FORWARDS AND BACKWARDS: DOCUMENTATION IN THE PRACTICE OF DESIGN AND RESEARCH

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ABSTRACT:

Concepts of document and documentation are central to the practice of design as well as to that of research. Still, these concepts have a distinctly different meaning within the two traditions; a difference that demonstrates obvious, basic differences between design practice and research. Nevertheless, the design student of today and professional designer of tomorrow are still expected to combine academic research methods and artistic practice in design projects and thus consequently to develop tactics by means of which he/she can handle the conflicting complexity which is implied in the concept and practice of document and documentation. The present paper seeks to identify and develop a theoretical framework by means of which design research and design practice may understand and resolve this conflicting complexity. The aim is to develop a conceptual field that may contribute to the methodology and vocabulary of design practice as well as that of research. The paper seeks to lay out this field by means of an instructive model.

1. INTRODUCTION: A RENDEZ-VOUS OF ACADEMIC TRADITIONS

> 'Life can only be understood backwards; but it must be lived forwards.'
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> - Søren Kierkegaard

What happens if one takes an institution like Denmark's Design School in Copenhagen—with its roots in traditions of craft and apprenticeship—and initiates a complicated and time-demanding process of change with the aim of developing into an accredited design university; an institution with graduate and post-graduate programs in design which should be based on research with certain demands as to appropriate standards in academic orientation and the production of scientific knowledge? Moreover, what happens if one gathers a group consisting of design researchers and design teachers with a background in artistic practice in order to collectively reflect in details on what *documentation* is all about; documentation that is in research as well as in design practice? What characterises the function of documentation in—the very different—practices of research and design? And how do the two functions meet in a design project? May the concepts of document and documentation in design theory and practice be integrated conceptually? After all, we expect the students to be able to integrate the two practically in their design projects, and we believe firmly, that the most competitive and innovative designers of tomorrow will be those who are able to combine theory and practice.

In our case, this self-given assignment developed into a fascinating process which set off from defining concepts on a very basic level. Often, research and reflection are taken for self-evident phenomena that need no further explanation. Also when it comes to the self-perception of given research practices, one often sees a tendency to naturalise, that is to take such self-perception as a constitutive feature of the very idea of being a designer and doing research. The perception of what research, design practice, and documentation thus *just are* is obviously tied up with given scholarly cultures. As far as research is concerned, these cultures find themselves rooted at the universities, the polytechnics, and the applied research institutions. These cultures are characterised by certain expectations as to validity, argumentation, a consistent system of references to scientific knowledge, etc., and typically balanced to specific characteristics pertaining to individual scholarly disciplines. It goes without saying that one may find considerable differences between research practices performed by scientists and humanities scholars, and evidently one may identify differences as well in respect of what constitutes a proper law studies thesis and a philosophical doctoral thesis. Despite the differences, however, it is still rather easy to come to terms among traditional scholarly disciplines in respect of basic expectations to scientific work. However, what happens if one also includes other academic disciplines than the ones belonging to the universities? May one still agree upon a common definition of research proper and excellent research practice? And if so, how may one characterise such research if it does not exclusively make use of the academic methods that are normative to the universities? These questions are crucial if one seeks to establish a research practice within the field of design; a field whose *ethos* and object of study is the practice of giving form to matter and

to solve practical problems and which is less concerned with the standards of established academic methods like the ones that one may find in the humanities and the social sciences.

These were the questions that we, a group of practicing designers as well as research scholars, found stimulating and challenging to discuss systematically. This paper presents moments of this discussion; moments that reflect the main complex issues of notions of documentation in the practices of design and research. The aim of the paper is thus to identify and develop a common complexity pertaining to the design project and to the concepts of document and documentation. This complexity is laid out in terms of 1) the formal versus the semantic dimension of design and research, 2) the reflective practice in Donald Schön, 3) general discourses of future in planning and design, and their pictorial genres that may be found at play in documentation, and 4) a "third place"; a term that we suggest to capture a common conceptual foundation of documentation that can accommodate scientific as well as artistic aspects of design practice. In the final part, this "third place" is laid out as a three-dimensional model that seeks to capture the interrelation of traditional dominant dichotomies of design practice, namely that of form and content, and that of product and process. The paper thus concludes that documents and documentation in design practice should be seen as a key to the complex epistemic situation that the authors' home institution currently finds itself in; a situation which is given due to the radical transition from the academic traditions of art, craft, apprenticeship, and the close relation to specific design profession and industries—to a modern design college based on the integration of academic method, the generalised (strategic) concept of design, the EU standards of higher education, and liberal economic policies of national government.

2. DOCUMENTATION: FORWARDS AND BACKWARDS, FORM AND CONTENT

To document something is to make things evident, to provide an evidence of something. The Oxford Concise Dictionary defines the term "document" as 'Things, esp. deed, writing, or inscription, that furnishes evidence …' "Document" stems from Latin *documentum*, which means 'proof, a teaching example',[1] viz. of Latin *docare.* A Danish dictionary ascertains *ad* article 'document' that '1. a material which is collected with the purpose to prove something or to provide a foundation for further research … 2. a description of a work which has been performed, e.g. a technical description of how a computer program functions.'[2] The two items in the latter dictionary's article point at what one could designate as an analytic, research-oriented practice and a design-oriented practice of documentation respectively. The research-oriented concept of document consists in providing empirical evidence for argumentation and judgment. The purpose of the documentation is thus to demonstrate that the preconditions of the argument corresponds to actual facts.

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[1] Our translation, Gyldendals Fremmedordbog, 7th Ed., Copenhagen: 1977.
[2] Our translation, Politikens Nudansk Ordbog med etymologi. Copenhagen: Politiken.

The design-oriented use of the term "documentation", on the other hand, applies to the substantiation of how a designer has reached a given result in his or her work (e.g., a concept outline, a product, a service, etc. As it may appear, one may identify some resemblances as well as some differences in respect of how documentation is perceived in the two practices. Whereas the document in research practices typically founds an argument without forming part of it, documents in design practice are typically advanced to form part of a design "argument", that is, substantiation for the designer's choices during the design process. In research, on the other hand, documentation is presented separately as a note, an enclosure, or a reference to an archive—if at all—to the written presentation of a scientific argument. In design practice, documentation should be integrated in the presentation of a result. This divergence is related to the fact that the aims of design and research are fundamentally different, and that researchers make use of verbal language, pictorial material, etc. in a very different way than designers do. The aim of research is to develop scientific knowledge; researchers seek to lay out plausible argumentations and interpretations of actual facts on given conditions. Designers seek to "develop form" (in Danish, "at give form")—to products, services, organisations, etc. Roughly speaking, whereas research consists in "semantisation", to produce *content*, design is about producing *form*, that is, to develop the formal potential in a given material. Sculptor Nathan Cabot Hale, who taught at the Pratt Institute, finds that artists are fundamentally not occupied with words, verbal language: 'when we try to understand the lines that exist in a landscape, we draw these lines, not say them with words.' (Hale 1972: 15) Hale continues: When I talk about your understanding the abstract elements of something, I mean that you are able to draw its line, form, patterns, and all of the features that we artists communicate without words. … It is not important to name these things or to tell what they do in words; we do all of our telling by drawing.' (Ibid.) Whereas research essentially consists in being capable of representing, constructing arguments, and pursuing a thesis by means of verbal language and with reference to certain rules and conditions, one may say that design—in a very general sense—also is about mastering a "language"; that may be verbal language as in poetry and prose, drawing as in Hale's case (and indeed in the case of most designers), in rock, or still other matters. This is of course a crude generalisation—many researchers would rather avoid writing altogether and just demonstrate a pictorial documentation that can positively make evident a finding or a discovery. However, if such practice of scientific documentation in would be valid at all, one should still speak of these cases as instances of (implied) semantisation. Obviously, such pictorial material would have to be perceived and interpreted in a distinct manner for the picture to have any scientific value and hence status as a scientific document. Still, also in traditional academic research, the scientific public more or less implicitly expects that the author provides information as to how a result has been obtained, on which conditions, with which accuracy in the method applied, and whether alternative interpretations of the result may be of interest to the initial problem and its conclusions. In other words, researchers should master writing when making findings public before the research audience.

It goes without saying that, today, the semantic and conceptual dimension of design should be considered equally important as the formal, functional, and aesthetic one. This has inevitably some further

complications as to the practice of documentation in design. Designers are often expected not only to develop form but also to argue by means of verbal language in order to partake in the strategic and organisational contexts in which they form part. Accordingly, the formal as well as the semantic dimension of the design process should be manifest in the substantiation of a given result of a design process. However, this leads to further complications as to the practice of documentation. Whereas the practice of documentation and argumentation is founded on globally recognized methods and standards, argumentation concerning the development of form and formal properties in design cannot rely on a similar foundation. It is true that certain attempts have been made to advance general methods of the development of formal properties, e.g. by Vita Riis (Engholm 2001: 176-216). This contribution does contain sensible considerations on this issue, but it is still dominated by the scholarly verbal traditions of the universities. In other words, this attempt demonstrates a notion of what one may designate as a "backwards" oriented documentation. An institution which primarily is devoted to design practice—and especially so to the development of form—needs "forwards" oriented methods by means of which the designer may construct subjectively founded arguments that are tied up with the formal properties of matter. In this sense, concepts of backwards and forwards oriented documentation may be boiled down to whether documentation is integrated in and forms part of or, conversely, is separated from argumentation in the way we suggest above. To imagine documentation being completely excluded from the practice of argumentation is absurd. In this sense, design is still primarily about the development of form—recognising that the semantic dimension of this enterprise is equally important. Documentation forms part strategically as well as practically in design processes, that is, in terms of programs, plans, experimentation, etc. Documentation is thus an integral part of the practice of argumentation in design.

Documentation may be applied in order to substantiate for choices made during the design process; choices such as in terms of form, colour, function, address, etc., and which are evident from the presented end result of the process. Such practice of documentation is still primarily of semantic character and is typically associated with what is what is referred to as the "research" of a design project. This action is still a predominantly objective, backwards oriented action. Still, the development of form could in such instance have been realized differently with the same formal properties and elements of colour. Formal choices made in the early, developmental stages of the design process are often based on what is coined as experimentation. Experiment leads to a set of possible choices that are given with reference to the framework of the overall task and the semantic dimension of the project. In this instance, these choices are obviously based on the designer's "visual language", that is the knowledge of and the ability to master practically the relevant material, formal properties, techniques, etc. Choices based on experiment are a predominantly subjective albeit also strategic type of action which is forwards oriented. Still, forwards oriented practices of documentation may also lend themselves to a backwards oriented practice where choices made may form part of a narrative in the past tense. In other words, design practice based systematically on experiment and choice may thus both form part of a backwards and a forwards practice of

documentation, and indeed both at the same time. Such integration of perspectives makes out an ideal combination of analysis and synthesis in the design process.

The backwards oriented practice of documentation represents and provides evidence for a result—or for a thesis, as the discipline of rhetoric has it. In the academic disciplines of research, it is usually implicitly assumed that (appropriate) theories and methods found the practice of documentation. In design practice, the backwards oriented practice of documentation sets off from a focus on the product as the end result of the design process. The forwards oriented process of documentation, on the other hand, pertains to the design process in its progression. The result, a (visual) suggestion or projection of a product should be an integrated outcome of this process. What is implied here is that the result has actually been developed by the methods used in the project. The forwards oriented practice of documentation thus has a strong impetus on method.

3. DOCUMENTATION AND REFLECTIVE PRACTICE

One of the scholars that has set the agenda as to the integration of the analytic moment in design practice, that is the forwards and the backwards orientation in design processes, is Donald A. Schön, whose book, *The Reflective Practitioner: How Professionals Think in Action* (2001) convincingly identifies systematic reflection on the design process as the most important development of the designer's role and professional competences. Schön's epistemology of practice may be seen as a reaction to the incompleteness he finds in the technical rationality's perception of professional knowledge. This work seeks to advance a theory on how the designer's practical competences meet divergent situations that are characterised by the intuitive, subjective processes that designers ventures into; typically that is in unique moments, moments of uncertainty. Reflective practice is a combination of the performance of a practice and the reflection on a practice; a combination that that will develop professional competencies in a continuous process. The reflective practitioner knows, he/she is given a unique insight, and he/she applies this experience as knowledge-in-action. This knowledge-in-action may be seen as more or less identical with Michael Polanyi's (1967) notion of tacit knowledge, which Schön also explicitly addresses. However, Schön makes one step further in the disclosure of this dimension of the design process by recognising the importance of reflection and its dialogical relation to practice. This moment of reflection-in-action should be seen as included or integrated in knowledge-in-action—in the sense that designer already in the very moment of designing, of developing form, reflects actively on the creative situation and possibly make necessary adjustments. To Schön, this is an important point in his epistemology of practice since reflection-in-action in this sense may facilitate an integration of the technical project tradition with its focus on specificity and problem solving into a more general problem-oriented project framework based on reflective inquiry. Reflection-in-action may integrate may facilitate research with the artistic practice of operating in specific contexts.

Schön's approach is applicable to the description of the complex, innovative practice of developing form; a practice which continuously will solve new types of problems in a dialogical process with specific traditions and general academic method (cf. Schön, 2001: 119,). The design process is characterized by a number of choices; of selections as well as of rejections. In this dialogical process with the matter in question unexpected answers typically emerge; answers that should be met by an experienced and knowing practitioner. The reflective practitioner must possess the ability to listen, meet, and pursue these answers and cues further—possibly in an entirely different context or in another stage of a process—but the analysis and the systematic reflection on the performed action have demarcated a larger complex of investigation and sown a seed that may develop and flourish on a later stage. Schön refers to the notion of a sequence of learning in which the challenging moment is made out by the given resistance in the process; a resistance which is tied up by the fact that the phenomena seem to change in the course of investigation. What were seen as basic and reliable becomes uncertain, floating, and complex.

Whereas the aim of Schön's work obviously is to strengthen the professional competences and identity by the appreciation of the specific reflection of process that pertains to the modern designer, one may still challenge Schön in respect of how clear he is on the issue of documentation and argumentation in the design process. In other words, if reflection-on-action should lead to the foundation of the designer's analysis and argumentation, the designer should be expected to make explicit the moment on reflection-on-action by means of documentation and present it before an audience of colleagues.

The design process is by nature continuously explorative, putting possible solutions on trial and developing hypotheses along the way. The relation between the inquiring designer and the complex situation of practice should in this sense be seen as transactional. This idea challenges in more ways than one with the basic dogma of the experiment which is supposed to be controlled and objective. Still, reflection-on-action has assumed a central position in the modern, general design process, in which the knowledge applied continuously, will be reformulated and developed in a dialogical process. The designer documents and substantiates his/her work in text, by means of sketches, and in actual material in a forwards oriented process of documentation. This documentation forms out the empirical field of the project, which along with the constructed theoretical foundation, analyses and reflection in the process leads to the argument. In this sense, the document becomes the pivot point for the research-based tradition of tomorrow; a tradition where the development of new knowledge and sharing of existing knowledge is seen as crucial.

4. THE PICTURE IN THE REFLECTIVE PRACTICE OF DOCUMENTATION

Another way to approach the complex relationship between the forward and backward orientation in the reflective practice of documentation and argumentation in design is to map out the possibilities of the very "language" of argumentation. These possibilities does not solely apply to the way a finalised design project

is laid out before colleagues and clients but also to the language that is used in other to support the design process itself. Let us concentrate for a while on text and image, and on the relationship between the two modes of expression since those are the most commonly used by practicing designers (and obviously also by practicing researchers) and in the professional strategic and organisational contexts that designers should oblige to in their work.

The relationship between text and image in the reflective practice of documentation seems to some extent to be characterised by the fact that the choice of pictorial genre generally alters during the design process. Whereas the final documentation of process and product typically is based on a pictorial medium of documentation that present artefacts and actual facts "as they really are", that is, positively and conveniently—and, consequently, photographically—one typically finds other pictorial genres and forms applies earlier in the design process, e.g. sketches, drawn outlines and similar kinds of pictorial material that is used in order to visualise a concept or elements from a research phase; pictures and sketches that forms part of the very process of developing form, patterns, etc. to a material, or a pictorial material that is supposed to have an instructive function in the context of the production of the designed object (e.g. plans, instructions, isometries, and the like). Moreover, one often finds that designed products are accompanied with pictures after their production, that is, when introduced before a market and even when acquired and used in everyday life. In this sense one may identify various pictorial genres that are related to the various stages of a design process—and thus even to the material culture of designed objects. The use of such genres seem to alter over time—from initial research and concept development to the documentation of the development of form and finally to the presentation, sale, and use of the final product. Moreover does one note that the use of pictorial genre alters between an orientation towards future (i.e. visualising ideas and products, giving instruction as to their production, suggesting actual use and the values to be associated by use) and towards past (i.e. registration of user's everyday life in analyses preceding the design process, documentation of the design process and the resulting product, the actual use of a product in everyday life).

Pictures that are orientated towards the past is typically associated with concepts of representation ("re-presentation" literally means, "to present again", whereas pictures that are orientated towards the future are fundamentally different due to their projective, or suggestive nature. Whereas the study of pictures may draw on well-established methods of analysis as far as pictorial representation is concerned, projective pictures has been a more rare object of study, that is at least as concerns the study of pictures in the humanities. In the field of management, planning, and architecture, where projective means of expression are more widespread, analytic approaches to pictures seem not to have been important to research so far either. No consistent methods of analysis of projective pictures is thus to be found in this field. However, in Swedish futurist and landscape studies scholar Lars Emmelin's work one finds a concept of future discourses which designates the discursive construction of future by means of text and images. Subsequently, in the field of landscape architecture—or "landscape design", as this discipline is called in some parts of the world—Emmelin (2000) distinguishes between four different types of future discourses:

- Prognoses

- Plans

- Visions

- Scenarios

These discourses of future may be associated with four respective pictorial genres which seem to dominate the use of pictorial means of expression in the field of physical planning (Johansson, 2006). Whereas prognoses and plans seek to present planned physical change in landscapes as positively realistic as possible (perceptually realistic in prognoses, pragmatically instructive geometrically realistic and pragmatically instructive in plans), visions and scenarios typically seek to make manifest the values on which a landscape is based. Scenarios are still to be distinguished from visions by intention in the sense that whereas visions should suggest the aim of a project as vividly as possible (and thus typically also as suggestive and seductive as possible), the genre of scenario is generally applied not in order to create consensus among stakeholders but to challenge them and to induce an analytical approach to future. The, per definition, plural character of scenarios intends to leave the audience with the question of which direction is desirable in planning and change. These pictorial genres of future could as well be identified as genres pertaining to the process of design. However, one should modify these so that they correspond specifically to design processes. Moreover is it necessary also to include non-projective, i.e. representative genres of documentation such as

- Process documentation

- Product documentation

Whereas process documentation typically relates strictly to the temporal unfolding of the design process and thus concentrates on choices (i.e. roads chosen, roads abandoned), the application of methods and the actual development of form, product documentation would typically be prepared with reference to an evaluation where the visual material or the product itself may be compared with what was originally intended (and thus expressed by means of plans and prognoses). Finally, in this taxonomy one should as mentioned also include genres of market introduction, e.g.

- Advertisement

- Manual

In a sense, the genre of advertisement shares properties with that of the vision since advertisements typically consist in presenting, not primarily the content, looks, and purpose of a given product but its use

and its contribution to the consumer and the users identity. In this sense, advertisements and visions are both about values. In the same way, manuals shares properties with that of the plan, which is instructive as well; manuals seek to guide the user how to make use of the product.. Whereas the product documenting pictorial genres thus are temporally regressive ("discourses of past"), the market introductory genres—*in casu*: advertisement and manual—to point ahead as a special category of discourses of future; they depict future consumption and application.

Comparing these genres it is striking to notice that they thus seem to match each others in pairs across the categories (i.e. vision-advertisement, plan-manual, etc.) and refer to design as value, design as production, and design as use respectively. Moreover is it characteristic that the pictorial genres make use of very different means of expression. Whereas the documenting, regressive discourses ("discourses of past") typically are photographic (incl. analytic scientific photography that may show, say, the thickness of a ceramic cup), discourses of future are often more abstract. A concept for a product may for instance be depicted in a truthful way by a very few, but very precise lines drawn in hand on a piece of paper, as in the case of the original sketch of the ARoS Århus Museum of Art, Denmark, by Schmidt, Hammer & Lassen Architects (Figure 1)
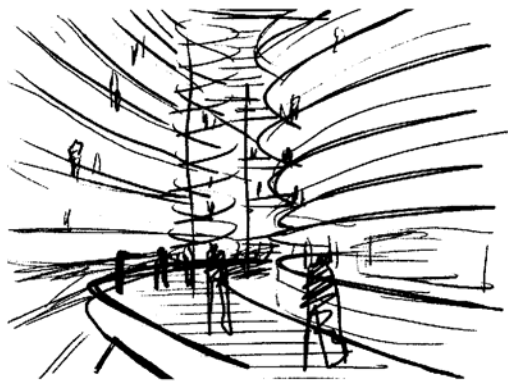

Figure 1: Schmidt, Hammer & Lassen Architects: Original sketch for the ARoS Århus Museum of Art, Århus, Denmark.

Figure 2: Schmidt, Hammer & Lassen Architects: Interior of ARoS Århus Museum of Art, Århus, Denmark.

In the same way, architect Dennis Lund has demonstrated that the most precise, i.e. truthful visualization of a construction like the Vejle Fiord Bridge in Denmark would consist of a few vertical and horizontal lines that demonstrate the elegant way this bridge forms part of and integrate its surrounding environment; the fjord valley and the flat plains above.[3] Plans and manuals are often geometric and diagrammatic, and prognoses would typically be perceptually realistic but not necessarily a photographic expression. The visualizations of architect Henning Larsen's new opera for Copenhagen that was prepared by the Danish Royal Academy of Fine Arts' school of Architecture in order to analyse and present the visual impact of the planned construction before the public thus underlined the plastic expression of the building in relation to the horizon and the local built environment. What were important were volumes, not surfaces.

5. DISCUSSION: A "THIRD PLACE"?

The immediate supposition of this work has been that documentation in design practice in some respect separates itself from a traditional scientific one. This comes as no surprise as most professional traditions ideally should have its own congenial discourse and mode of expression which supports a given content in the most apt way. Scientific documentation is thus characterised by its attempt first and foremost to provide an objective, coherent, and verifiable mode of presentation and argumentation. Moreover is it characteristic that documentation is backwards oriented and seeks to map out a subject matter with a linear structure.

It is typically held that reflection in the field of design practice is a visual, subjective, and fundamentally a "tacit" or silent kind of knowledge. Positions like these supports the naturalisation of the idea that universities is identical with written discourse, systematic reflection and argumentation, and that design academies equal visual and typically unconscious "reflection". Perhaps it really is so; or rather: perhaps the world has been like this. But this is not necessarily a law of nature, and currently, things are

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[3] Dennis Lund: Oral presentation at the seminar on geographic information systems (GIS) and communication held by the Danish forest and landscape research Institute, Ministry of Environment and Energy, Schæffergaarden, Copenhagen November 22nd, 1999.

certainly changing. The culture of documentation in the practice of design must be developed with reference to the specific complexity of its subject matter. Should this complexity be mapped out and visualised it could be by means of a three-dimensional model that makes it possible to lay out process in the same field as product, form in the same field as content, and indeed the progressive, "forwards" orientation in design practice in the same field as the regressive, "backwards" orientation. This model would set off from these dichotomies but should not confine itself to any of them individually since its ambition is to merge traditions of academic research and artistic practice. It should include these dichotomies in terms of "both-and", not in terms of an "either-or". In the 1980ies, architect Peter Eisenman suggested that architecture should strive towards a post-Hegelian condition in which it should abandon the value structure based on dialectic oppositions; a string-jacket that maintains one's work within the confinement of a tradition-based ideology of form. Rather than reflecting on architectural form as something that unfolded itself between absolute conceptual oppositions such as form and function, representation and ground, and ornament and structure, where practice generally was given by an either-or, such reflection should assume a position that pushed, annihilated, or deconstructed the limits of traditional perception of form.

Eisenman's position—which to a large degree is influenced by French philosopher Jacques Derrida, the initiator of deconstruction as a philosophical project—seems possible to translate into the context of design. In continuation of the deconstructivist discourse it seems possible to think design practice's culture of documentation in terms of the in-betweens of traditional dichotomies and thus find a more fundamental field to base one's reflections. Reflection (and research on reflection) should thus explore these in-betweens; fields that did not make it necessary to distinguish fundamentally between e.g. a written and a visual discourse, whether something was determined by form or content, or whether documentation mapped out process or product. This should lead to a congenial discourse for reflection in the practice of design; a discourse that is based on artistic as well as scientific traditions and which should orient itself most fundamentally to such a third place.

We have sought to condensate our reflections on documentation in design practice in the model below. Its ambition is to separate itself from traditional three-dimensional Cartesian coordinate system where a position is given by statically by an either-or (Figure 3). The axes in the Cartesian coordinate system are locked together in a joint reference point, a point-zero, from which they extend with fixed orientation. The traditional coordinate system thus makes possible only one position, *the* position.
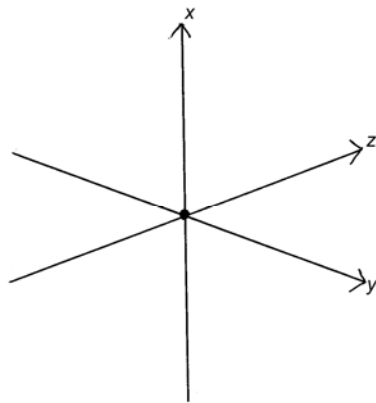
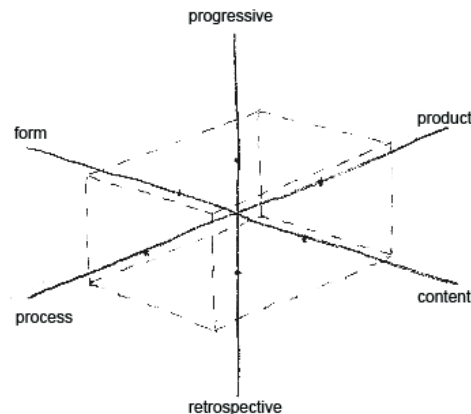Figure 3: The Cartesian coordinate system   Figure 4: A model of documentation in design practice

Our model of documentation in design practice also consists of three axes but these are not fixated to one joint reference point (Figure 4). As in the Cartesian model, the planes are fixed with reference to each others, but there is no point-zero. Instead it is possible to identify three points of departure on the axes that makes possible the mapping of a given focus of one's practice of documentation. On one axis one may thus identify whether one's work is orientated towards product or process. This corresponds to whether one is preoccupied with documentation with reference to the solution of a problem or a problem that has already been solved. In other words one may say that this axis is about the documentation of strategic disposition acquired during the work. On the second axis one may find oneself performing either a progressive or a regressive orientation in regards of one's design work. This translates into whether one's work is practice oriented or directed theoretically. On the third axis one may locate one's project in respect of whether one is oriented towards form or content. In this sense this axis maps out mastery of expression.

As a designer, locating oneself in the model, one would find one's work mapped out in terms of dynamic, integrated dichotomies. Also on each individual axes, the model suggests a dynamics between conceptually ideal poles, that is, a field of a "both-an". It should be noted that we do not consider our model as fully developed at this stage. What we seek is to map out a terrain for the exploration of the in-betweens of traditional dichotomies. The given version of our model features the representation of a box in the middle; a box which is supposed to demarcate the conceptual field that one should relate to when reflecting on own practice; a field that encapsulates a project trajectory setting off from an experimental (forwards) beginning and ending with the traditional backwards oriented reflection. By the beginning at the trajectory one would find oneself in the corner of the box where the forwards orientation, content, and process is prioritised; by the termination one has moved diagonally through the model to the corner, where the back-wards orientation, form, and product come to the fore.

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In the practice of design one could imagine finding oneself, or intentionally taking on other positions and trajectories than the one described above. This could be done with reference to a more comprehensive use of the discursive genres of future applied in the design process, e.g. prognoses, plans, visions, and scenarios. When the final solution has been developed, one should be able to identify one's choices in the model. In this manner, the model should assume the status of a general model of possible trajectories, that is, possible choices done in the course of the project. In this sense, documentation will be perceived fundamentally with reference to the third place and not only to the traditional dichotomies seen in isolation.

One of the fundamental problems pertaining to this synthesized position is probably what appears to be an impossibility to generalize reflection; it would always be relative to the particular case and its given trajectory in the general field. Reflections would in a sense always unfold its own empirical field, that is, an unfolding that would follow from one's particular product and one's particular choices and trajectories. This problem thus raises the question whether one can establish a methodology on this basis; a basis that fundamentally resists the essence of method ("the right road chosen", the normative dimension of methodology that thinks method in terms of consequence, reproducibility, and systematic. Today, this problem has become manifest indeed in a conflict that probably is widespread among design colleges with a post-graduate program since post-graduate learning is based usually on problem based learning; a pedagogical principle that typically confronts traditions based on apprenticeship and fixed professional roles.

6. FINAL REMARKS

The analyses performed by this essay is the result of an ongoing seminar in which academic staff members with backgrounds in both professional design practices as well as in research sought to identify and scrutinise fundamental scholarly problems of design practice and academic method. The outcome should not be seen as a model and a conceptual framework that is directly applicable to design practice. Rather, we see it as the outline of a complex conceptual field in which design and research practice may find a common foundation for exchanging ideas about the nature and practice of documentation. The authors thus invite practitioners as well as researchers to develop the basic model and concepts further with special reference to the planning and execution of actual design projects.

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