However, I would suggest that one should take care not to draw too many conclusions founded on loose thoughts about architecture of a culture one doesn’t know or belong to. According to the pragmatist view, aesthetic judgement is linked to the situation. This means that a discussion out of context will not do justice to the aesthetics of the case. I would thus conclude that the aesthetic values have to be studied in the cultural setting; if one ventures outside the process of the case a different kind of aesthetics emerges. Distinctive aesthetic marks can also be found in the object, as Shusterman shows in his study of rap music (2000, 201f). In accordance with the traditions in aesthetics, an art object forms a whole. In the first case study the constituents are prefabricated structural components. The client acts in an autonomic way and applies his competence in design, despite the inclusion and influence of other parties. The object of design is complex, yet possesses an inherent logic. The architecture designed by means of prefabricated elements can be read as a unified architectural object, and deciphered as an art object.

When it comes to design management, I think it would be reasonable to make a distinction between the small projects of private clients and the bigger projects with commercial or public clients. The former would need a different kind of management,
where the responsibility is not divided between two different parties but preferably unified in one consultant. Due to cost reasons, the project of an owner-occupied house for a young middle–class family (within the Finnish tradition of self-build) could not support the inclusion of a full-time hired professional responsible for site surveillance. However, I believe that there is a need for assistance in the early stages of the design process, which the current organisation of the simpler owner-occupied house design process is unable to meet. My proposal would also include a need to provide the future professionals with skills to manage this complexity, consisting of procedural and construction aspects, cost control and architectural design.

In the second case study it’s obvious that the architects Lahdelma and Mahlamäki apply a strategy of pluralism, aiming at a broad production of competition entries. There is no given architectural canon. They trust their experiences, constituting a basis for evaluating and judgement, thus improving the proposals. This matches the idea of Molander, who says that knowledge is “knowing with good reasons” (1996, 241). They know that they don’t have to look for external support, but the success has to be developed through the application of the internalised knowledge and the tacit professional codes. One can never know if they are sufficient, but winning competitions probably enforces the trust in the personal skills and judgements. The case study shows that the competition system is an intricate system, promoting the development of professional values and shared codes. These design codes aren’t fixed: they are continuously changing, but the competition system — with the accompanying exhibitions, press releases and documentations in the architectural press — provide forums where the codes are expressed and communicated. The moment of judgement constitutes a switch between the preparatory creative reasoning, with its ties to the contextual setting and different influences, to assessment reasoning — based mainly on formal issues regarding the architecture. There is a ‘before’ and an ‘after’, a pre-design reasoning — focusing on requirements and conditions — and a post-design reasoning — focusing on the architecture. The architect’s profession is dependent upon such a system. This competition arena is of advantage to the development of the field and its codes and the competition system is attractive. Both professors and ambitious architects participate in them. It’s also attractive to some important clients, such as government and civic authorities, and by means of invited competitions also powerful commercial clients. Still, it’s more attractive to the representatives of the political society than to corporate managers. One reason could be that all the bigger municipalities have appointed architects who initiate competitions, especially in complicated situations, as a gentlemanly way out of a conflict and because of their personal professional interest.

I think it’s important to see the distinctions between different aims and the training of designers, which I pointed out in the conclusions to the second case study and the interview with the project manager. Architects have different aims depending on for whom they design and how they relate to the task. There are at least three different positions:

A. Avant-garde designers, with a commission for an avant-garde architecture.
B. Ordinary architectural design commissions, asking for a robust design skill, but where the client puts less emphasis on avant-garde solutions and more on accomplishing the complete solution regarding cost, construction, performance, functionality and architecture.

C. Commercial projects, where there is a dominating interest in commercial success and where less efforts are spent on the architectural design.

I realize that one response to the last point above would be to say that projects where little efforts are spent on architecture shouldn’t be allowed. Yet it’s clear that they do. The power plant projects mentioned in the interview with the project manager in the second case study are successful international projects — in a sense selling Finnish architecture abroad. There are also many other projects of this type going on and being erected in Finland. My interpretation would be that they include architecture and contribute to the picture of Finnish architecture, but due to the strong emphasis on avant-garde architecture among the Finnish architects there are very few architectural skills available for these projects. Architects tend to be seen as being unable to cooperate under these circumstances and are thus seldom invited to cooperate. In conclusion, I would say that these commercial outskirts of architecture pose as much a pressing problem within the field of architecture as the task to keep the Finnish architectural avant-garde competitive.
THE AVANT-GARDE

With reference to Bourdieu, I call the competing architects the competing avant-garde. It’s a different type of avant-garde, where the main constituting elements are not strikingly new approaches or experimental methods, but simply participation in architectural competitions on a regular basis, with a shared devotion to the idea of competing and the aim, thereby, of searching for an appropriate architecture acceptable within the architectural community. Truly avant-garde experimenters are maybe noticed, but seldom accepted into the establishment and are hardly found among the winners of the competitions. The best examples of the ongoing development of the artistic codes aren’t always displayed in the winning entry. The winning entry is selected because it matches architecture with the requirements expressed in the competition programme. The rest of the prize-winning entries are selected to display the artistic breadth of the competition. These selected entries often have functional deficiencies or don’t fully meet the programme requirements, but are selected by the jury as the most representative examples of different solutions profoundly concerning architecture. This variety probably gives a better indication of new tendencies than the winning entry. Winning a competition is no guarantee that the designer will be successful or that the architecture will continue to be positively evaluated. There are other ways of being accepted in the long run. In due time, some architects or buildings become icons and this is not necessarily achieved through competitions — but rather through the internal discourses and by media attention. Some built competition results are forgotten in the wake of history, but they might have provided a setting for the ambitious architects to acquire a position in the architects’ establishment.

Combining both traditional definitions of avant-garde and Bourdieu’s theory, I distinguish different types of avant-garde in the field of architecture:

- The virtual-experimental architects, devoted to art for art’s sake.
- A method-oriented avant-garde.
- A theory-driven avant-garde.
- The architects possessed by the culture of architectural competitions.

The virtual-experimental, artistically-devoted architects have to reject the interests of the clients, and will probably also be ignored by the clients as utopian or too artistic or too unrealistic in their approaches. These architects will only have the option of producing virtual designs. They cannot have anything built. There is a tradition in architecture of creating idealistic or utopian designs, mainly intended for debate and changing paradigms. There’s also a counter tradition expecting that design has to be erected in order to fulfil the mission of architecture. There’s also a tradition in architecture saying that architecture can never exist without addressing functional needs. On the other hand, there’s also a tradition of putting out projects for display, despite the fact that they never have been constructed. Works by old masters are displayed in this way, regardless of whether they were built or not.
Instead of artistic experimentalism we could have a methodological experimentalism — using new methods and means — but with the aim of generating new forms. This could also, in the rhetoric of the early functionalists, be seen as the only true and scientific way of progress in architectural design.

Theory can constitute a second distinctive approach towards avant-garde aims. Theory has a very distinctive task as a driving force in design. Design is accompanied by reasoning. Architecture can be developed without any explicit theoretical reasoning. Much of architectural design is generated by the particular situation and the design briefs, but theoretically-oriented design has also been very influential in the field of architecture, with its own traditions. Such an avant-garde uses theories as a basis for design or combines design with initial conceptual and formalistic reasoning. In the modernist tradition, as well as in the case of postmodernism and deconstructivism, the emergence of these currents has been supported by theoretical reasoning. There is definitely a tradition in architecture of theory-driven avant-garde — with examples such as Jencks, Venturi, Eisenman or the approach towards pragmatist philosophy (Ockman 2000). These have often been initiated as mere hypothetical ideas but some of them have been very influential and changed the whole field. However, this type of avant-garde is very rare — almost non-existent.

The fourth type would be one determined according to the rules laid out by Bourdieu. In this case, the avant-garde is simply found in the competition for a position among those with a right to judge the production of others. This type of avant-garde isn’t defined by its experimentalism — though it exists — but by being possessed by the idea of notoriously competing, by means of developing and showing a superior taste, in reference to the codes of the field. The design activity in the fourth type of avant-garde is framed by the idea of design as a matter of art for art’s sake, often ignorant towards rules stemming from external positions, ignoring time and budget limits, and with a notorious wish to oppose existing traditions. The only thing the agents of the avant-garde are really good at is taste and innovation. They sometimes produce remarkable innovations, changing the thinking of a whole field or culture. I think this innovative potential is hardly available at the commercial pole, or in the institutionalized formal education. This contradicts the idea of enforcing innovation by simple commercial means or by scientific education. Based on Bourdieu’s thinking, I assume that innovation asks for a strong avant-garde and an autonomous professional field where the agents are forced to perform excellently in their practice, stimulated by internal cultural symbolic incentives.

Design is about expressing solutions so that others can share in and judge them. Theoretical explanations in the process of design are not definite truths but statements resembling hypotheses, bound to the situation, and expressions aimed at furthering development. Through communication in discussions, a certain rationality arises concerning design solutions, which ties the solutions together to a logical whole. This logical whole does not in its abstract form take the shape of a scientific explanation, but is constructed as a support uniting various arguments and expressions. Factual explanations are combined with evaluative judgements, choices and decisions. Communication plays an important role when there are many parties involved. Although certain aspects of the design process are based on tacit
knowledge, there exists a need to be able to exchange views on design solutions. Design is concerned with establishing and discussing goals, dealing with problems and conflicting values, as well as with developing means by which to achieve suitable goals. Those taking part in the design process must be able to communicate around various solutions. Design is dependent on a situation where the parties involved are able to express problems and ideas, solutions and judgements, and to gather these together to form an acceptable and unified solution in a complex situation.

That avant-garde design is important is nothing new to the pragmatist position. The difference between Bourdieu’s descriptive approach and Dewey’s philosophy is that Dewey is looking forwards, while Bourdieu is describing and explaining it in a historical perspective. Dewey aims at the future and a better society. In this society everyone will have greater access to aesthetic experiences and can profit from them. They enhance development and enrich life. In a proper design theory, we need to understand both. We have to understand the history and the present situation, but we also need to develop new directions for research and developmental efforts. The development cannot or should not be monitored and directed without ethical reflection. In this sense the pragmatist perspective is clear. We should put forward our reasons for how to develop the field in the future.

Stevens claims that schools of architecture profoundly act “as conservators of society’s cultural capital” (1998, 215). He finds that schools don’t produce genius, which might have been part of their social contract in early times when the academies where the school of the elite. This makes the role of research or the interest in progress in architecture clearer. The avant-garde architects tend to be critical towards the schools, saying that they are mediocre or backward. There is also a clear tendency to disparage lectured knowledge (Ibid, 198). The progress at the top cannot be about objectified knowledge in architecture, but about taste and cultivation. This top is never achievable in the schools, where the main task is the conservation of taste. The knowledge of cultivation and taste is embodied and transferred through a charismatic mode. Stevens ends his discussion regarding architecture in a rather pessimistic tone, with the conclusion that:

“It is a tragedy that the field as a whole maintains the fiction that the huge new segment of the field created this century is identical in nature to the older and much smaller sector inhabited by the eminent […] By conflating “architect” and “building designer” the field obfuscates the fact that why one designs — whether through (economic) necessity or for (symbolic) renown — is more important than the fact that one designs at all, and that those at the summit of the field who design structures of power and taste for people of power and taste have little in common with those who toil at CAD workstations detailing supermarkets” (1998, 223).

Stevens interprets the education of architects as an institution aiming at conserving the existing ideas and with no production of architecture (which is the task of the practicing avant-garde professionals). He says that research is no natural feature of the architectural education system of the English-speaking world, and never has been (Ibid., 222). In his interpretation “architecture produces taste and ways of valorizing buildings” (Ibid.), with scant resemblance of other production areas (especially that of research). He also uses the expression “know-nothing-ism” as a
sign for the lack of research and their attitude towards knowledge (Ibid.). I think his interpretation is partly wrong. I agree that much of the knowledge production takes place in the practice, but I think his interpretation of knowledge is too limited. He doesn’t really address or explain the notion of knowledge but contrasts architecture with science and their production of the new core knowledge, and points out the little value architects tend to put on the knowledge provided by acoustics or psychology. In a way he sees only an empty discourse of architecture, sometimes determining that acoustics is relevant, “when the intellectual fashions of the time require their service in the formulation of the instruments of valorization” (Ibid., 211), which is in the moment the avant-garde theoreticians try to construct new interpretations of architecture. I think it’s important to notice that we normally accept architectural theory and history as reliable sources for attempts trying to understand architecture. In this sense I think we cannot dismiss the theories produced about architecture, even though it’s very much about the right taste. Here we again encounter the epistemological question concerning knowledge. In a truly scientific sense, seeing the natural sciences as the only producers of true knowledge, architectural theory and knowledge cannot be seen as knowledge. In a pragmatist sense this distinction is not so important and I think we could call it knowledge, as a means of determining that there is some kind of knowing about architecture and taste that is reproduced and also applied in theoretical discourse and communication and criticism — it is highly operative. The education of architects isn’t an exercise in “know-noting-ism” but a difficult and often wordless process of transferring the central avant-garde understanding of taste and the proportioning of an architectural whole, alongside the explicit knowledge of physics and design processes.

This divided system of teaching the codes of the profession seems to be a success story. Finnish architects have been able to keep their professional status on an internationally high level even though there has been little unemployment within the profession – which one would expect to lower the overall standard of all architecture being produced – and a reluctance to participate in assignments abroad, as well as being slow in assimilating new international trends. These conclusions favour the current system, with a strong institution for design competitions. The top of the “professional education” lies not in the academic world, even if it’s rather close to it due to the professors participating in competitions and teaching. There are problems within this system. For instance, there’s a danger of losing sympathy and resources due to the lack of academic production in the educational institutions. Inversely, the strong orientation towards the scientific production among the managers of the academic world can be interpreted as problematic. They tend to see the situation as a result of the architects’ neglect or incapability to create an educational structure incorporating both practice and research. There’s a danger of breaking the competitive edge by enforcing research. This would probably result in a redistribution of resources, unfavourable towards the now strongly practice-oriented education. It might, of course, also result in a skilled potential for internal criticism, potentially eroding the strength of the existent ideology, but instead it might create a strong understanding of the professional identity triggering appropriate developments. A scholarly trained group of practice-oriented critics will have the potential to enrich the design practice, because a profession, according to Selander (1990), is a dynamic structure. It will continue to change and the infusion of theoretical knowledge might provide a means for adapting to changes.
A PRAGMATIST THEORY OF ARCHITECTURE

Of particular importance in the present study are the implications Dewey’s aesthetics can have for architecture. There have been recent attempts to invoke the pragmatist philosophy into the theory of architecture (Ockman 2000, Dahms, Krause, Kuhnert and Schnell 2001). In the Pragmatist Imagination Casey Nelson Blake concludes the discussions by means of three questions (Blake in Ockman 2000, 266): “Is there a necessary connection between a pragmatist theory of truth […] and any particular political position?”, “Is there a connection between a pragmatist aesthetics of the sort that Richard Shusterman recommends and any particular approach to architecture and urban design?” and “Does a pragmatist hope for a revitalized public sphere carry with it a commitment to particular understandings of public space, place, and scale?” Blake favours the last question and its implication on public space. I find the two first questions more in line with Dewey’s ideas, but also expecting a different approach towards architecture, with a less elitist orientation and potentially a more social devotion like in the early modernist period. If we limit the scope to Dewey, I think there’s no immediate basis for a canonical interpretation of his philosophy. Dewey’s art theory poses no restriction on what the artworks should be like (Jackson 1998, 111). It can integrate both striking avant-garde architecture and sublime adoptions to tradition and culture. The implications in Dewey’s pragmatist philosophy are mainly moral attitudes (or agendas) and strategies for action and inquiry. Among these the most important are:

- A genuine democratic devotion asking for a shift in focus.
- An agenda promoting access to a well-rounded life.
- A general intention of seeing the active development and involvement of all people as desirable.
- We can and should aim at integrating various aspects into a full body of experience (intellect, body, artistry, community life, history, facts, etc.).

There’s a need for a broader understanding of architecture, and that the educators have a responsibility to respond to the interest in architecture among the broader public. There’s also the complicated alternative of involving non-professionals in the design process and its aesthetic experiences. There are also other alternatives, such as using criticism as a tool for education and generating a broader awareness: e.g. initiating public debates and criticism of architectural objects of many different types and standards. According to Scruton (1979, 13ff), this broad public is a core element in Modernist architectural theory, constituting a demand to always address the aesthetic interest of the broad public. For Scruton, this is a landmark of Modernism.

From where, then, should the architect find his or her ideals? Should s/he take popular architecture as his/her example? I believe it’s reasonable for architects to take their ideals from the avant-garde tradition, although we must surely assume that the majority of users and clients are themselves anchored in popular conceptions of
architecture. Popular architecture could certainly enrich architects’ understanding of architecture. On the other hand, I find it hard to imagine that popular architecture could act as a genuine guiding star for architects and for education in architecture. Occasionally it will certainly have an input into the production and theories of architecture. The creation of guiding theories and evaluations arise within the professional elite, where there must be something of an autonomy for each to formulate his or her own opinions and to decide him/herself which examples are good. Searching for ideals within one’s own professional elite is natural; nonetheless, the architect must be able to modify and integrate his or her own ideas and aesthetic experiences with those of other collaborators and the consumers.

Concepts facilitate explanation and description, which are principle contributions of research. That is not to say that the objects of design improve through the development of theories. One can be a good creative designer without being able to express oneself. One would, however, find co-operation and the presentation of design more difficult if one is unable to express oneself. Here a distinction must be made between being able to articulate the design process and being able to articulate qualities and their motivations behind design solutions. As seen from the present study, it’s essential that collaborating designers manage to express their aesthetic experiences. Design takes place in shaping and modelling, but it often requires verbal motivation. The design process is far too fraught with conflict, and the parties often too far from each other, to trust that the solutions speak for themselves.

One might draw the conclusion that architecture and the planning of buildings should not be seen as a task of a lone designer, but that everyone affected should be given the chance to take part. Design can be seen as a project in which many designers are included: it’s not only the architect who designs, but also the client and other parties. Each works on his or her own understanding of the whole and its qualities, but the whole is founded on a conjunction of a variety of points of view. This brings about a change in the regard for the role of the architect. The architect does not alone administer aesthetic judgement. Design is primarily a result of co-operation, influenced by many types of aesthetic thinking and creative construction. The role of the architect is not to act as the only authority on aesthetic decisions, but to act as a tool for the client, working on his or her own aesthetics, but equally ensuring that others understand the whole and contribute to its unified aesthetic qualities.

I find Stevens (1998) is very convincing in his arguments for seeing architecture as a culture and the discipline as a second-order activity — the task of the latter being the (re-)production of architectural discourse. Stevens is critical towards the emptiness of architectural theory and longs for a stronger influence of science in the schools of architecture. This is also a discussion that many schools presently face. I’m aware of the lack of research-based knowledge production at the schools of architecture, but I also recognize the public success of architecture. What I detect in Stevens’ reasoning is that theory of architecture is an important tool for education and cultivation, not only for students but also for the larger audience and especially for the clients. The top of the field is very much dependent on cultivated clients and the rest of the field is very dependent on the top of the field. Thus I think it would
be reasonable to suggest that the discipline needs to increase its efforts to produce architectural theory and to make it reach the larger audience outside the discipline of architecture. The mediating target, is of course, the media and the tool is writing. This poses the question of where this competence can be taught. Designing architects have little interest in this, and the current schools of architecture that I know have little education in writing criticism and interpreting architecture in a written form. This question could find an answer in a liberal art department education, where people can analyse architecture and write about it, but who don’t see their ultimate goal in being a designer.

Another thing I detect is the lack of epistemological foundation in architectural theory or the tacit acceptance of its existence and the difficulty of expressing its epistemology. Frampton starts his extensive presentation of the history of architecture (1992) with hardly a word about what his theory of architecture is, in the sense of knowledge. It seems that we need to address this in a more precise manner if we want to proceed with investigations concerning architectural design processes and the teaching of architecture. Linda Rampell (2003) has produced a controversial dissection of the functionalist ideas, in an attempt to show that functionalism is not free from dogmatism. From her examples, I could construct three different perspectives, positioning theory of architecture and pragmatism in an ideological framework:

- **Capitalism**, as it appears in the descriptions of our current society by Bourdieu, with a lot of artistic freedom, and where money and the market are the dominant regulators, but where taste is an important denominator and architecture a tool in the creation of distinctive cultural classes and differences.

- **State capitalism**, as Rampell describes it in the historical examples of Sweden and the former German Democratic Republic, where the government, as a political power, has been part of a liaison for supporting the then new design philosophy of functionalism, generating a canon of taste, which is established by “the compound” — as a politically favoured elite of artists, curators and critics.

- **Pragmatism**, which is open to the potential power of the artistic compounds, but still with a reluctance to accept them as a reigning power and their canon of taste if they constitute a hindrance to the individual aesthetic experiences. Pragmatism remains open for both political and commercial powers but sees reasoning and criticism as tools for promoting the course of social good. True artful growth is to be part of everyone’s life, thus posing the difficult demand of refocusing in the theory of architecture and architectural design.
A comment on the development of current research

The potential of an academic doctorate based on investigations through design practice is problematic because it will hardly be possible to generate a situation that is competitive enough. The source of the real competitive knowledge is embedded in the competition practice and its juries, and the interest is supported by a strong potential of both symbolic and commercial success. The intensity of the primary goal of the profession — art for art’s sake in this case — is, according to Burrage et. al. (1990), weakened by the teachers’ primary goal of educating others, which will make the avant-garde production a secondary goal. There is also a risk that the competition system is not innovative enough. Both Lahdelma and Mahlamäki express the thought that the competition system creates a too uniform architecture. The strength of the field is tied to the potential of artistic innovation. The system with real life projects offers opportunities to earn money, but limits the space for experimental solutions that are necessary for innovation. As I see it, there are a few potential solutions to this:

- Changes in thinking are often theory driven. Without theoretical reasoning complex ideas are difficult to discuss. We need more theory development concerning experimental ideas.
- The strengths of the design competition system could be applied to the idea of a doctoral (PhD) thesis in design practice. We need to create a realistic and highly competitive design situation for these doctorates, with jurors from the cutting edge, and to create a high-rank forum where the results are published. Potentially, this could deal with objects that are in an initial design stage, with artistically ambitious clients.
- Create a forum where experimental architecture is highlighted and discussed.

Notes:
1 Finnish architect and designer Kivi Sotamaa could be seen as an example of this tendency, with international successes in experimental architectural practice, not to mention an appointment as professor of architecture at Ohio State University, USA, but with no successes in the system of Finnish architectural competitions. Sotamaa is also part of an international collaboration using new technology (Hawthorne 2003).
2 Wolfe (1999, 15) sees the art manifesto as being typical for the avant-garde compounds and for the movements of the 20th century generally, starting in 1910 with the Italian futurists.
3 See for example the comments by Stefan Jonsson in Dagens Nyheter, January 10th, 2004: <www.dn.se/DNet/jsp/polopoly.jsp?d=1058&a=221325&maNo=0>
4 In discussions with the author, during the last week of May 2000.
A THEORY OF DESIGN
INTRODUCTION

I start this chapter with an attempt to outline some structures for design theory and the subject of design as a knowledgeable discipline, or a spectrum of disciplines. I have been reluctant towards the idea of proposing a consistent theory of design in the form of one single body or model, but I think I have to conclude that it’s necessary to get hold of this spectrum as a whole. I still don’t see any possibility of describing design as an absolute or all-inclusive theory, or as a truth about design. However, it’s necessary to provide a picture of the subject as a whole, with general terms, even if they, due to their generalised form, cannot catch the complexity, and it will inevitably be disrespectful to the important notion of contextuality. One reason for this conclusion is that there are ways of interpreting design that seem less fruitful or correct. After sketching a structure of the design field and the reasons for it, I explain something about certain central aspects of design such as knowledge, rationality and aesthetic experience. From these structures I move on to an interpretation of some core design concepts from the pragmatist perspective of Dewey. In the final section I discuss the impact of this proposed structure on research in the design-theoretical field and its potential for future research projects.

Human culture is largely constituted through design. It’s not only a professional practice, but a common competence of man. Design is irreducibly intertwined with the art of living, with the production of means and objectives, and the generation of human experiences. There’s also a much larger agenda in Dewey’s philosophy – setting standards or finding ways for how to achieve a good life - but that is something beyond the scope of the present study, and instead I concentrate on the professional processes in design theory. The broader project of Dewey’s art philosophy, advancing the potential for all humans to have fulfilling aesthetic experience, as a matter of human existence, would also have to be left to a broader philosophical treatment. The advantage is that we can keep the field more consistent. On the other hand, we must reflect and investigate what it is that designed objects and structures mean to their users and consumers, and how they are or feel involved in the design process. Design is also a professional practice, with great influence on such different matters as political organisations, engineering, markets and media. My goal here is to initiate a discussion by proposing some structures and distinctive borderlines for design theory. Due to the dominance of scientific thinking, I think it’s important to discuss the epistemological framework of design research and design theory. Design theory has to accept the long and stringent tradition of science, where the theories and descriptions are simple and clear. Still, many authors claim that design cannot be described by scientific means: I join this attitude. Design constitutes a specific academic field, alongside the natural sciences, social sciences and humanities, and it seems more promising to see it as a distinctive field with distinctive features, significant for the proper understanding of design. However, in order to create respectability it must categorize and structure despite the obvious problems and the lack of accuracy of the descriptions - it must, to some degree, make use of the discourses of social and natural sciences, because they have many more methods and means at their disposal.
What would be worth considering in a pragmatist theory of design? Buchanan & Margolin (1995, xii) defend a position where pluralism must be accepted within the understanding of design, and they try out new classifications and concepts in the anthologies they have compiled (Buchanan & Margolin 1995 and Margolin & Buchanan 1995). Concepts and classifications are tools for reasoning and communication. Reasoning and communication are important for intellectual and cognitive progress. Buchanan and Margolin point out the diversity in design and make us accept a liberal attitude towards pluralism. Hickman (2001) has a different approach, arguing for tuning up technology, in the sense Dewey saw it. Technology, he argues, is the vehicle for all kinds of controlled inquiry, including science, art, culture, practices and techno-sciences - and design. We are inclined to turn the scientific world view up-side down. Design is technology. Science can also be seen as design. Design reasoning is a kind of technology. It’s applied in various forms in various projects and fields. Different forms of design are constituted in different ways. In large engineering projects much of the design process is formalized and much of the inquiry into the design situation strictly scientific, whereas in the artistic design fields the inquiry is highly intuitive and the investigation of the design situation stays on a non-formalized level. The pragmatist approaches try to impose a shift in thinking; scientific theories are neither the ultimate goal nor the highest cultural achievement - nor are they the only or the outmost correct way of understanding reality. Design is a way of grasping complex phenomena, and it’s a method for exploring problematic and puzzling situations. I think we need many perspectives in design theory, but we have to be clear about our position in order to promote a clear understanding. Theories, categorizations and structures are not fixed, but instrumental means for making the world intelligible.

If we dismiss the scientific notion of truth and its devotion to a search for a truth (about design) is the conclusion of Dewey’s theories that anything goes? No! There are significant differences. We all know that a good-looking, well functioning and economic design is preferable to those where there are deficiencies. The answer is that the judgemental processes and the reasoning let us discriminate advantages and preferred qualities, both in design and in design research.

Does this pragmatist attitude mean that everything is socially negotiable or lacking guidelines? I think we can say both yes and no. In a broad sense, one could say that it’s up to those who decide (the “high priests”) regarding design. On the other hand, some facts tend to be regulative by themselves. We can design a large roof construction with concrete beams, but if the span is too long it will be impossible to construct - at least with the techniques available today. Presumably it would be more economical to use steel beams, already before reaching the ultimate possible length of concrete beams. This, I see, as an example that the reasoning will be open for debate and the solutions tend to be socially determined yet need to be evaluated, criticized and adjusted to goals, expectations, needs and regulative facts. When it comes to design research, this issue is more complicated. In design I think most of us realize that the outcome is dependent on the reasoning of individuals and that it cannot be exclusively based on external reasons. Even if we leave the notion of truth aside, we don’t have to dismiss the methods. How do we prove or show that some theory is good, better or useful? By showing it in a trustworthy way. Theories
shouldn’t be free-standing ideas but have to be interconnected with reality and their contextual setting and shown to be trustworthy or useful. This is achieved by means of theoretical reasoning and by testing the theories in real life. This provides a foundation for both design theory and design. It has a strong emphasis on reasoning and the social or collaborative aspects, but it also has the strength of empirical and methodological practices.

I take the attitude of the practitioners described earlier (who argue that they don’t need any design theory) as an indication of a dilemma in design research. There’s little space for design research that tries to gain acceptance both in the designer community and in the research community. That’s possible only in cases where the outcome can be interpreted by the designer community as useful and appropriate to the artistic codes and the rhetoric of the field of practitioners. New tools for design, like computer software, pose no real problem to the inherent thinking of the field of design practitioners. Nor are the investigations in design history problematic. But when it comes to the investigations of the design processes and social situations, as described by Dewey and Bourdieu, the result is often felt as an offence to the core values of the field. Bourdieu’s sociological perspective is often seen as uncanny and destructive. This has led me to the conclusion that there is no way further in this area unless we disconnect the design research in the fields (at least in the artistic fields) from the practitioners. I join Buchanan in his pledge (1990), claiming that we need a liberal art of design (and of architecture, too). I don’t take my motives from his reasoning but rather from Bourdieu’s theories. Bourdieu claimed that we have to distance ourselves from the dogmas of the artistic production in order to be able to see the true circumstances of cultural production, where social positions play an important role. I don’t think it’s necessary to create this distance. I think it’s possible to see these structures despite a closer relation to the field. In the design fields we can’t escape the demand for a practical understanding of the design practices among the researchers. My point is that I doubt the potential for success of design-theoretical investigations if the true readers (audience) of the research are to be the community of practitioners. They cannot make use of this kind of knowledge. They want knowledge that is similar to their design thinking and truthful to their internal dogmas, saying that design knowledge is about object qualities and not about social conditions or relations in the process. I detect two different types of research, each with different audiences. There’s a need for enhanced research efforts in close relation to the design practices, in order to produce results relevant to the design practice, but I also believe that we could improve the position and status of design research by creating a significant liberal art division in the field of design, parallel to the professional orientation. My assumption is that we have leading stars (the avant-garde) in all design fields and also in the research fields, and they don’t converge but compete for leadership. It’s difficult to be both a truly successful designer and a successful researcher. These roles have different goals. The goal of the avant-garde designer is to trust his feeling for artistic values and tendencies, whereas the researcher can take no comfort in an extended understanding of these issues if he cannot address the thinking of the top research community.

As already stated, I prefer to make a division between design research and design theory. They are intertwined and they have partly shared methods, but they have
different aims. Design research aims at improving the understanding of design or at producing better products or methods in a specific field. Design theory should aim at constituting an understanding of the shared design competences and design processes (and potential differences). The design research fields all have their own traditions, concepts and models. It’s my conviction that it’s very difficult to carve out the stock of shared elements of design, if we don’t have an interdisciplinary area devoted mainly to it. The idea of including all fields of design in one design discipline seems all too utopian and inoperable, because it touches almost every field of life and many professional practices and developmental processes. The research efforts wouldn’t then be focusing on these shared issues, and there is little chance that we can find partners from other fields capable of communicating their ideas across disciplinary borders and in a vocabulary accessible to others if we don’t prepare for it. We can do without these structures and limitations, but I think design theory - as a matter of condensing the ideas from various design fields into a stock of shared understanding - is a useful and promising undertaking. Design research and design disciplines tend to diverge, and will continue to do so. Intensified design research will produce even more specific areas of knowledge, enlarging the gap between the design disciplines. Design theory, as the integrative discipline, is an answer to this problem. I think the overall development of the understanding of design will profit from an interdisciplinary approach, combining and comparing ideas from different fields. It is and will continue to be difficult, because we have to cross cultural borders and enter into ways of thinking that seem alien to us, but it seems that it could nevertheless prove fruitful. A stronger integration of design knowledge from various design fields - than the current situation - will presumably produce more than a few scholars interested in the subject as a kind of a hobby. The shared features, elements and theories probably will not produce any immediate help to the various design and research practices. The design research cultures are anchored in the thinking of their particular field and depend a lot on their internal knowledge, theories and traditions. An architect is foremost an architect and not a general designer capable of designing anything, and will not be able to execute design research in the field of engineering just because he knows the basic and shared ideas of design.
STRUCTURING THE DESIGN FIELD

I will here try to sketch a structure for the design field and the impact of Dewey’s pragmatist philosophy on the design field. By design field I here include all kinds of design activities - professional as well as other types of design. The aim is to test a few ideas. The idea of seeing design theory as a separate philosophical realm is one such idea. I also propose using Dewey’s philosophy as an epistemological framework for design research. One core issue is the tacit knowledge in design interrelated with taste, culture and aesthetic experience. By means of interpretation, I also produce a set of central concepts as seen through the lens of Dewey’s pragmatist philosophy. Design theory needs to distance itself from the commercial interests of design research and concentrate on the interests emerging from the internal debates, traditions and values. In order to strengthen the research on shared design issues, the focus inevitably shifts from the commercial day-to-day research interests towards internal criticism and the comparison of theories. This kind of research is of no interest to short-term business-oriented design research. It’s only in the long run that it might provide support and seem profitable to the utility-oriented research communities.

The ideas, I hope, generate a structure that makes design research more intelligible, and a field that has structures that are distinguishable. I don’t think it will have any immediate import on design practices, but it can provide an understanding for design researchers and for those who administer design processes from an outside perspective; design managers, administrators, people in design education and hopefully for those striving to criticise design research on a meta-level. This last task, I would argue, is a central task in design theory. Design theory is not only about generating and structuring the shared design knowledge but should also address the problems of the design fields. Though I propose that we regard design theory as a philosophical discipline, I also realize that it’s necessary to keep a close connection within design theory to design practice. For Dewey philosophy is not a pure form of reasoning but rather a tradition of addressing occurring problems by explicit reasoning. For Dewey there is no need to isolate philosophy from real life. On the contrary, he thinks it’s important to address problems of real life, problems important to people (Campbell 1995, 149f). My experiences, from this dissertation as a research enterprise, imply that the border between research attempts in specific fields and those in the area of design theory will remain diffuse. My case studies lie clearly within the area of architectural design. It’s only the reasoning that touches design theory, though I don’t see this as a problem. In the pragmatist continuum, there is no borderline between empirical investigation and philosophical reasoning; they are just different means of addressing a problem at different levels of abstraction. Design cannot be understood if discussed only theoretically. Design understanding presupposes a close connection to design practice and the particularities of design processes. Here, too, I see the appropriateness of Dewey’s pragmatist philosophy. He made no definitive distinction between practice and theory. Theory has to be developed out of practice and he emphasised the need to distinguish the conditions and predicates of problematic situations (Dewey 1938, 129ff). The complexity of design is too vast, and so we shouldn’t take theory as a final truth but as reasons...
behind conclusions. The advantage is that this philosophy allows us to combine such different aspects as form, fact and values. According to Dewey’s moral attitude, it’s a process aiming at innovation, development and experiences, and the engagement of all people.

I have concentrated on the philosophy of Dewey, because it’s a theory of design in itself. It includes an appropriate reasoning supportive of the design-oriented understanding of knowledge. Dewey avoided the reductionist understanding embedded in the scientist’s world view, and put the emphasis on practice, relations and processes. The task of design-theoretical reasoning is not to pin down knowledge to a simple and fixed truth, but to address problems and to promote understanding by clarification and criticism. The philosophy of Dewey is respectful towards aesthetic experiences and accepts a flexible interpretation of rationality. Design theory is constituted as a fact through investigations and theories describing design, design processes, design knowledge, influencing aspects and many other factors. The advantage of Dewey’s theory of creative action is that it includes not only a model of the design process but also a large set of explanations touching different areas, such as artistic production, culture, technology, science and experiences. Still, I draw a borderline between Dewey’s philosophy, its aims and objects of investigation, and design theory as a discipline. Dewey’s philosophy is certainly not identical to the field I claim should be seen as the academic field of design theory, and which I think should be seen as a liberal art. Dewey’s philosophy deals with a lot of issues, ranging from art to research, and from common sense to scientific communication. It’s reasonable to address various aspects of human and social life, practices and experiences, but I think we must demarcate design theory in some way in order to keep it manageable. One solution is to limit it to the professional design practices, and related issues. Traditionally design theory has focused on these issues - though, as I see it, it has tried to cover all kinds of design research.

In a broader perspective, Dewey’s art theory leaves artistic production open to attacks from the utility-oriented propagators, which some people might think is bound ultimately to dissolve the artful aspects of design. I don’t believe this to be the case. It’s clear that artistic production will be open to criticism if we break its protective isolation: but I don’t see this as a problem. There is still a strong interest in art and artistic production. The criticism will destroy empty artistic statements, but naturally also strengthen approaches that can successfully meet this kind of reasoning. According to Bourdieu’s theory, there’s only a limited space for cultural production in a field. It stands in a relation to its audience, which also determines the possibility of avant-garde production. There are other areas with the same kind of isolation; for example, scientific research without responsibility for negative side effects, or technological development as an end in itself. On the other hand, these tendencies are more like simplified ethical, defensive statements. In reality, most design situations are based on reasoning, where artistic interests are confronted with conflicting interests. Technological developments are normally facing both moral and aesthetically oriented criticism, despite its clear focus on functional and technical problem-solving ends.
As already mentioned, I doubt the usefulness or correctness of describing design in a very precise and definitive manner. I think design theoretical research is very much about reasoning and providing a vocabulary - clarifying concepts - as a means for the articulation of the inherent aspects of design. These aspects are to a very large degree tacit and hidden for a transformation into and use by discursive means. Due to the fact that the aspects are tacit, it’s very difficult to derive consistent concepts. This means that we will have to be rather speculative in our approach and make conjectures on how to interpret and understand design by discursive means. I would use the word *articulate* as a designation of the research process putting into words what is going on. The value of the conjectures cannot easily be measured against reality but it will be a question of how far the proposed concepts and theories are accepted by the design cultures and research communities. It’s in this sense still also a question of how well these concepts function in design theoretical reasoning. One conclusion must be that the field of design theory will always be filled with conjectures regarding new models, conceptual interpretations and theories. Based on the pragmatist attitude towards truth, I think it’s important to point out the significant distinction between the attempts to create a *complete model of design* and the attempts to create a *holistic picture* of this issue but restricting the description of it to what is seen as the central aspects - leaving the description open for interpretation and consciously leaving the door open for the inclusion of complementary aspects - the core being described but the outskirts of the descriptions remaining open. On the other hand, I also see it as central that we try to position different aspects of design in relation to the other issues and the structure as a whole. Here I think the interdisciplinary and integrative stance constitute an important perspective. I don’t think it’s possible to create a comprehensive theoretical picture of design if we don’t make a shift from the perspective of our particular design discipline (e.g. architecture) to the shared area of design theory.

The ultimate version of design theory would not be a linear model of design - as a set of consecutive steps identifiable in the theory of design - generated from Dewey’s philosophy, like in chapter 4. I think this model is central but it would be rather useless if we don’t recognize its connection to a specific type of rationality and ignore the importance of culture and context. I also think it’s more important to concentrate on the design knowledge than on refining the linear model of design. I’m also reluctant to describe design as *problem solving*. I think this will also lead us in the wrong direction. Design is better described as a developmental process, including elements of management of problems and, of course, to some degree problem solving. The description of design as a problem-solving process leads us to think that design is a somewhat simple linear process, freestanding as a scientific experiment and with simple and precise given ends. The cultural perspective means that the design is hardly reducible to a simple end and freestanding process. It might seem so to the designer, but in a research context I think we have to take the cultural influences into account, because the designer, the client and the users/consumers are tied to distinctive subcultures, with unspoken ideals influencing the process. It’s a poor design process if it only produces what we were able to define in the design programme stage. We normally define the design goal in some simple terms like “a new library building” or “a detached house” and sometimes many specifications are set out in advance, like, for example, in the competition for the library, with data
about different spaces, their uses and sizes, but, as in the library competition, it’s not enough to produce what is given in the programme. I think it’s better to talk about *expectations* than to talk about goals in design processes. The word ‘expectations’ designates that there is more in it than the given facts and ends. There are unspoken ends that are to be met and there are ends that should be exceeded. The cultural context contributes expectations. If I, as an architect, design a house for a young family they have expectations that they cannot spell out and my position in the field of architecture provides me with a cultural coding that also poses some expectations on the outcome.

I think it’s important to notice that design knowledge is embedded in cultural codes and that it cannot be specified as any explicit freestanding fact. Through the present research process, I have become aware of the vast number of values expressed in all kinds of discourses. I agree with Bourdieu that statements regarding taste and value are important tools for making distinctions and defending positions. Each subculture determines significance and negotiates positions by means of value statements. In this sense a designer needs to know the values of the elite of his professional field, but because design provides a service for clients - often with positions in leading subcultures outside the design fields - it’s also important to be able to take part in these language games. Furthermore, I think that the unspoken values expressed in actions and production is even more influential than the verbal discourse about values and taste. I think an important aspect of design knowledge is that it’s embedded in various cultures and the thinking of the elite of the culture. The impact of this is, of course, that we have to look for other ways of eliciting and describing design knowledge. It’s not really adequate if expressed only as facts. Field studies become important tools for grasping the tendencies of the elite, because their thinking changes quickly and is mostly embedded in tacit knowledge exercised in design activities, and not expressed in any precise bookish manner.

My description of design would make knowledge the central aspect. I think we have to turn to studies of design, not as linear models that can be reproduced and trimmed, but as complex studies where the linear process is only the basic structure and the key issues are described by issues such as design knowledge, design rationality and design subcultures. I clearly reject the idea of the profession as a defining aspect in design theory. In the various fields the professions play an important role and constitute a perspective of design thinking, but it’s the design subculture that provides the embracing and characteristic features of design. The subcultures provide the rules of the language games, which enable us to detect whether designers act accurately. It’s a system of rules providing guidance both for the craft-like praxis and for the canon used in the aesthetic evaluation. This praxis can be seen as action, as the application of repertoires, and as being dependent on an inherent rationality and on access to the aesthetic experience. The aesthetic experience is an individual contribution, based on the individual’s emotional reactions and experiences. Still, the possibility of using the aesthetic experiences is linked to the need to learn and adhere to social and cultural codes, where the professions play an important role with their matching educational institutions. Still, the design cultures are much larger than the professional fields and the elite cultures include agents from other professions or classes.
Design knowledge

Design is a creative process of modeling, experimentation, evaluation and analysis. It's important to create syntheses and to be able to judge. Design includes explicit reasoning and rationality. It's a controlled process with an open ending, addressing expectations of the client, designer and broader public. Much of the process and its intelligent actions are embedded in *praxis*, habits, cultures and social relations. Many design processes are tied to professional expertise, but it's also a universal human competence. I prefer to see design in a broad perspective, including also such remote design activities as product development, design management and professional practices. I see no use in limiting design to the pure innovative stages, nor to the artistic processes. I also think it's rather logical to see science as a kind of design. As I see it, art, science and crafts are specific types of design that are significantly different from those professional practices we normally call design professions. However, I think that the conceptual analysis of art, crafts and science as design practices are better left to discourses outside design theory.

I think Schön, Molander and Lundequist are on to the core issue of design theory when discussing design knowledge and how we can relate to it. Design knowledge is embedded in practice. It’s to a large part tacit - meaning that it’s not explicit, but embodied and embedded in cultural traditions - connected to intuition and aesthetic experiences. Knowledge in design is partly something like *knowing with good reason* — a background that helps select and address problems and solutions. It makes use of facts, forms, values and many other things, but in the complexity of design situations there’s no better judgement basis than good reason. In design we have to deal with knowledge that is not explicit. Much of the intelligent actions by skilful and less skilful designers are based on knowing without using formalized knowledge. Still, to some degree we can support our actions by routines and by more or less formalized methods. We can also apply explicit reasoning, rules and information. The central tasks in design are:

- To analyse and develop the situation, or to determine what needs to be done in a situation
- To experiment and test ideas
- To reason and judge
- To model and present solutions

We could, of course, claim that we need a good training, intuition and good taste. I think it’s also a training in the traditions of the culture, knowing what is good or bad, and potentially where one may break with the rules to find something more appropriate. Taste, tradition and a proper understanding of the elite and of the field itself are essential tools for a successful design activity. I have no proof, but I have reason to believe that the distinction between artistic and non-artistic design is misleading. I think it might be more adequate to use Bourdieu’s perspective, with a polarization between symbolic and commercial poles, in all design fields. This
indicates that there is some kind of avant-garde in all design fields, which defines itself in its opposition to the commercial forces but simultaneously constitutes the engine that produces the dogmas but also the new ideas of the field. Thus taste, tradition and an understanding of the avant-garde constitute essential ingredients in the paved road to success - or good design knowledge. What this indicates is that we need more knowledge of the structures and codes of the non-commercial subfields. It also changes the perspective of design research, from the concentration on the object to an emphasis on the contextual structures and relations. Still, one important task in the cult of the object is that it transmits the traditions and codes of the elite, but it’s, of course, primarily a historic description, which surely is sufficient for the “true readers”, but not for those interested in new solutions. The new avant-garde needs to know the basics of this, but should not stick to it, but rather focus on the possible weaknesses of the authorities and expectations for change in the field. This knowledge is hardly formalizable and when it is formalized it’s historical and an insufficient source for those who want to be close to the cutting edge. To have access to the knowledge at the outmost frontier you have to participate and assimilate the knowledge without linguistic means, which comes close to pupilage and learning by doing. In an organisational setting you have to fight this obstacle of linguistic transference. If you want to share this knowledge you will have to show and reason about your new emerging knowledge and insights.

An important tool in the design process is judgement. You have to evaluate suggestions, ideas, experiments and half-ready solutions all the time and there is no time or space for thorough evaluation. It’s here that I find Dewey’s conception of ”having an aesthetic experience” fruitful for the discussion of how to manage design processes and how to decide on what direction to continue with. There is something about Dewey’s descriptions of aesthetic experience that often hits the nail on the head. It’s impossible to give a definition or thorough description of it, but we can learn and teach others how this can be enhanced and promoted. By concept development and through narratives we might also be able to strengthen the formalized understanding of it.

I still cannot provide any definitive answer to whether design process contains aesthetic experience. However, I think it’s a useful concept. It remains a hypothesis and it will remain ambiguous, both regarding the meaning of it and whether it’s applicable in all types of design. I don’t think we so much need more theoretical investigations of this issue, but rather empirical investigations, both on how it’s used in design processes and on how people describe and understand it. I also think it’s necessary to clarify the distinction between aesthetic quality as a socio-historic canon and as a tool for the identification of qualities within a process. This I think might profoundly be an issue where we need more theoretical investigations. What I trace in the case studies is that there are two different types of aesthetical canons; one which is of the type we know as a written and described theory of design or style, the other an unspoken set of culturally-determined and continually changing rules.
Concept interpretations

I have constructed a theory of design through an interpretation of Dewey’s theories concerning research and aesthetics. Constructing this theory brings together theories of art and research. The result is an explanation of aspects of the design process, interpreted by means of certain concepts. These concepts, originating in Dewey, are: situation, conception and testing, materials, seeing and judging, argument and consummation. The process is rather like that described by Schön (1983) concerning specialists’ knowledge in action. The design process can be described as a series of exploratory steps. It begins in an establishment of the problem, progresses via experience of the senses, experiments and alteration and then develops into a new situation where judgements and new experiments take over. The process continues until the situation is deemed satisfactory. Like Valkenburg and Dorst (1998), one can label the steps based on Schön’s thinking as naming, framing, moving, reflecting, but one should, of course, bear in mind that design is a complex process. There are innumerable factors besides the notable effects on the process, and this complexity must therefore be taken into account. A somewhat specific feature in a design-theoretical discussion is experience, as Dewey interpreted it. Experience is a vital ingredient in design. It’s vital to the design process, but also to the final consumer of the product. It’s vital regardless of whether we are primarily interested in providing something for the individual, or reaching the mass audiences. The consummative experience is part of the complex process of meeting the desires of human beings.

When it comes to the closer examination of aesthetic experiences, I don’t think my classification of experiences is complete or even very accurate. I have isolated some distinguishable types, and though they aren’t based on any necessary and sufficient definitions, I do think these different concepts contribute to a shared understanding. One significant feature I have tried to show is that there are many aesthetic experiences that never reach a fully consummative stage. In design we have a lot of immature results and processes that are never brought to a final end or perfection. The design process aims at a final perfection and a product that’s satisfactory to the designer, but it consists of a lot of half-ready explorations and creations. With reference to the design process of Ilmari Lahdelma, I would claim that a design process where the single explorations can be cut short is very efficient and in this case proven to be successful. However, I think his minimized explicit design process is supported by an elaboration of the conceptual design in the mind of the designer.

The pragmatist perspective provides a lens through which we can interpret concepts. This makes the concepts precise in meaning, but, of course, also tied to this contextual interpretation. These interpretations cannot claim any final significance. They provide a toolkit that supports the articulation, understanding and communication of design features. I don’t find it necessary or even possible to express these interpretations as necessary and sufficient definitions. They are only theoretical explanations that try to express the most central characteristics. They are theories in a larger conglomerate of theories and need to be criticized and compared with other interpretations. Because much of the thinking in design is tacit I doubt
the usefulness of precise descriptions. The most important task is to have a shared common understanding that enables us to discuss and develop the shared interests. Below I present some interpretations of central basic design concepts, seen through the lens of pragmatist philosophy:

**Design**
Design is a controlled creative action. The control, however, cannot be complete. There is always a space for changes and discoveries. Dewey’s technology can be seen as the professional application of reflection in action. One core issue is the creation of something new. A design process guided by reflection, explorations and by a restrained and reason-based judgement process is also termed *technology*. The outcome of design is an object accompanied by reason. Thus science is a specific form of design, where the result is expressed with a stringent set of reasons and all of them have to be explicit and based on reliable sources. The aim of science is explanation. Art is another specific form of design, where the final outcome is an expressive object. Art is design without any given client, and it doesn’t aim at explanation but rather at experience. One important aim of reasoning - providing external criticism - in the art field is to provide support for deeper experience.

**Design knowledge**
Design knowledge is a set of repertoires intended for managing problems, desires and puzzling situations, and for changing an existing situation into a preferred one. Design knowledge cannot be transformed into information. Design knowledge is carried and applied by humans in action. Information is an important subset of design knowledge. Design knowledge is primarily a knowing in progress and creativity is a subset in design knowledge. Design knowledge applies rational reasoning, but some of the reasons and influencing factors will always remain hidden. They are embedded in cultural and socio-historical traditions. Design reasoning can make use of explicit logic, but it’s only one possible option in design reasoning.

**Design problem**
The design problem is not a single and simple issue, but rather a complex situation where we want to improve or change something. It’s a situation of indefinite complexity, constituted by such major aspects as facts, form, values and social relations. The problem is never purely a technical matter. If it can be solved with a ready-made solution then it’s not a design problem. It prominently asks for an evaluation and ethical judgement. One important part of design is to clarify the problems and competing interests.

**Creativity**
Creativity is a dynamic capability to manage problems and situations and generate solutions that match the expectations. It presupposes suitable repertoires and the application of Dewey’s technology. The expectations can be fulfilled in various ways but must produce more than a mechanical answer to a given programme. The creativity must also address desires that cannot be expressed in a programme, and which is better expressed by the word *expectation*. I interpret Dewey’s explanations of aesthetics as a model by which to explain creativity; thus creativity is not veiled in a cloud of mystery. Creativity displays certain regular patterns. It’s bound to the
particular context, but also to intuition and mental processes. It becomes apparent that creative solutions do not simply emerge from nothingness but are constructed through experiments, conscious reflection and judgement appropriate to social traditions and practices.

**Innovation**
Innovation is a recognized success based on the production of a new design. It’s socio-historically substantiated, linking the new to history. Innovations need to contest existing thinking more than normal design but will always be embedded in a context of cultural expectations. Potentially good innovators are driven by symbolic interests and the interests of the elite of their field. Control and commercial interests tend to limit the innovativeness.

**Aesthetics**
Aesthetics is a canon for the interpretation, evaluation and judgement of design products. The canon is stable but not fixed: it changes continuously. It’s socio-historically determined, and the elite of the field have the ultimate right to judge. The aesthetic canon varies between different social classes and different professions. Some components of the canon can be shared and remain stable over a long period of time. Sometimes an aesthetic canon can be overthrown in a few days by a new competing set of rules. But in doing so, many ideas of the old will silently remain accepted.

**Aesthetic experience**
The aesthetic experience is a positive bodily-anchored response, which includes cognitive and intellectual elements. The experience is difficult to describe but can be communicated by means of examples. The aesthetic experiences range from rather simple intuitive conclusions to extensive emotional and fulfilling experiences. It’s preceded by conscious and unconscious processing of some complex and confusing situation. It’s based on feelings that are processed to an emotion reaching a point of awareness. It’s an emotional-cognitive experience that provides the means for judging complex situations, which cannot be fully or quickly enough analysed through and by explicit means. Aesthetic experience is an important guidance in artistic production, design and many other professional and scientific practices.

**Design professions**
Design professions are distinguished by their ability to organize themselves into corporate bodies, who take responsibility for the education and defence of corporate values. Design professions are craft-like and are mainly learnt in a master-apprentice relationship. They can include more or less academic knowledge and intellectual and artistic components. Design professions produce primarily immaterial products as a response to given programmes, and the product is accompanied by reasoning. The new knowledge is not taught at schools but generated in the practice, eventually in close relation to the media and institutions serving the elite.

**Communication**
Communication and interaction are methods by which to convey solutions and continue experimentation. The entire design cannot be converted into a verbal
explanation, but with the help of expressions coined in the design process one can achieve an exchange of ideas, solutions and criticisms. This elevates the design from being private and centred around the individual to a co-operative situation where many people may take part in the aesthetic experience and, moreover, contribute to the design. Communication must then not be seen as purely verbal activity, but including various kinds of expression - images, charismatic expressions and metaphors. I also see a likeness to Hillier’s (1996, 61) explanations regarding the role of theories in design. According to him, the theories function both as support in the generation of solutions and as an aid in analysing and predicting how the design will work.

**Criticism**

Criticism is present on many levels. In design one has a need for critical judgement. One must be able to make one’s own judgements of results and possible consequences; the criticism is then, of course, a choice, and a control of the process. When goals have been established and solutions modelled, others can take part in the design process and express criticisms, in a type of broader reflection and evaluation. The design can also be criticised by someone with expert knowledge analysing the context and content of the design. Criticism should primarily be seen as a guide to understanding. Evaluating is something innate in the way we act and experience things. Unmotivated opinion, however, is not an acceptable type of criticism - impressions should be developed through knowledge and reflection. In pragmatic philosophy, criticism is the most important method by which to develop design solutions and support and enhance aesthetic experiences.

**Consummation**

Finally, consummation can be defined as completion, but should not be taken to mean a final perfection. Rather it could be described as a merging of all the streams of aesthetic experience, brought about by a creative process and by experiencing what has been created (Berleant 2000, 137). It’s not an isolated occurrence in private meditation over a work of art or a completion that exists solely within the object, nor is it accessible only by a creative genius. These aspects can, of course, contribute to the consummation, but it’s always the result of a complex situation where one often finds many contributing factors and parties. Insofar as it’s bound to the context and the situation of the observer, and as experiences have an influence, objects of design should constantly be reinterpreted. The interpretation will be different at different times and in different circumstances. There are no perpetual aesthetic truths; the result may be experienced as giving a feeling of clarity and harmony, but it’s dependent on the observer and the situation.
Some proposals and problems

Dewey’s view of the process of artistic production remodels the current understanding of design. It shifts the focus from the objects and its qualities to the process. This is especially obvious in the artistic design fields. However, this doesn’t mean that design can be reduced to mere stylization, nor is it a theory dismantling and destroying the fine art traditions. There’s no reason to believe that the process orientation would devalue the aesthetic qualities or dissolve the aesthetic and ethical codes. Despite Dewey’s interest in broadening the understanding of aesthetic experience, he was not ignorant of the traditions and established practices. His philosophy shifts the interest in design research towards the ingredients of the design process, but it’s by no means a reduction of design to functional or materialist aspects. Values, experiences and traditions constitute ingredients in the design process as well. Instead of decomposing and thus reducing the aesthetic dimension, Dewey’s theories underline the importance of aesthetic quality and experience and the integrative orientation of design processes - taking cultural traditions and the context into account. According to Bourdieu, the art producers are bound to be blind to the social ingredients (positions and their interrelated relations to individual disposition) of their practices. This was also a perspective seen by Dewey (1931). The designers are blind to some of the contextual ingredients of their successes and failures, too. They are simply unable to accept a scientific dissection of their production which doesn’t take the formal and stylistic rhetoric (or intuitive formalistic design thinking) as the proper truth of artistic production. Dewey’s approach might be a bit too close to Bourdieu’s idea of a distanced investigation of art - and thus regarded as a blasphemy by the designer community because it unravels the relations of the field in an inappropriate manner, inconvenient to the self-esteem of the designers. This is a dilemma I think we have to take into account if we want to develop the research in artistic design fields.

I think it would be fruitful to the design fields, including architecture, to create liberal art departments in universities that could acquire independence from the profession-oriented institutions. The success of advanced design research depends on how it can create an independence from the utility-oriented profession, where the ultimate aim is not the creation of expressive objects but stringent theories that meet the standards of the research community. The profession-oriented schools are not capable of supporting this process. The creation of such institutions is complicated. I think the professional schools are efficient as they are. There is a danger that the creation of liberal art departments will undermine the now strong practice orientation and the reproduction of designers, and thus reduce the strength of the professional schools. On the other hand, I think the design field would profit from institutions with a strong, independent internal reflection and criticism. Also, we are all aware of the status of research in the competition for funding. An independent and stringent research output is an important measure for the administrative powers of the academic institutions. It’s a question of both status and money, though in a Bourdivian sense the usefulness - or hope for commercial success - is always confirmed by means of pecuniary instruments, whereas cultural successes, such as research on a theoretical level, are only measured by means of position and status.
There’s a complication in the creation of design theory as a liberal art concerning the continuity or reproduction of scholars in the field of design theory, if we take design theory to be a philosophical discipline, distanced from the concrete design research. I would argue that all scholars have to start with a genuine design education in order to acquire an acceptable understanding of design. Normally the next generation of scholars in a field are trained in the very same field by their predecessors. In the case of design theory there is a discontinuity. The scholars of design theory have to come from fields other than design theory. They have to come from the different fields of design practice. This is even more complicated because the design education seldom includes any deeper theoretical education on the subject of design processes. If we believe in the potential of design theory I think this is a gap that we need to bridge - if we want to strengthen the field and its development. However, I am reluctant to accept that we should introduce more theory into the education of design professionals. I think they’re better off as they are. We need the liberal art of design parallel with the professional design education. Students of design theory need to take part in the basic design education in order to get a basic understanding of design competences, but in a final stage it should provide an advanced theoretical preparation for analyses of design processes and influencing aspects. These studies wouldn’t end in a design object but in a written analysis.

One important part in this construction is the capability of criticism. In the fields of design education I think it would be important to include the education of critics. In the field of architecture I find the lack of competent critics astonishing, but as far as I know there is no natural educational road to becoming a competent critic of architecture or hardly in any field, with perhaps the exception of literary studies. What we mostly get is journalists writing about architecture out of pure interest, but with hardly any knowledge of the traditions embedded in architecture. In my understanding, criticism is not an activity limited to only a few people in the media, but an important task in many types of design-related work, for example in administration. I would like to see criticism as a competence demanded from administrators and managers. In urban planning there are many administrators who don’t design but have an education totally devoted to design. We have a situation where the administrators have only an education as designers, with little knowledge of methods of making explicit analysis’s and criticism, which would be more operative in a design administration context. Instead of administrators trying to apply their design skills they could be more supportive through criticism – and interfere less in the actual design process. Another task of the public administrators is to make the design solutions understandable and readable to a broader public.

What should be left outside design theory? I think methodological issues would be my first answer. Design methods and research methods of the various design fields are better left to the particular design fields. The methods must be adjusted to the particularities and traditions of each field. There is no reason to believe that we could apply the same research methods in architecture as in engineering or media design. We must not forget that the expectations vary according to whom we design for. There are family resemblances and we can learn from interdisciplinary comparison, but there is no space for a universal design methodology, except for the very general types already existing.
One problem with design research is that at first sight the design practices and research practices are identical. Many designers do research within a design process. A good theoretical investigation produces conclusions that bring new ideas to life. There is no significant difference between an advanced process of product development and a scientific enterprise. In the different fields of engineering, product or process developments (design) are central scientific research objectives. These similarities tend to blur the picture of design research. I don’t think we have to exclude design-like processes from the realm of design research, but we should make it clear that there are differences between research and design. In accordance with Dewey’s philosophy, design theory would produce theories, design would produce objects and design research would produce theories, knowledge and new objects. All these processes accumulate and generate knowledge, but at least in design theory the central aim is to produce formalized knowledge that can be communicated and criticised.

I see confusion in the use of the concept design theory. It might seem plausible to call it design philosophy. On the other hand, in the light of pragmatist philosophy and due to the fact that much of the design knowledge is embedded in the design actions, as tacit knowledge, I think it might be relevant to mark some distance to philosophy. I think that the methods of philosophy are the relevant tools for investigations of design theoretical issues. Still, with the type of knowledge we have in design processes I think pure reasoning would be a lame duck. Research into design processes needs to be informed about the particularities and the inherent thinking of design action, in order to be powerful. Pure reasoning won’t be enough.

The amount of research based theories regarding design knowledge in higher education is rather limited. Design education is largely established on the basis of the professional subcultures and their traditions regarding educational systems, teaching and learning methods. Within this complex elaborate theories of didactics and cognition hardly plays any role. My conclusion is that design education os established largely on successful practices and successful subcultures. This means that the educational practices can be seen as sources eliciting theories about design knowledge. Due to this I think it would be reasonable to try to conduct case studies concerning design educational processes and to compare them with similar processes in other design education and with existing theory on teaching and learning. This might give access to a theoretical understanding of design knowledge.
RESEARCH IN THE FIELD OF DESIGN THEORY

I don’t think we should dwell too long on the details of Dewey’s philosophy or on defining design or design theory. He wanted inquiries into real problems, instead of extended reasoning about things without any impact on real life. The other thing to measure design research by is progress or usefulness. We have to select proper ways of interpreting design situations and methods in order to develop the situation. The advantages of Dewey’s pragmatism are that it provides an epistemology, which allows different approaches. It constitutes a basis, allowing us this contextual and relative type of knowledge, which is often requested in explanations on the characteristics of design process. There are various advantages - though open to critique - to be gained from such an approach:

1. We need to develop a rich understanding of various design processes and their cultures, because innovation is design: a theoretical development tends to infuse new ideas and trigger some new development.

2. An increased understanding of the specific issues inherent in design might enhance some development in the cultural field, which is very central in human existence.

3. There is a demand for meaning creation, which is the result of design processes.

4. There might be better possibilities to include features like attention, aesthetic quality or joy if we adopt a design-specific paradigm of thinking and knowing.

5. In business and technology there’s a reawakened interest in design research, though it currently lacks orientation.

6. There’s a need to address the ethical values embedded in design, and design theory might provide some structures supporting the investigations of these issues.

I’m convinced that different types of research and new methods are needed. Also need are different approaches and an adequate epistemology. I doubt that we can penetrate and describe design processes completely. I think we will have to accept that we have to stay within the rich complexity of design and develop rich studies of processes, including contextual surveys and evaluations of the social relations. I am a bit reluctant to accept Bourdieu’s proposal for a new method of research as the only true way of penetrating the processes and relations in design. However, due to Bourdieu’s field theory, I find it reasonable to assume that there’s little space for a strong research orientation in close connection with practice. Investigations that reveal the real nature of professional and artistic codes are doomed by their very nature to be rejected.
I think we can sort out two central tasks in design theory:

1. To create maps, concepts and ideas that provide a means for better and deeper aesthetic experiences, and thus better design production.

2. To develop theories and a conceptual framework that can support research and development in the academic fields and within the professions.

These two tasks aren’t totally different. Both can rely on Dewey’s technology, yet aim at different results. The former addresses the large continuum and the pluralism, which asks for ever-changing articulations and expressions, whereas the latter aims at long-standing explanations. In Dewey’s theories, there’s an indication that aesthetic experience is an ingredient in all kinds of practices - or it could be enhanced by taking it into account. This also implies that the conceptual framework applied in the art world could provide support for an improved conceptual understanding of other practices. Here it’s important to notice the problem that there is no way to adequately determine or define aesthetic experience or art.

One of the major tasks of design theory must be to sort out concepts and theories concerning the shared issues. If design theory is a philosophical discipline it’s natural that the methods of philosophy are the methods of design theory - i.e. reasoning. One obstacle in design theoretical investigations is the management of the confusion of languages. The general tasks must be to clarify concepts and theories and to criticize existing practices and models. With an integrative stance it’s necessary to work on the translation of design thinking from one field to the vocabulary of another, which would allow us to share ideas.

In a pragmatist perspective, it’s also important to take a *designerly attitude* and produce new ideas and to propose changes, and to alter perspectives and attitudes. In the pragmatist tradition, the descriptive mode is but one basic mode of research. Development is a most genuine pragmatist mode of research. The aim isn’t, as in design, the production of refined products. The aim is enhanced development, as such, and controlled inquiry is the means to achieve it. I see at least two vehicles - research modes - for achieving this. The descriptive mode, articulating and modelling the design process and clarifying concepts is one way of supporting progress in design theory. The other research mode is to produce speculative theories and have them tested. There are other ways, too. One way of doing this would be to make proposals for issues that seem problematic, important or new. Design theory could pick up issues from the interdisciplinary resources and react on the research in a field, by criticising and addressing these issues. On the level of developing implications from Dewey’s theories, I find the ideas of Shusterman and Hickman promising. Shusterman (2002, 200) goes on to develop ideas on how one could apply the ideas of Dewey, challenging the privileging dichotomy of high art versus popular art, and by proposing the invention of new vocabularies and changing how and where they are applied. Hickman (2001) tries to illustrate the strength of Dewey’s pragmatist philosophy as a universal tool for controlled development in any area.
The continuous analysis and rewriting of design history is, at least partly, a task that belongs to the field of design theory. History is not final but a process of continuously changing interpretations, largely dependent on cultural and political interests. History is also a source for the understanding of the field and a vehicle for generating new ideas. The obvious pluralism in design makes it difficult to write a simple, straight-forward design history, and this will fuel the field of design history with new and competing theories, which, of course, is fruitful for the field. Among the tasks to include in design theory, I would like to mention the mapping of the fields of design. The mapping of the field would be a necessary task in order to draw on the empirical findings resulting from design research in the different fields.

One of the most important issues to address in design theoretical research must be ethical issues. Unlike science, where we at least should try to limit the influence of moral issues and subjective interpretations, design cannot function without them. Design practice is filled with moral-based thinking, mostly on a hidden and tacit level. Ethical thinking provides support for design action. The articulation, reflection and reasoning concerning design thinking can lead to well-founded action and appropriate solutions and potentially prohibit mistakes. I assume we cannot expect to unveil all hidden moral issues, but this is no reason for ignoring them. A different type of moral issue to address is the borderland between design practice and design research. We cannot deny that there are components of research in design, or that there are components of design in research projects. We should address these confused and blurred areas, not by constructing a definitive borderline between research and design, but by articulating and discussing the specific features of each area. I think we might be able to distinguish several distinctive areas, with different combinations of design and research. Research might be one, prototyping another, and theoretical investigations a third. We must avoid throwing all approaches into one bucket.

My conclusion, based on my experiences from the present study, is that the field of design theory and the stock of theories of design are so narrow and difficult to develop by theoretical means - and have such a little stock of established theory — that there is no reason to put too much emphasis on theory development by means of pure philosophical reasoning. What design theory needs is an enlarged production of design theories and concepts, based on empirical investigations. They can take the design processes of specific design fields as their point of departure, but they should be elaborated to the level of shared (philosophical) theories of design, by means of comparison.

For further research I would propose studies of the subcultures and avant-garde in different fields. The avant-garde professionals of the field autonomously define the codes of the field. These codes are a key to the understanding of what is interesting or not - it’s a kind of standard by artistic means. This understanding is a prerequisite for innovative design in the field of architecture. This also poses the question of whether truly commercial and client-oriented design projects can be innovative. I think it would be interesting to study other fields of consultancy in order to trace their ideology and their avant-garde; e.g. in software design and in engineering design.
I’m also aware of the lack of depth in my conclusions and think further investigation is needed, for example on how the avant-garde designer addresses client needs, and on how the relations between commercial demands and artistic interests in the avant-garde office are constituted. I also detect a need to investigate the methodological relations between empirical research and philosophical reasoning in design theory, within the philosophical framework Dewey proposed. I have said that design theory is a philosophical discipline. Due to the specific problems of design knowledge, with its tacit art and the investigations depending on a closeness to the practice, and because facts are rare and utterly seldom clearly verifiable, it would be helpful if we had a clear and consistent theory concerning the research methodology. I think the design theoretical research would profit from a consistent theory development regarding the application of methods of inquiry, both regarding case studies (and other related methods for the study of unique processes), the philosophical methods and their interrelated dependence.

Notes:
1 See Rorty (1982, chapter 6) on his explanation of why there is no need to keep philosophy pure, detached from the messy reality.
10
CONCLUDING REMARKS
DEWEY’S PRAGMATISM

The present study has dealt with both architectural and design theory, with particular emphasis on the application of philosopher John Dewey’s methods of inquiry. This last aspect is an important issue because it’s a central concern in Dewey’s philosophy — how to investigate and improve various problematic situations. Dewey’s philosophy is not meant to be only an exercise of concept clarification or an abstract reasoning about “ethereal” issues. Inquiry is about concrete problems and not a restricted area accessible only for philosophers. Inquiry is the method per se for investigation and development. In this final chapter I will address some general problems and conclusions, and finally try to articulate some of the weaknesses or problems I detect in Dewey’s pragmatist philosophy and his method of inquiry.

Regarding the fear of an increasing consumerism and commercialism of design professions, I’m not at all afraid that the fine art of design or architecture, or culture at large, will drown in the swarm of the markets. Culture is a strong power alongside money, politics and science. Both as scholarly and human interests, it still seems appropriate to address the issues that tend to remain unmentioned. In the light of Bourdieu’s field theory, I also see the lack of equality in our society; but it’s not a question of only money, for taste, too, plays a similar role. Though I might be sitting on the wrong side of the fence, I still think it’s worth addressing the question of how we can enhance and broaden the access to aesthetic experience among all people. I have no simple answer but I do see the disproportionate accessibility and the oppression of the lower social classes by means of architecture.

According to the pragmatist philosophy of Dewey, the first thing is to focus on the problems and study them closely, producing grounded statements for further discussion. It seems that the architects often ignore these issues. Most research is devoted to the history of architecture, which certainly is important but often rather unproblematic. There is a strong tradition of seeing the others (clients, cooperating engineers, users and the public) as problematic and needing reform or edification. Architects tend to see architecture only from an inside perspective, while in other design fields there are traditions of seeing design from an outside perspective, too. This is most clearly to be seen in the field of design management. A more appropriate attitude would be to assume that we have to look at our problematic relations, focusing on the aspects that we can influence. The increasing competition, measured in time and cost, is often seen as problematic, but there is no research in this field among architects. The tendering procedures are often discredited as faulty and ignorant towards artistic values, but there is little in the product development in the architects’ community in this field. The large part of the built environment is considered as being of a poor quality, but hardly any architect — at least in Finland — cares to exercise criticism in a thorough manner in writing. Criticism as a writing practice is not taught among architects. The problem of an uneducated public is never studied as a responsibility of the architects or as a matter of lacking public criticism.
One important claim in Dewey’s pragmatist philosophy is that there are no eternal truths. On the other hand, it’s important to notice that differences and distinctions constitute means for distinguishing significance and meaning. It’s important to notice, for instance, the difference between reflection on design actions and reflection in design. It’s also important to notice the different goals attached to design research, design and design theory. I can discern several ways of seeing the general method of inquiry as applicable to design theory. But a multiple perspective makes it all confusing. We have to be clear on what we are aiming at. Inquiry can be interpreted as:

- A general description of design processes.
- An indication of how to perform design research.
- An attitude towards the development of design and design research.

These same ways or indications of potential directions for progress can be addressed in the very field of architecture, too; but in the case of architecture, and the creation of architecture, it's more complicated. Still, Dewey's general method of inquiry can be seen and applied as:

- A general description of architectural design processes.
- An indication on how to perform research in the field of architecture.
- An attitude towards the development of architecture.

In the theory of architecture, which influences the generation of new ideas for the production of architecture and where philosophy often is taken as an underpinning theory, I can see no simple translation of the ideas of Dewey into a theory of future architecture. It's the attitude towards the development of architecture that is the core element in a pragmatist philosophy of architecture, and this attitude stands in strong opposition to the present-day attitudes, with their overwhelming interest in avant-garde architecture and international trends and theories.

In this sense, I think the research method of the present study — Dewey’s theory of inquiry — has functioned very well. The rich material and the interweaving with existing theories has produces a rich picture of the design process. The openness and the application of reflection and reasoning made it quite difficult and the early stages very tentative. It would be easier to proceed if the research methodology would have a distinct format. I see the method, in short, as based on a rich case study, articulating both the design process and its context. The inquiry takes support from existing theory and develops through reflection and interpretation. Its stance is theory development, where the empirical material is used to articulate and support the understanding of the reasoning. The research approach has a specific point of departure in the acceptance of design knowledge as a significant characteristic demarcation, with its culture bound to knowing-in-action as an issue asking for special treatment. Some specific problems I have encountered are:

- Design thinking and experiences are difficult to access; not only because they are tacit but because design also continues after the actual working process and the turning points often stem from unconscious cerebral processing reaching the level of consciousness at any time.
• Concept clarification is very much a matter of design, borrowing from other areas and theories. The empirical investigation seldom delivers any concept proposals. The vocabulary of the designers is very much oriented towards the object and the produced intermediate solutions (sketches etc.).

Existing theories very much focus on the idea of modelling the whole design process, and the vocabulary is split into many similar expressions, overlapping and vague. I think it would often be more useful to concentrate only on some aspects of the design process, like, for example, the process of “anchoring” and its relevance in different design cultures.

One problem with pragmatist philosophy is that it’s difficult to bridge from it to the currently dominating tendencies or schools of philosophical thought. Dewey’s philosophy was written almost one hundred years ago, directing its force against the dominant ideas of its days. Due to the present-day acceptance of pluralism and even relativism, instead of fixed truths and definitions, it’s difficult to apply the theories of Dewey in a consistent way. The will to accept no categorical distinction between praxis, science and art is, of course, favourable to design research, but it also makes it difficult to construct useful distinctions and to sort out differences. This pluralism and interrelatedness ask for thorough reasoning, much more than when we start from definitions and clear-cut classifications. The pragmatist process of inquiry asks for reasoning that clarifies and supports the ideas and hypotheses, which in turn has to be based on analysis and reflection. One weakness of the pragmatist philosophy of Dewey, as a methodological approach, is that it expects a thorough reasoning in order to prove its conclusions. Another problem, which also is accentuated when bringing in the ideas of Bourdieu and rejecting his demand for a distanced process of investigation, is that Dewey’s ideas lead to a research situation where values are very intimately connected to the research process, where the researcher potentially might shift to a value-based rhetoric, with little relevance as a research enterprise. Finally, the fact is that there is rather little on how the method of inquiry is applied to real life problems. This is probably due to the fact that Dewey’s influence diminished in those later years when he wrote the pieces on inquiry. It’s difficult to find examples in his writings of how to proceed.

It’s also important to notice the impact of Dewey’s pragmatism in the sense that it changes the whole picture of research and scientific investigation. Instead of a clear-cut classification of human practices — constituted as separate realms like, for example, science, art and politics — we get a large spectrum of interrelated human practices, which can be seen in different perspectives rather than one definitive one. Furthermore, the inclusion of Bourdieu’s theories leads to a situation where the various forms of power constitute an important aspect in the reasoning around knowledge and development. Once we have understood this, I think it’s difficult to ignore the significance of these aspects.

Notes:
1 There has been a promising initiative by the Finnish Architectural Review (ARK) going on for a few years, but this, of course, concentrates on winning entries and other examples of high ranking architecture.
CONCLUDING
REFERENCES:


Lehtonen, H. Perspektiivejä arkkitehttuurisuunnittelun esityskäytäntöihin. YTK, Espoo.


---

**Publications from the Finnish Association of Architects (SAFA):**

*Architectural Competitions in Finland* (Kilpailuliite) 1, 2003.


### List of figures

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.</td>
<td>Table</td>
<td>The Finnish Association of Architecture</td>
</tr>
<tr>
<td>Figures 2 -3.</td>
<td>Figures</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 4-5.</td>
<td>Photos</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 6-7.</td>
<td>Detail plan</td>
<td>Korsholms kommun</td>
</tr>
<tr>
<td>Figure 8.</td>
<td>Drawing</td>
<td>Kannustalo Oy</td>
</tr>
<tr>
<td>Figure 9.</td>
<td>Photo</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figure 10.</td>
<td>Drawing</td>
<td>Kannustalo Oy</td>
</tr>
<tr>
<td>Figure 11.</td>
<td>Drawing</td>
<td>Vällvik träelement</td>
</tr>
<tr>
<td>Figures 12-14.</td>
<td>Sketches</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 15-16.</td>
<td>Photos</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 17-25.</td>
<td>Sketches</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figure 26.</td>
<td>Photo</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figure 29</td>
<td>Sketch</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figure 30.</td>
<td>Photo</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 31-33.</td>
<td>Sketches</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 34-40.</td>
<td>Drawings</td>
<td>Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figure 41.</td>
<td>Photo</td>
<td>Jussi Tiainen</td>
</tr>
<tr>
<td>Figure 42.</td>
<td>Photo</td>
<td>T.Hägg - O.Pohjola - K.Haigh</td>
</tr>
<tr>
<td>Figure 43.</td>
<td>Photo</td>
<td>Lentokuva Vallas Oy</td>
</tr>
<tr>
<td>Figure 44.</td>
<td>Drawing</td>
<td>Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figures 45-49.</td>
<td>Sketches</td>
<td>I. Lahdelma / Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figures 50-52.</td>
<td>Photos</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 53-54.</td>
<td>Sketches</td>
<td>I. Lahdelma / Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figures 55-57.</td>
<td>Photos</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 58-60.</td>
<td>Sketches</td>
<td>R. Mahlamäki / Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figures 61-62.</td>
<td>Photos</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 63.</td>
<td>Photo</td>
<td>Jussi Tiainen</td>
</tr>
<tr>
<td>Figure 64.</td>
<td>Drawing</td>
<td>Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figure 65.</td>
<td>Photo</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figure 66.</td>
<td>Sketch</td>
<td>Petri Saarelainen</td>
</tr>
<tr>
<td>Figure 67.</td>
<td>Drawing</td>
<td>Petri Saarelainen</td>
</tr>
<tr>
<td>Figure 68.</td>
<td>Sketch</td>
<td>Petri Saarelainen</td>
</tr>
<tr>
<td>Figures 69-70.</td>
<td>Drawings</td>
<td>Petri Saarelainen</td>
</tr>
<tr>
<td>Figure 71.</td>
<td>Photo</td>
<td>Jussi Tiainen</td>
</tr>
<tr>
<td>Figures 72-74.</td>
<td>Sketches</td>
<td>Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figure 75.</td>
<td>Photo</td>
<td>Leif Östman</td>
</tr>
<tr>
<td>Figures 76-77.</td>
<td>Drawings</td>
<td>Arkitehtitoimisto Lahdelma &amp; Mahlamäki Oy</td>
</tr>
<tr>
<td>Figure 78.</td>
<td>Photo</td>
<td>Christer Öhman</td>
</tr>
<tr>
<td>Figure 79.</td>
<td>Photo</td>
<td>Håkan Nylund</td>
</tr>
</tbody>
</table>
APPENDIX
Appendix 1

Aesthetic Quality in Project Management 1.

Leif Östman
Royal Institute of Technology; Stockholm.

Introduction.

Art has two different meanings. We normally understand it as a sense for beauty and as objects created by artists. Originally art stood for a kind of higher competence, in any type of activity, e.g. the art of thinking, the art of fighting. Art was not restricted to one single field but denoted the excellency of doing something (Schischkoff 1991). I take this as a starting point for a discussion on the matter of aesthetic in project management.

Aesthetic quality is diffuse; the evaluation of it is based on tacit knowledge and depends on cultural backgrounds. They have often been neglected in traditional science and there are many different definitions of aesthetic qualities. There are a lot of theories about aesthetic, most of them of little or no help in real life situations.

Our understanding of aesthetic is dominated by the ideas of the analytic philosophy – seeing aesthetic as distinct from science and mainly as a set of rules to determine what is art and what is not. Still, I think it could be possible to push this subject further. I would like to use the pragmatist philosophy and its theories about art and knowledge. The pragmatists have a different conception of aesthetic. Instead of being locked up in a field of fine art, the pragmatists see aesthetic as a common quality, occurring in all kinds of activities. It is not only related to the art object but also to the art of doing something. In the following chapters I will present the pragmatist understanding of aesthetic and how it can be related to project management.

The intention of this paper is to present a sketch for a research program. The aim of the research would be to explain different aspects of aesthetic – in design management, in innovative projects and as an art of practice in management. My conclusion is that aesthetic quality appears in several forms, in project management, and that the pragmatist philosophy can improve our understanding of it. A basic theory development could clarify different aspects of aesthetic quality. I propose that aesthetic quality could be studied through case studies combined with hermeneutic interpretations of theories and cases – in an interpretative way, like in art criticism.

1 Paper presented at the EURAM conference 2001, in Stockholm
The need for concepts.

What do we want to achieve through research and knowledge? I think we would all like to improve the world. We would like to help people manage projects. One response is to develop systems and tools or to improve methods or skills. Another - according to the philosophy of Wittgenstein - would be to develop concepts. I assume that the development of concepts will not produce immediate utility, but I also know that it is difficult to gain utility from any research.

Much of the knowledge of project management is tacit. We know how to do even if we are not able to explain it (Molander 1996). We know how to manage projects even if we cannot describe it. The main source of knowledge is previous experiences. According to Lundequist there is a lack of concepts in action-oriented professions, such as the field of project management (1998). Is there a need for developing concepts in project management? I think there is. It is necessary to communicate within a project. Both within and outside the project people need to understand what is going on. We need concepts to be able to communicate. According to Lundequist we need to describe phenomena in order to be able to communicate and experience the world (1999). The task of the researcher is to make phenomena understandable. It is also necessary to discuss management solutions. If we design structures and systems for the management of projects we will have to do it on a higher level of abstraction – higher than the level of ordinary management practices. The concepts are also tools for our thinking and new concepts help us change and improve our thinking (Lundequist 1998).

Aesthetic in project management.

There are several areas in project management where we come across aesthetic. I notice two popular subjects in current project management that are related to aesthetic: innovation and design management. Both of them have a connection to design theory and aesthetic. It is obvious that design and design management has something to do with aesthetic, even if we cannot clearly explain how. Design management is a kind of project management, where there are high demands on the aesthetic of the resulting product. The reason for the interest in this subject is that there is a market for good designs.

The connection between design and innovation is not that obvious. Innovation is a prestigious task. It is not achievable through a systematic approach. Innovation asks for something more. I think aesthetic can be seen as the common factor. In both design and innovation there is a creative leap
– difficult to trace and describe – generally associated with a kind of skill to see or use aesthetic quality.

I also think we must consider the possibility that aesthetic quality could be of interest when explaining what project managers do in their professional practice. How they manage insecurity, lack of knowledge, changing and complex situations. The pragmatist aesthetic is rather large and includes all kind of processes. I think it could be useful when explaining how project managers understands and reacts in different situations. All these different aspects form a complex of concepts related to aesthetic. They may have something in common, but I also think their meanings need to be clarified.

**Pragmatist philosophy.**

The pragmatists have an understanding of aesthetic, as a quality in processes and human relations to objects and phenomena, offers a possibility to reach a better understanding of project management. The pragmatist aesthetic is something different than the ideas of the analytic tradition, where it is seen as the philosophy of beauty or even as an analysis aiming at distinguishing what is high art and what is not. In pragmatist philosophy aesthetic is a quality based on human senses, helping man understand complex situations and allowing him a possibility to an enriched life.

To begin with I will introduce a theory of management, based on Schön’s theories of professional practices (1983) and partly on the late Wittgenstein. Wittgenstein’s language game suits well my understanding of management practices. It is a social practice within a given context. The process follows certain rules, but they cannot be fixed as laws in physics or chemistry. In short: we do follow rules but show our knowledge by acting in an appropriate way within the language game (Lundequist 1999). I think this explanation enables us to understand the practice of project management without forcing it into clear-cut definitions. I think the open concept of language games is more fruitful than attempts to produce definitions, because of the action-oriented type of knowledge in project management.

The knowledge of professionals is - according to the pragmatists (Dewey 1938, 1980) (Schön 1983) - something between common sense and scientific knowledge. I use the pragmatist philosophy and its concepts of aesthetic and knowledge to explain the knowledge of project managers. The pragmatists make no distinct division between different types of knowledge. All kinds of knowledge have its roots in real life. The differences appear when real life experiences are elaborated. In normal life situations we do not reflect upon occurring events. We seek solutions, use our common sense and react. On the other hand the scientist systematically searches for causes,
solutions and explanations and he is forced to explain thoroughly how he reaches his conclusions. He has to express his findings with the help of a rather exact discourse. Professionals do not have time to dwell on a subject. They will have to react. On the other hand they are trained in a scientific tradition and they deal with complicated technical problems where science is important.

I see the project manager as a *professional*. He has a basic education in scientific disciplines but due to the scale and complexity of the tasks in industry the problems cannot be solved without an extensive organization of people, resources and time. The professionals have to manage these organizations and projects, which ask for another kind of knowledge than the scientific one.

The idea of *professional knowledge* was developed by Schön (1983). Through his concept of "reflection-in action" using design professional’s actions as examples of how professionals act, I will try to explain why aesthetic is an important aspect in project management. One major idea in Schön’s thinking is that professionals cannot apply their scientific knowledge to the messy problems of reality. The scientific knowledge is mainly a type of cookbook knowledge. If you do A and combine it with B, you will get the result C. This is the case as long as you have clear-cut As and Bs. Schön claims that the professionals first have to find problems - the As and Bs. The reality is much more complicated than the principles of the scientific theories. The professionals must construct the problems. In other words: they design manageable problems, out of the messy situations, on which they can apply their scientific knowledge. (Schön 1983, 170).

According to Schön the professional uses reflection-in-action and reflection-on-action as means of action oriented knowledge. The knowledge is not fixed to written principles, but is inherent in the action. It is a kind of *knowing* instead of knowledge (ibid). There are other features of this kind of knowledge. In the process of trying to establish a problem the professionals make proposals. They cannot be sure, but by proposing something they can see if it leads anywhere. They *experiment* with the situation. By means of their experience and knowledge they know that certain things will probably lead to something. They recognize and see problems familiar from previous cases. They are not the same but show similarities and could turn out to something they can solve (ibid). Because they do not immediately find the problems, they have to transform the situation or their understanding of it. If they do something, the situation changes and they learn something about it. According to Schön the professionals have to *change the situation* in order to get forward (1983). He sees these changes as experiments and claim that it is typical for professionals to carry out experiments, and to do this in a virtual world. Instead of risking it all, by experimenting in real life.
situations, they have to find other ways to carry out experiments. They do it by creating models of real life situations. The results of the experiments in the virtual world can be evaluated and translated into real life situations. The results are not known in advance but can, when successful, turn out to useful results or improved knowledge of the situation. As I have already stated, I see the project manager as a professional. Due to Schön’s reasoning the project manager would be a person who carries out experiments. He can do so by modelling the situations in front of him. When he has modelled the situation and seen the result of it he can reflect on it and evaluate the situation. By doing this he can avoid mistakes and make prognoses for the future steps of the project.

The next question is of course what kind of modelling and experiments the project managers are using. I think we have to realize that there are many types of modelling in management because the projects and problems are very complex and unique. A typical model is a schedule, but that is not enough. As an example: I might have a schedule consisting of dates for delivery. This is important for the client. As a producing counterpart I will also consider the time spans between the dates of delivery as important. I might even design a different schedule mainly showing the periods of time between these dates. I might also like to model the internal procedures with quality controls and different production processes. In a discussion with other people involved I will have to express it in words - prepare a model by linguistic means. Or, I can use known projects as references, e.g. the new project will be like the project X but include subprojects like in Z. I am inclined to think that project managers do a lot of modelling. The first step of an investigation in this kind of research would be to check what kind of modeling projects managers are using.

The next step in the process is the evaluation of the results. How do project managers evaluate their experiments? They are probably not experiments of the scientific kind, where you will get a clear yes or no. They are likely to be complicated, contextual and combinations of innumerous data and influences. It is at this point that I would like to use the pragmatist concept of aesthetic. To get some deeper understanding of evaluation and aesthetic it is necessary to look at Dewey’s explanations of art and knowledge. He proposed that man’s experience of complex situations, when developed through intellectual thought, should be seen as an aesthetic experience. Basically one should note that this kind of experience couldn’t be described in words. On the other hand there are certain features that can be explained. Dewey distinguishes between experiences reaching us all the time, without deeper reflections, and events and things that are ”composed into an experience” (1980, 35). Though he presented an art philosophy he didn’t make any distinction to other human activities. As examples of
having an experience he mentions: ”a piece of work is finished in a way that is satisfactory”, ”a situation [...] is so rounded out that its close is a consummation” (ibid). This kind of experience is a whole, which has qualities of its own, apart from the qualities of its different parts. This emphasis of wholeness and its qualities distinct from the qualities of the parts do exist in traditional aesthetic. New is the idea that this can be found outside the field of art. When we sense this kind of consummation as a final quality of something as a whole Dewey called it aesthetic. In art it is common to thrust this kind of intuitive experience. According to Dewey this aesthetic experience occurs when we interact with some aspects of the world (1980, 44). The starting point for aesthetic experiences is the human sensuous experiences. We do something, we try to control the changes and evaluate the outcome. To conclude: the aesthetic experience is not restricted to art, it gives us a holistic understanding of a situation, based on interaction with the situation, combined with adaptation of intellectual efforts. It is not completed before the experience reaches a momentum of consummation.

Research.

The question is: what should be studied? A definite answer is of course impossible to find, but obvious is that we need to clarify concepts that are diffuse. Another answer is that we need to articulate practices that are tacit or based on tacit knowledge. A third point is that it would be helpful to study phenomena where there are competing views on how aesthetic concepts should be interpreted in real life situations.

To get access to the design thinking and the aesthetic qualities I think we have to come closer to the artistic field. There are some indications, by different authors, that this approach could be useful. In order to understand “living knowledge” – a concept related to Schöns “knowing-in-action” - Molander says that we might have to consider new approaches, such as criticism (1996). Schön concludes that we have to “recast the relationship between research and practice”. His proposal for research is mainly oriented towards descriptions of practices and of different aspects of professional practice (Schön 1983). According to Habermas we need to criticize our understanding in “expressive action”. This “expressive action” is one of his four types of action and this one connected to values. He proposes two ways to exercise this: a reflective dialogue and criticism as in art criticism (Habermas 1990). Art criticism has the task of giving an orientation to the reader, using arguments to persuade him of the values of the art object.

In the pragmatist tradition art criticism is not mainly a judgment. The main task is not to distinguish whether the object is art or not, but to guide the observer to an art experience. This experience is not purely sensuous nor
is it private. It is intellectual and can be shared (Dewey 1980, Shusterman 2000). This kind of art criticism is a discourse pointing at the interesting aspects and offering arguments improving the understanding and the experience.

Here one should note the difference between the object of art and the artistic process. Art criticism is normally focusing on the object. On the other hand the object is the result of the process. The object is formed and colored by the process. The art object can also be understood by learning about and interpreting the process. By understanding the process we can improve our experience, at least on an intellectual level. I think this is important in studies of action-oriented professions.

Project management can be seen as an artistic activity. Using the words of Schön the professionals’ performances inhibit “artistry”, as an intuitive judgment and reflection in action (1983). Because this intuitive knowing in action-oriented professions is difficult to trace and describe I propose that we should try art criticism as a conceptual framework for studies in project management. The focus must be on the processes. I see little value in studying the resulting objects of project management. On the other hand the intermediary objects, such as schedules, programs, and project descriptions could be useful for the interpretation of managers modelling. I think we have to stay close to the processes, participate and observe. We have to do case study research, and to combine it with knowledge of management in order to produce adequate results. The ultimate task is to produce concepts and theories linked to the existing theory, but based on the actual cases. It can be seen as a hermeneutic interpretation based on both theories and case descriptions. The results are contextual but can be generalized to a certain degree and improve other peoples understanding of project management. The reason for using art criticism is that it allows us to form interpretations of moments that are not totally determined. It gives us access to the qualities of the whole, which is not accessible by a piecemeal approach.

Conclusions.

I have not touched the two subjects design management and innovation because I think most people understand what they are. It is obvious that aesthetic is linked to design management and innovation. It is a quality necessary for a successful process. A crucial and difficult question is how to study and develop concepts of aesthetic. It includes a great deal of tacit knowledge and we cannot just ask for information. People will not respond or cannot explain what they are doing.

One key to the meaning of aesthetic is in seeing it as a kind of knowledge, common and inherent in many processes. Based on Schön’s theories of
professionals’ knowing-in-action I propose that it is a quality inherent in management processes. Here I use the pragmatist interpretation of aesthetic. That is why I think we have to come closer to the artistic field if we want to study the management processes. We have to combine case studies, hermeneutics and art criticism, and we will have to study the processes from within the process. We have to combine theory with case descriptions and develop hermeneutic interpretations. On this basis I think we can develop concepts connected to real life events.

What kind of conclusions could be made? It is worth trying to ask professional project managers to reflect whether there is an aesthetic feeling or experience occurring in project management and what modelling processes they use. This could produce basic descriptions or fragments of descriptions that help form an understanding of the subject, close to the real life understanding of the phenomena. Another issue is that this approach would produce concepts close to the tacit knowledge used, which would improve our thinking. It might give us a clue why some project managers are more skilful in their jobs. It might give also us new insight, how to teach project management.

References:

New York.
Open Architectural Competition for Lohja Main Library

ARCHITECTURAL COMPETITIONS IN FINLAND
1-2003

Published with Arkkitehti - The Finnish Architectural Review 1-2003

Publisher
The Finnish Association of Architects
Competition organiser
City of Lohja

Competition period
1.3.-31.5.2002

Competition results
1.10.2002

Number of entries
190

Competition jury, appointed by:
City of Lohja
Reijo Siltasaari, chairman of City Council (chairman of the jury)
Tellervo Kangas, member of City Council
Pekka Liimatainen, member of City Board and City Council
Teuvo Sarin, vice-member of City Board
Bror Ahlgren, head of education and cultural affairs
Martina Aminoff-Remes, library director
Leena Kihlman, town planning architect, architect SAFA
Heikki Rouvinen, head of town planning
Katariina Haigh (o.s. Ruokonen), architect SAFA

The Finnish Association of Architects
Marko Kivistö, architect SAFA
Erkki Partanen, architect SAFA

secretary of the jury
Katariina Haigh (o.s. Ruokonen), architect SAFA
competition assistant
Marjaana Ketonen

Open Architectural Competition for Lohja Main Library

Background
Lohja lies in the vicinity of the Helsinki Metropolitan Area, 55 km west of the capital. The present main library of Lohja, dating from 1961, does not any more fulfil the requirements of modern library services. The function of the Lohja City Library is to form a versatile service network that enables the residents of Lohja to acquire information, promotes learning and contributes to their recreational activities. The execution of construction drawings will commence immediately after the competition results have been determined.

Competition site
The competition site in the centre of Lohja, by the medieval stone church, is one of the prime sites of the town. Apart from the Church of St Lawrence, the context is dominated by cultural, educational and administrative buildings. The only existing structure on the site
is a small storage building. Other buildings of the town block include a protected 1930s Functionalist building, the Luoma House, at the western side; a 1950s health centre and a 1930s timber building, housing the Lintula Day Care Centre, in the east, and two residential blocks at the southern edge, one dating from the 1960s and the other from the 1920s.

**Competition objectives**
The goal of the competition was to find a scheme combining architectural excellence, functionality and financial viability that would complement the townscape and provide a feasible basis for further development. The building should be both inviting and representative of its status in the townscape. Particular attention was to be paid to the needs of elderly library users and children as well as the requirements of the modern information society.

**Design brief**
The new library building was to be planned as an integral part of the area’s “cultural campus”. The old stone church nearby brings a strong historical dimension to the location. Consideration of the context was one of the most challenging tasks of the competition. Functional flexibility and adaptability was also among principal design criteria. The projected net floor area is 2,686 m².

The library is, above all, a place of meeting. It is a centre for learning and local information services. The library space was to be organised into encounter, service and study zones. Future information sources will be increasingly interactive and customers must have a possibility to handle and work on their own material in the library.

Areas of particular attention included:
– townscape and architectural features of the scheme (quality of architectural design, interaction with context, organisation of site and supplementing the existing townscape)
– viability (scheme's potential for further development and functional adaptability)
– economy over life span (building system and construction, maintenance and operating costs)

**General assessment**
The submitted entries provided a diverse range of possible solutions. The best entries even included several alternative and feasible solutions for the relatively complex contextual framework. The overall standard of the competition was high despite the intricacy of the design task. The entries showed that the required room programme could be accommodated on the competition site. However, finding a balance between the varied aspects of the townscape was difficult.

**Alternative solution types**
The entries for the Lohja Main Library could be divided into three main categories. Most of the schemes where the building is organised along the street axes were two-storied. In the best proposals the authors had succeeded in creating a new spatial centre of gravity, an entrance square, on the side of Karstuntie road that emphasised the status of the new library within the urban fabric. Another basic type was a 2–3-storied block that was freely situated on the site. In many entries the scale of the new building was successfully adapted to the other buildings in the block. The alignment of the new light traffic route through the block was successful in these entries.
The third basic solution was a relatively compact 3 storied “building in the park” organised about a central space. The assets of these entries were the clarity of interior spaces despite of the fact that activities were located on several levels. In the best proposals the size and the orientation of the new building was such that even the smaller buildings in the block retained their own identity and park-like surroundings. In these entries the light traffic route could also be successfully realised.

In addition to these three basic types there were also a considerable number of differing solutions. Some entries included a new park or a square on the Karstuntie side. Although these alternative schemes were interesting, the jury did not consider them to have potential for further development as the demands on the yards of the existing residential blocks were excessive.

Lighting
Tried and tested structural solutions were generally employed to ensure sufficient daylight. In deep plan buildings this had been solved appropriately with rooflights. An eastward opening alternative with views of the church was one of the most successful. In entries with westward views the problems of evening sunlight had usually been overcome by a system of blinds. The best proposals had succeeded in creating an interior atmosphere that is conducive to concentration while bringing the surrounding cultural landscape as part of the new main library.

Spatial organisation
Spatially the entries represented a wide spectrum of trends of modern library building. In the most frequent and traditional solution public spaces had been divided onto two main levels. Locating most of these spaces on the first level usually resulted in the character of a large “lobby space”. Horizontal links were long and the spatial character lacked zest. Organising the spaces more equally on two floors facilitated the spatial aspect of planning. Reflecting the building’s overall character in the interior as well as the visual and functional connection between floor levels were considered paramount. Solutions organised on three levels were spatially slightly easier to handle than the former models. A compact mass and spatial organisation about a central space was one way to create a heart for the building that would help orientation within.

Recommendation for further action
The jury made a unanimous decision to recommend that further development be based on the winning entry “Johdanto” with regard to further design instructions and the design commission be awarded to the author of the entry.

Awarded entries

1st prize
EUR 24 400
entry no 78 "Johdanto"
author: Ilmari Lahdelma, architect SAFA
The entry takes up the site successfully. The scheme works as an individual object in the townscape, yet responds to the context with subtle aspects of its orientation. The facades of the building create a dialogue with its surroundings. Excellent solutions have been found to the questions of scale within the town block. The building is in harmony with the perimeter blocks of residential buildings as well as with surrounding buildings with more diminutive scale. The jovial lanterns on the roof are a vivid detail on the outside and a humorous feature of the interior, too.

The building has a clear status of a civic building in the townscape. Its architecture respects the adjacent Luoma House and its relationship with the residential blocks allows both elements to have their own “breathing space”. Openings towards the town centre and the church are imaginative and appropriately located. The red brick cladding is in harmony with the surrounding buildings. The elevational composition is both controlled and vivid, and the entrance invites people into the building. The organization of spaces is logical and the building well-functioning; interior views even dramatic.

2nd prize
EUR 18 300
entry no 7 "Arkki" (1)
authors:
Asmo Jaaksi, architect SAFA
Teemu Kurkela, architect SAFA
Samuli Miettinen, architect SAFA
Juha Mäki-Jylilä, architect SAFA
Arkkitehtitoimisto JKMM Oy
assistants:
Johanna Kallioniemi, student of arch.
Teemu Toivio, student of arch.
structures: Juha Kattelus, M.Sc.(Eng.)
scale model: Seppo Rajakoski

A handsome and vigorous scheme combining features of functional organization and the exterior in a dramatic manner. The outline of the building is forceful enough to become an integrating element of the area, a new centre of gravity within the town block. Its distinct and carefully considered sculptural form directs the eye towards the church. The light traffic route through the town block is appropriately situated. The independent figure of the building allows the smaller buildings to be perceived as a separate entity, occupying their own territory. The elevational composition is expertly realized and complements the character of the scheme, but the proposed cladding material (zinc sheeting) is rather severe.

The library’s public spaces are organized on two main floors, above which are work facilities
of library staff. The organization and interrelationships of spaces are successful. Library users are subtly directed to the main entrance and central hall from the Karstuntie side. The second floor spaces are strongly directed towards the park and the church. This entry among the most successful in making these views a handsome feature of the interior. Despite of the slightly sketchy presentation, the scheme expresses strong architectural vision.

3rd prize
EUR 12 200
entry no 82 "Halo"
author:
Petri Saarelainen, student of arch.

A decisively executed scheme of high architectural standard. The compact scheme is a successful addition to the existing urban fabric. The entrance fronting Karstuntie is handsome and the proposed exterior materials are well-suited to the existing buildings and park-like context. The scale of the building creates a mediating element between the Lohjanlinna residential block and the Luoma House. Elevations are carefully composed and informal, complementing the character of the scheme.

Spaces are aptly organized about a central space that form the heart of the building. Different departments are logically organized on two floors, the third level being occupied by administrative and other staff facilities. Handling of the site is excessively dictated by service activities. The required option for an underground car park has not been indicated. The overall execution of the scheme is skilful and carefully thought out.

1st purchase
EUR 6 100
entry no 81 "Nide" (3)
authors:
Rainer Mahlamäki, professor, architect SAFA
Susanna Pietikäinen, student of arch.
Arkkitehtitoimisto Lahdelma & Mahlamäki Oy
assistant:
Tarja Suvisto, B.Sc.(Arch.)
Pia Rantanen, student of arch.
Samuli Sallinen, student of arch.
Riitta Id, architect
Mari Jokela, architect
scale model: Seppo Rajakoski

The library building has been conceived as a block-like object at the centre of the site. The main mass is subdivided by smaller interlocking masses, which bear reference to the tall firewall of the Lohjanlinna residential block, but the relationship remains vague. The scheme is inspired by the locality and a romantic notion of the town’s industrial history – and successfully so. The outline of the building does not refer too directly to any specific
aspect of its context and it has an unmistakable status of the civic building. Its relationship with the surrounding buildings is mainly in balance. The Luoma House has sufficient space about it within the block which is also complemented by the red brick facades of the new library. The layout of the building is intelligible. The sloping northlights give a beautiful light to the upper floor. The interior is characterized by open halls, but would have benefited from additional three-dimensionality. Public spaces open handsomely towards the Church of St. Lawrence. The handling of the elevations represents careful and vivid modern brick architecture.

2. Lunastus / 2nd purchase
EUR 6 100
entry no 150 ”Keidas”
authors:
Claudia Auer, architect SAFA
Niklas Sandås, architect SAFA
Auer & Sandås arkkitehdit Oy
experts:
Jaakko Hamari, M.Sc.(Eng.), Ins.tsto Rovasuunnittelu Oy (structures)
Eeva Byman, architect SAFA, Maisema-arkkitehdit Byman & Ruokonen Oy
scale model: Seppo Rajakoski

The jovial crawling mass of the scheme continues the existing elements of a perimeter block. The principal mass consists of a single-storey hall, while the taller part forms an element about which the Karstuntie-side masses are organized to create a more unified street elevation. Opening up pedestrian routes to the “campus area” is hindered by the one-storey solution. The rigorously dynamic massing is one of the entry’s principal merits. The building can be seen as an independent object within the urban fabric while it also continues the perimeter block theme in an inventive way. Sloping roofs have been utilized to find an appropriate scale mediating between the Luoma House and the residential blocks. Different functions are expertly organized and orientation within the building is easy. Despite of the change of level, the interior experience is hampered by its “lobby space” character. Views from the building open mainly towards the interior of the block. The glazed concrete surface of the exterior conflict unhappily with the surroundings.

honorary mention
entry no 94 ”Kirjapuutarha”
authors:
Kimmo Friman, architect SAFA
Esa Laaksonen, architect SAFA
Sari Nieminen, architect SAFA
Arkkitehdit FLN Oy
assistants:
Max Hartman, student of arch.
Tatu Pärssinen, student of arch.
scale model: Matti Kangaspuro
A vigorous and carefully studied scheme. The sculptural simplicity has been impressively carried through the entire proposal. The building’s scale, especially in relation to the Luoma House, leaves much to be hoped for. The elevational composition and materials complement the chosen design approach. The proposed “book garden” running through the plot is one of the most successful solutions introduced in the competition. Different groups of spaces are appropriately organized, however, placing them on three floors was considered undesirable for reasons of supervision. The entry includes vivid spatial sequences and views towards the church have been utilized to the full.

honorary mention
entry no 105 “Palapeli”
author:
Aaro Arto, architect SAFA
Arkkiitehtiyöhuone Artto Palo Rossi Tikka Oy
assistant:
Elina Ahdeoja, architect

The entry’s principal merits lie in its contribution to the surrounding urban fabric. The varying scales of the context have been inter-linked into an intelligible and unified town block by the pavilion-like massing of the new building. The ground level comprises two inter-linked functional zones. Massing of the Karstuntie side has integrity and directs visitors towards the inviting main entrance. Diminishing scale towards the smaller buildings of the block work extremely well. Overall massing and openings in the elevations are stylishly executed. The scheme does not become self-serving in its elegance but comprises a vivid series of internal and external spaces. The organization of functions is logical and the zone divisions are successful. Workspaces can accommodate varying uses.

honorary mention
entry no 162 “Kirjokansi” (3)
author:
Miikka Hirsimäki, architect SAFA
assistant:
Marcus Upmeier, architect SAFA

The entry is a refreshing alternative to modern-day trends, representing lasting, even classical architectural language. Smaller masses of varying scale on the Karstuntien side are linked to the triangular main mass. The scheme successfully continues the perimeter block theme of the residential blocks, creates an entrance square to the building and changes scale in respect of the Luoma House. The main entrance and the adjoining square are inviting. The layout appears thoroughly considered and expertly realized. Functions are aptly organized. Both public and staff areas are spatially interesting. The views towards the Church of St. Lawrence have been commendably utilized.

Honorary mention
entry no 185 “Akatemia”
An intriguing small-scale scheme consisting of two parts. The L-shaped part delineates the entrance square and acts as a linking element between the differing scales of the Lohjanlinna residential block and the Luoma House. The interior spaces of the L-shaped mass open beautifully towards the square, which in turn awkwardly opens towards the yard of the Lohjanlinna residential block. The other, more rectangular mass forms an appropriate pair to the L-shaped mass. This division complements the room program and the building meets well the functional requirements. The pivotal part skillfully gathers circulation paths from all directions. Service activities have been organized in an exemplary manner. The area designated for adults has unfortunately been divided onto two floors. The elevations have been carefully thought out and the illustrations support the humane and harmonious overall approach. All in all, a skilfully executed and presented scheme.