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Preface

I was intrigued by the very recently published book on Van Gogh's letters*. It took the three authors fifteen years of investigations, and the result is a gigantic oeuvre of six volumes. To have all the artist's words together with all those images (over 4,300 illustrations in total) is really spectacular. The letters reveal that Vincent van Gogh was not only a great artist but also a gifted writer. As surely and skillfully as he wielded his brush and draughtman's pen, so he found the words to say what most deeply concerned him as a human being and an artist.

When visiting the Van Gogh Museum in Amsterdam some time ago, where more than 120 original letters are shown alongside the works that Van Gogh was writing about, I was thinking about the world of research we're all investigating, questioning and discovering through the RTS-program.

Van Gogh was – we could say now – indeed researching his own painting-concepts through words and sketches. The sketches, included in the letters, served no artistic purpose but were made with the sole intention of showing Vincent's brother Theo and his other correspondents what the paintings or drawings he was working on or had completed actually looked like.

‘There are so many people, especially among our pals, who imagine that words are nothing. On the contrary, don't you think, it's as interesting and as difficult to say a thing well as to paint a thing.’

Vincent van Gogh to Emile Bernard, 19 April 1888

Van Gogh was defending his own findings! The documents of more than 120 years ago unite the artist and the letter writer. The letters can truly be seen as research “from within” the practice. And now, in 2010, we can enjoy fifteen years of academic research into the correspondence of Vincent Van Gogh.

I was intrigued, as I said, by this book because it mixes various intellectual “schools” of research. The work of the Van Gogh Museum and the Huygens Institute of the Royal Netherlands Academy of Arts and Sciences is situated in the continuum from scientific research to creative practice, and the discussed Mode 1 and Mode 2 of knowledge production are, in a certain sense, reversed here. The design research is literally related to both.

Together with Reflections 3, Reflections 7 and Reflections 9, this new issue is discussing research interests from various angles and thereby making another small contribution to international research developments in architecture and design. It will have an impact on the developing of the new Faculty of Architecture and Arts within the context of the K.U.Leuven. The field of artistic research and research by designing is one of the top three priorities of the Faculty.

I want to thank all the people involved in RTS (Research training Sessions) for their energy and efforts. I want to use this opportunity to thank Johan Verbeke, who’s influence on creating a beneficial context and climate towards artistic research within Sint-Lucas is undoubtfully great.

Dag Boutsen
Head of Sint-Lucas School of Architecture

*Vincent van Gogh - The Letters
Edited by Leo Jansen, Hans Luijten and Nienke Bakker.
Six hardback volumes, slipcased, 2,180 pages, over 4,300 illustrations.
Van Gogh Museum/Huygens Institute/Mercatorfonds, 2009
Co-editions: English (Thames & Hudson), French (Actes Sud) and Dutch (Amsterdam University Press)
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This paper is intended to be a record of a reflective exploration of themes and influences on research by designing. It includes a search for a formula and order, definition of key themes, visual expression of important statements and assumes the reader's interpretational freedom, enclosed within a designed frame.
IF WE KNEW WHAT IT WAS WE WERE DOING, IT WOULD NOT BE CALLED RESEARCH, WOULD IT?

- A. Einstein

ART HAS NEVER BEEN MADE WHILE THINKING OF ART.

- N. Stumpo
Truths are to be invented, not just discovered.

Creative work is a play. It is a free speculation using materials of one's chosen form.

- S. Nachmanowitch
entities must not be multiplied beyond necessity
- Ocham's razor

from the point of view of classical thought, transdisciplinarity appears absurd because it has no object
- H. Dunin-Wóyseth
the core characteristic of knowledge is the ability to recognise new elements of what is named via the name

- G. deZeeuw
The concept of dog does not bark
the concept of space is not space

— B. Tschumi
I knock at the stone's front door. It's only me, let me come in. I don't have a door says the stone

- W. Szymborska

de strength of a good design lies in ourselves and in our ability to perceive the world with both emotion and reason

- P. Zumthor
The outcome of any serious research can only be to make two questions grow when only one grew before.
- T. Veblen

Copy from one, it’s plagiarism; copy from two - it’s research.
- W. Mizner
Research is the process of going up alleys to see if they are blind.
- M. Bates

Basic research is what I am doing when I don't know what I am doing.
- W. von Braun
1. Serendipity

Sir Alexander Fleming (1881-1955) was a Scottish pharmacologist. In 1928, he was studying staphylococci and returned from holidays. On 3rd of September, before leaving he had stacked all his cultures of bacteria in the corner of his laboratory. Returning, he noticed that one of these was contaminated by a fungus and that the bacteria immediately surrounding it had been destroyed. After studying the situation he discovered penicillin, the biggest novelty of that time for which he obtained the Nobel Prize in Medicine in 1945.

On 28 January 1754 Horace Walpole wrote a letter to his friend Horace Mann, an Englishman then living in Florence:

“It was once when I read a silly fairy tale, called The Three Princes of Serendip: as their highnesses traveled, they were always making discoveries, by accidents and sagacity, of things which they were not in quest of: for instance, one of them discovered that a mule blind of the right eye had traveled the same road lately, because the grass was eaten only on the left side, where it was worse than on the right—now do you understand serendipity? One of the most remarkable instances of this accidental sagacity (for you must observe that no discovery of a thing you are looking for comes under this description) was of my Lord Shaftsbury, who happening to dine at Lord Chancellor Clarendon’s, found out the marriage of the Duke of York and Mrs. Hyde, by the respect with which her mother treated her at table.”

Since then the word serendipity disappeared for some time, reappearing in late 19th century and being included in the Concise Oxford English Dictionary in 1951.

The Cambridge online dictionary defines serendipity as “the lucky tendency to find interesting or valuable things by chance”. It is the process by which one accidentally stumbles upon something interesting, surprising or valuable while looking or searching for something completely different (as Sir Fleming did).

When creating projects architects and urban designers carefully study the local culture, context and people. At such moments they look for interesting details which could trigger their inspiration. Following the famous citation of Louis Pasteur “Dans les champs de l’observation le hasard ne favorise que les esprits préparés”, they are open and absorbing information and clues. The availability of clay, an old track, an old story or person, all can trigger creative ideas for the open-minded designer.

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1 http://www.sundaytimes.lk/050102/plus/11.html [accessed 14th December 2009]
2 “In the fields of observation chance favors only the prepared mind.”
2. Associative thinking

When problem solving, most people will connect to the familiar rational mental activities of collecting data, analyzing information and the use of analytical, logical and conceptual ways of thinking. However, since the earliest references to creativity, researchers have reported that this can involve a wide range of different mental processes which are very much different from the rational approach. Many names have been used for these processes which help creating novelty and surprising solutions: intuition, inspiration, unconscious processes, right-brain thinking, ... Their exact nature is still not very well understood.

Associative thinking is the way of developing free associations between subjects and concepts. It is the thinking process of making associations between a given subject and other pertinent factors without drawing on past or given experience. Part of the success of brainstorming lies in the fact that funny ideas generated by one person, evokes more ideas with other people. Associations and diversity help in creating novelty and unexpected solutions. Where the left part of our brain is connected to linear and logical thinking, the right side thinks holistic and poetic. It handles ambiguity and confusion. It handles music and is non-linear and connects multiple images.

The following story nicely illustrates how associative thinking works. “One afternoon, I sat down for a moment on a rock by the Aegean sea with a colleague, Alice, and we chatted about our work. When Alice asked me to tell her about image-work, I offered to demonstrate. I suggested that she allow an image to emerge that represented who she was or what she needed to know at that moment in her life. An image emerged of a tree in autumn, still full of fruit, but some of the leaves beginning to turn. The tree had a sacred feeling about it, a good deep ancient feeling. I asked her about the history of being that tree, and she remembered the time when she had been a sapling, and the tree had been more flexible, and she swayed with the wind.

I asked what was next for the tree. ‘I need’, Alice said, ‘to develop a scent so that the bees will come and I can pollinate.’ Then she laughed and called me all sorts of names, having suddenly realized that while she had started thinking of herself as a mythical, middle-aged being, she really wanted to develop her female scent, find a partner and have children. The whole experience took only a few stolen moments, but that evening, as I watched Alice dancing, her whole body language was different, and she looked ten years younger.”


3. Delight as Knowing

Within this context it is important to note that the process of discovery is often part of the delight. As Isaac Asimov once said: “The true delight is in the finding out rather than in the knowing.” The finding out forces us to explore, think, reconsider and at one moment, all aspects fit together (as in a puzzle) and at that moment we know we have reached a fundamental understanding.

In a very similar way, visiting the Chapel of Notre Dame du Haut of Le Corbusier or the Bruder Klaus Field Chapel by Peter Zumthor (a wonderful concrete chapel on the edge of a field in Mechernich) one gets delighted and one knows that some kind of God must exist. The beauty of these buildings is creating inspiration and knowing of a different kind. It is the type of knowing created by novelty, by feelings, by experience. Once seen and understood, it stays in our mind for the rest of our life, influencing all our future feelings and actions. One just knows this must be right.

During the first year of mathematical studies, students used to have a basic course in Algebra, introducing the main theorem of Algebra. This theorem is proofed many times. The first time, it takes like 6 pages with very complex arguments to make the proof. After building up mathematical concepts, definitions and machinery, students managed to reduce it to 5 pages, then 4, 3, 2 and the final proof consisted of just one square scheme. This is visually very easy to understand and it is evident from this scheme that the theorem does hold. But, some 150 page are needed to develop this understanding. It is the final part and usually students are all filled with delight because of the easy and beautiful way the theorem finally is proofed at that moment. It is this beauty which makes students full of delight and energy to continue their studies. Understanding this beauty and way of proving this theorem made them feel happy and proud. One just knows this is correct and a fantastic way of doing things.
4. Poetics

How to get to know things which themselves bring more than knowing? Can emotional or aesthetic experience be fully transferred using the terms and categories, which come from the outside of it? To what extent the surprising and momentary discovery can be shareable and objectified? Is there a reliable bridge, which connects its essence with the nature of traditionally understood knowing? Or, maybe, the borders of knowing can be freely widened and include all other fields of human experience? Are these questions relevant when thinking of poetics of design in the context of designerly knowledge? To what extent do they directly suggest easy answers, trying to give a way for a hidden will to avoid the true involvement?

No, no, … it is not intended here to give a full explanation of neither poetics as such, nor its relation to knowledge generation processes. First, it would require a deep terminological study to set the context of meaning of each of the key terms. Then the further argument could be developed – and this, to be serious, would be a work for years, if not for decades. This kind of research, a generalizing one, would still be an activity of thinking OF. It would be a kind of development of the competence of not getting involved. For a designer, for an architect, would still be an activity of thinking OF. It would be a kind of development – and momentary discovery can be shareable and objectified? Is there a reliable bridge, which connects its essence with the nature of traditionally understood knowing? Or, maybe, the borders of knowing can be freely widened and include all other fields of human experience? Are these questions relevant when thinking of poetics of design in the context of designerly knowledge? To what extent do they directly suggest easy answers, trying to give a way for a hidden will to avoid the true involvement?

Let us architects speak, having in mind their works, which come out of their thoughts, or their words coming out of their designs:

“We want architecture to have more. Architecture that bleeds, that exhausts, that whirls and even breaks. Architecture that light up, that stings, that rips, and under stress – tears. Architecture should be cavernous, fiery, smooth, hard, angular, brutal, round, delicate, colorful, obscene, voluptuous, dreamy, alluring, repelling, wet, dry and throbbing.
Alive or dead.
Cold – then cold as a block of ice.
Hot – then hot as a blazing wing.
Architecture must blaze.” (Coop Himmelblau, 1980)4


 Existence as a result of quantification is a colourful illustration of Alice minus Wonderland: patrimony, nihilism, the illegible. Reason sitting on a curved lip politely.
Along the canal San Francesco, - mute appearance devised by wrinkled gargoyles, - Palladio’s innocent prohibition against the rock enduring in ecstasy, Ice. Enter along the concave contour of a softf. Colourful billiard balls instead of the loggia – isolated chateau built inside the exclusive gaze – defunct vehicles.
(...) The ceiling glows with romantic end all as you apply for a visa to existence, estuary to omniscience as accessible as a cliché reminiscent of heroic fanfares repeatedly sounded to alert powdered milk to ancient wrongs. The plummeting heart.
Pavement drenched in blood, the fur coat Arctic needs to become an elementary experience once again... (Daniel Libeskind)6

4. It occurs that the above 4-points scheme is a recursive process. Circular. Its main node or spine is designing. The whole process of creation begins with, concludes and starts again with designing.

5. The scheme and the process it circumscribes shows a rich potential for where designerly knowing can be generated:
   - in the “content” of designs – specific solutions, concepts applied or derived;
   - in the ways by which solutions are developed – methods, the use of media, ordering or dis-ordering of thinking;
   - Content and methods are interrelated, but getting into research requires both flexibility and rigour

6. The starting point to generate designerly knowledge is designing. The indispensable condition to develop research in design is TO DESIGN. It is also the simplest conclusion for this issue.

7. The designer’s work takes place in the studio, but in fact the designer’s laboratory is the studio and designing. It involves iterations of experimentation, failures, risk, shaping and defining.

At the Graduate Research Conference in Melbourne, in May 2009, one of the PhD candidates presented his research project. It was his third presentation, which means, that the research project was initially formulated and key issues selected. After an interesting and long discussion, the candidate asked a question: “what shall I do now?”. The panel chairman, professor Richard Blythe answered immediately: “Design! Continue designing!”

6. The object as knowledge

Design, read both as a noun and as a verb, is a projection of the expected reality to be created according to the rules it defines. In most cases these rules in fact constitute the knowledge, which the resulting object represents. Here we face a very interesting relationship between design and object. On the one hand, design seems to be a “servant” of the object, which becomes the forefront carrier of the created values. On the other hand, it is design that brings the power, and the object is a “mere” executor. So the relation between them cannot be steadily established. In the domain of creating, this relation is challenging, because on the conceptual level there is a complete unity between design and object, but on the representational level, sometimes they seem to be very distant. Whereas intentions and concept lead to realization, the “language” of the object can be and often is blurred, obscured, unclear, ambiguous. That’s why, the process of decoding – firstly, when the design is formulated, and secondly, when the object is subjected to “reading” – is the essential process of knowing, characteristic for creative disciplines.

Ambiguity of the object however, can be an advantage. The object, in the creative process sometimes comes first, and design – as a mental or conceptual construct – may appear as a result of how the object is interpreted or treated. One of the most radical examples of this approach are Duchamp’s ready-made objects. They were used as such, taken as they were, and the design of the new mental shaping emerges as a result of their existence and through a close encounter with an artist.

What becomes clear now is that if the creative process is to go beyond making statements, and if in relation between object and design, one is NOT an illustration of the other, we need a process (creation – reflection) in which one reinforces the other. Thus, design brings knowledge to understand the object, and the object itself, through its influencing power, inspires development of designing. So this relation assumes both openness and circularity, where generative cycles begin and conclude, but each time on a different level. It is indeed interesting that this kind of doing goes far beyond a mere professional studio work, but becomes a deeper attitude towards reality.

In architecture, Peter Eisenman, developed several methodical approaches to the process of designing. One of them seems to be of special potential and relevance in the context of knowledge generation through designing. The project for South Friedrichstadt in Berlin can be a powerful “device” showing both the sequence of evolvement of design thinking and specific solution which set a coherent argument for the place.

The project created in 1982 is an important step between the conceptual breakthrough of House X, project for Cannareggio and later works as Romeo and Juliet, or Wexner Center in Columbus. Having an urban block with a few remainings and well documented history, the challenge was to make history apparent and at the same time make a new intervention an adequate trace of the now. Therefore the architect constructs a new history for the place by creating abstract levels of time, but in spatial, material terms. The scheme of overlapping grids is “objectified” by the Mercator grid as a memory-forgetting device. The argument is being developed through rigorous designing and critical interventions within the concept, so both are deeply interrelated, and this relation is consequently realized in the constructed building. Thus, the object itself becomes knowledge in this specific context.

7 There are many resources presenting Marcel Duchamp’s works. A good reference to start exploring it is the website: http://www.marcelduchamp.net/
7. Research is a design activity

In 1999 Ranulph Glanville wrote a wonderful paper ‘Researching Design and Designing Research’. He first explores aspects of traditional research and explains that there is a difference between the ideal and how science is practiced. The role of the experimenter (researcher) who plays with all aspects of the experiment until it produces results of a certain type is stressed as crucial. After some elaborations on the role of theory in research, Glanville concludes page 87 that the processes he described ‘is design and is design at many levels. And, therefore, (scientific) research is a form of design – a specifically restricted form. If this is so, it is inappropriate to require design to be “scientific”: for scientific research is a subset (a restricted form) of design, and we do not generally require the set of a subset to act as the sub subset to that subset any more than we require the basement of the building is its attic’.

It is well known that designing is not so much related to the past, but is related to creating possibilities for the future. It is about projecting ideas into the future, exploring possibilities and developing spatial qualities. As such, it creates a holistic view and develops future possibilities.

In architectural and design curricula, the main teaching takes place in the design studios. It is here that out of a context, and through processes of exploring different settings and expected outcomes, through associative thinking and through the understanding of special behavior of humans, ideas are envisioned and projected towards the future. The designer in the studio continues to explore and search until the design performs as is desired, expected or required. If sufficient quality of space is not obtained, the project is redesigned, possibly some constraints are changed and a new coherent whole is created. Finally, the designer may reframe all understanding in a theory. The understanding of one design may change the initial position and question and may lead to a repeated design effort improving the previous insight, integrating previous understanding and experience. This circular process of searching and developing is crucial to design.

8. From “what is” towards “what can be”

Design professionals defined design in a variety of ways as:

- A goal-directed problem-solving activity;
- Decision-making, in the face of uncertainty, with high penalties for error;
- The performing of a very complicated act of faith;
- The optimum solution to the sum of the true needs of a particular set of circumstances;
- The imaginative jump from present facts to future possibilities;
- A creative activity - it involves bringing into being something new and useful that has not existed previously.

This clearly refers to exploring possibilities and projecting future realities. It is this process of mapping complicated conditions and constraints into a vision of future developments that is the dominant activity in design education. It forms the core of the field. It is about inventing and creating truths, it is less about the facts and conditions, but it is about possibilities and change processes in a long term perspective. It is creating new and interesting possibilities for humans and envisioning their future and developments.

For the Brussels Capital Region many Urban Development Plans have been developed. Some have a formal status and have been approved, but others have not overcome the status of a proposal. Nevertheless, these projects incorporate very interesting concepts and knowledge on future developments and possibilities. They are communicated in a way that communicates visions and ideas rather than very detailed descriptions. They, on purpose, leave space for interpretation and flexibility, but they include some very strong positions which cannot be denied and which envision ideas for the future of the city. These alternative urban development plans will probably never been realized, but by creating, developing and designing them, the authors influence how the field is thinking about the urban problems in Brussels. A good example to illustrate this position is eg. the ‘Vision for Brussels, Imagining the Capital of Europe’ by The Berlage Instituut (Rotterdam). 16 architects and professionals explored between 2004 and 2007 Brussels and developed a proposal for the future, envisioning our future society. The project was presented to the main political authorities as well as to the wide public. It generated a lot of discussion and ideas for future development. Some will probably be picked up by future designers as the local context is still too complex to accept just one proposal for the Brussels Capital (Brussels consists of 19 smaller communities).


9. Peer-review

The nature of designer’s or artist’s work lies somewhere between the work’s singularity and the author’s autonomy. Designing itself, however is a form of sharing, it is expressing ideas and concepts in a form of both – the project and/or designed object. So the work, in a way, speaks for itself and for a designer. It is assumed it is singular, i.e. does not duplicate any other work, and is performed within the assumed creative freedom, although sometimes must be “framed” formally (as in architecture – by the complex process of procedures leading to construction).

Autonomy as a mental, but also a cultural condition is indispensable in all creative activities. It is the artist’s or designer’s freedom which lies behind the novelty and uniqueness, which we can experience in the quality work of art, architectural object, or listening to music.

Yet, at the same time, the work of art cannot be examined, as the object of science, and objectively assessed, because there is no general reference in science, and objectively assessed, because there is no general reference in creative disciplines, comparable to the “objective truth” in science.

Let us make a risky, but probably quite relevant juxtaposition of basic references: when in science there is one general reference point, which is the truth, proved and stable, then in arts and design we deal with the plane of interpretation(s), dynamic and “fluid”, which constitutes the shared understanding(s). Only the shared opinion of competent peers can be a validating judgment there.

These formal or informal bodies of evaluation in creative disciplines represent both strength and weakness, because on the one hand, some them are the “arms” of the politics – mainly of financing, of lobbying parties (on many levels – academic, universities, government, organizations), etc, and on the other, the democracy which is inborn in making of the communities of practice enables to constitute new bodies or entities on this plane of reference.

The main challenge in this context is the multitude of the systems of values. It seems to be a problem, but only when one cannot see a chance and important value there. It is indeed the consciousness of the richness of this landscape of thinking systems, which makes the research in creative disciplines motivated and justified. Therefore, the horizon in this landscape is to generate and constitute new bodies or entities on this plane of reference.

The competition for a new urban development of the Potsdamer Platz in Berlin in 1991 made apparent how dogmatic attitudes disable a serious and deep discussion. Two opposite positions were represented by Hans Stimmann, who chaired the jury and some designers, whose opinion was expressed by Rem Koolhaas in his famous letter. Stimmann, who managed to force a conservative scheme to win the competition, was accused by Koolhaas of organizing “a massacre of human intelligence”. Libeskind, whose design was dismissed, concluded with a very relevant and eye-opening statement: “You can’t separate structural order from the notion of creating creative things”. Can we then suspect, that the separation of this kind makes a relevant evaluation in creative disciplines impossible?

10. Interaction

Interaction starts, when action begins between at least two actors, or within/between the actor him/herself. It is interesting that both the words “action” and “actor” have the same root. To “act” – seems to be at the center of discussing an issue of interaction. Action, actor, activity, act, active, actual – all concern some dynamic behavior or quality focused on change.

To be an actor can be understood as both – to play a role and to become. Let us focus on becoming, as it implies the natural process, which does not pretend to represent some other entity than it is itself, it is not simulation. So to act is to take action of becoming, becoming of something or someone. Becoming, then, suggests the process of change, modification, transformation, shaping, development. Understanding is not a condition to acting, but it usually appears as a result.

According to de Zeeuw (explained by Glanville), action taken by the actor brings improvement. There is no action when there is no improvement. Therefore acting is a form of intervention. “Intervention suggests positive change and active involvement. This does not come about through the inevitability of some internal dynamic. It occurs because actors become involved: it is a willful choice by which actors can create changes in the quality of the conditions on which they base their observations. When we intervene in something, we act. We also change that something” (Glanville, 2001)12.

However action is one of the stages in the sequence of phases, which all together constitute the procedure of constructive evolution – of both the actor and situation. The sequence is as follows:

observation – action (based on observation) – improvement (resulting from action) – support

So high quality observation inspires action, which in turn, by involvement and intervention in what was observed, generates improvement. Improvement, then, changes both what was observed and the actor, who takes action, and those who are helped, by helping them to help themselves. Support, then indispensably involves communicating.

It has commonly become obvious, that successful interaction brings the synergic effect. Having de Zeeuw’s procedure, we can try to visualize the process of interaction – as a mutual action and sharing taken by two actors, at the same time on the same topic. If we can assume that the mutual influence is non-linear, then the procedure of interaction occurs simple, yet multilevel and extremely rich in possible outcomes.

The scheme shows the potential of how interaction - understood as mutual and open influence – highly strengthens the process of constructive development. Surprisingly powerful in its simplicity.

11. Language

Languages (verbal and non-verbal) are terribly important for our communication processes. They are usually rooted very deeply in history and our local culture.

When communicating and trying to understand the messages we capture, it is important to notice that communication is a two-way process\(^\text{13}\). In Information and Communication Theory, a sender transmits a message to a receiver. The receiver not always receives the full message, there probably is some noise on the transmitting channel which makes that part of the message is not fully captured by the receiver. Hence, some redundancy is useful to get the message to the receiver and a language or a common coding is used in order to transmit the massage.

In daily life however, it is clear that non-verbal communication and sensuous understanding play a very important role. They complement our more formal verbal communication and guaranty a continuous flow of non-verbal information and understanding. These complement the verbal messages and ensure some kind of cross-checking on the quality of the two-way communication. Especially in design communication, the graphical and visual communication is very dominantly present. Plans and sections but also the aesthetics of the project and the material used is of utmost importance. Even acoustics make a space in a wonderful place or a dreadful environment to be.

The use of the word ‘smak’ in Ukrainian nicely connects to the word ‘smaak’ in Dutch/Flemish. It testifies there have been connections between both regions a long time ago. In a similar way, the Chinese characters are deeply rooted in their way of thinking and handling. They influence the reasoning and research language.

Sign languages are not mime nor are they a visual rendition of an oral language. They have complex grammars of their own, and can be used to discuss any topic, from the simple and concrete to the lofty and abstract.\(^\text{14}\)

12. Listening

Communicating processes belong to the most fundamental processes determining both – personal development and a very wide, collective understanding of the world as well as of the development of a given civilization. Not trying to resolve the whole field (which concerns psychology, linguistics, learning, thinking, etc – see also the previous chapter, which mentions Pask’s conversation theory), let us try to understand of what makes communication possible in general. … and be reasonably redundant.

In 1995, a short manifesto concerning understanding (multi-) media in architecture was written (Jakimowicz, Kadysz, 1995). Approaching intuitively the simplest possible pattern of communication, it was stated that:

- we can start from the scheme of “transmitting – receiving” as a basic communication pattern;
- the transmitted content does not always occurs the same when it is received;
- the message appears only when it is received – there is NO message without receiving;
- there must be some mediation sphere between the sender and receiver (does this mean that it is not a two-way process?);
- the most important mediation takes place on the side of the receiver.

From this point then, we can say that there is no communication without listening – and that it is the process that determines communicating at all. So it is crucial for understanding.

“The present understanding of the medium as a mean of linear transmission, with the primary role of the sender is no longer sufficient, is too simple. The possibility of mutual and multidirectional communication in real time makes the distinction between sender and receiver not so clear. The roles are effacing, but actions, processes are not. Receiver becomes sender, but the process of receiving is always distinct from sending. The importance of the process, the attention must move towards a temporal process of transmitting the message (...) and primary role of receiving.” 15

Listening is the condition of receiving. It constitutes the message. It is active.

13. Mountains (limit to see more)

Perspective beautifully represents one of the basic secrets of cognition. One has to enlarge the distance between an observer and an object to see more. Consequently, approaching closer limits the field of view, increasing focus. At the same time, having a wider view, does not let us recognize details – so we see less. Opposite – a closer look disables to see the whole. We are so used to this very basic paradox that quite often we cannot “translate” this procedure of coming closer and distancing into other activities. Perhaps it is one of the most powerful procedures in interpreting the creative activities into knowing, designing into research. The iteration of widening and narrowing of the view, careful wandering between levels of perception, keeping rigor in changing the “focus” and “lens” – lets us locate the work in the context, at the same time enables to give names to things which are to be defined. Therefore one has to limit him/her-self to see more – but has to be aware of the of depth between foreground and background, and always suspect that something important lies behind the scene. The process of knowing, or better say – of getting to know, is infinite. There always is and will be something to know, something to be discovered or to be invented. Things we think we know well can always let us take the journey to the unknown. So both – creative and critical activities, through the processes of communicating – constant conversation with the world, sensitive listening, the use of languages, zooming, framing, defining – are deeply complementary in the cognition of the (non-) objective world.

About ten years ago, I developed a simple idea of abstract modeling – an intuitive use of 3D modeling software to make abstract architectural objects or spaces in the digital space. This let me explore the unstated and hidden potential of the digital medium and use it in a way which was not intended by the manufacturers.

What is interesting, exploration of the digital medium, brought me back to very basic, “analogue” space and material. I realized that a sheet of paper represents an ideal plane, or a perfect material to intuitively explore its spatial potential. Folding, squeezing, crumpling occurred incredibly rich modeling “methods” to try to experience complex spaces. So I had lots of 3D physical models made of an ideal, almost abstract material ready to be explored or analyzed. The most surprising thing however was, that in order to explore them, I had to limit my perception – 2-dimensional representation (through scanner or endoscope) was the only possible way to get “inside”:

“Flat spaces is a concept derived from the paradox, that some spaces, when generated, have to become flat, transmitted into 2d plane in order to be able to fully appreciate its 3rd dimension.

The paradox is even deeper - as it can be really experienced with the simplest devices: dark void, white light and pure plane. In search for ideal environment or media, only one set occurred appropriate. Any dark room.

Scanner
Sheet of paper
this kind of depth
this kind of spatial simplicity
this kind of spatial complexity
this kind of void - substance experience
this kind of light arrays
this kind of purity

--------- could never be achieved with more dimensions, but 2,
--------- could never be achieved by richer media
--------- could never be seen otherwise 16


14. Being Inside (experiencing) – Outside (knowing)

“We cannot both experience and think that we experience”17. Art and creative activities are about interpreting and experiencing. Research is about understanding and knowing. Can experiencing be somehow translated into knowing? Or can they be incorporated? Is it a task for artist or researcher? Or is it an issue for them of becoming a hybrid “creator – knower” to be able to deal with this problem.

Traditional research, with its aim of knowing the objective truth, very clearly states the position of the researcher. He is the observer, armed with observation tools and rigorous methods to analyze and examine the results of observation. As an investigator of truth, he has to be outside, cannot be involved in the observed object. This paradigm brought us a great developments in sciences, letting us know the world better and better. Is it, however, the only and absolute pattern? Science itself brought this position to the limit. Quantum physics proves that at a certain level the process of observation cannot be separated from the natural and deep involvement. We cannot state the basic nature of matter, because the observation tools are of the quantum nature themselves 18.

Can we, then, think of defining contexts? … interconnected, but at the same time autonomous “clouds” of both experience and knowing, where tacit knowledge complements the explicit. By defining the right or even the contradictory perspectives, by zooming, framing, careful definition of connections between objects and processes, the creation of new worlds shall become equivalent to the process of getting to know things, by exploration of possibilities.

In 2002, at the Far Eastern International Digital Architecture Design (FEIDAD), animation competition was won by the short animated movie designed and made by a student. It perfectly shows, how contexts can be contained within wider ones. How each of them constitutes an autonomous world, and how they can be naturally connected or separated. However, one has to experience it in order to understand, and there is no way for communicating it without being involved 19.

19 http://www.youtube.com/watch?v=B_SHeNGkNpU
15. Not knowing

Henk Borgdorff\footnote{Borgdorff, H. (2009) Artistic Research within the Fields of Science, in Sensuous Knowledge No. 6, Kunsthøgskolen I Bergen, p. 7.} states “(…) For one thing, much artistic research is conducted not with the aim of producing knowledge, but in order to enhance what could be called the artistic universe; as we know, this involves producing new images, narratives, sounds or experiences, and not primarily the production of formal knowledge or validated insights. Although knowledge and understanding may well emerge as byproducts of artistic projects, this is not usually intended from the beginning”.

The above citation, indicates that different and many types of knowing, meaning, methods and understanding are present in different domains. Poetics and art require a different way of knowing and interpreting of results and outcomes. They require a deep understanding of the field and imply the reader can capture a specific way of communicating.

On the other hand, also the way of developing research and knowledge in poetics and art seems to be very different. Instead of analytical processes and the collection of data, the processes are more steered through processes of holistic attitudes, associative thinking and creative processes. It is well known that a blanc sheet of paper (or not-knowing and blocking all explicit knowledge) can be very stimulating during designing. The development process, the process of making then play the crucial role in the developments of ideas and the process of searching for the appropriate solution.

During the ‘By Design – For Design’ session of RTS, objects sometimes communicate a sharper vision than the accompanying text. The object transcends the usual understanding and knowledge and nicely complements written ideas and verbal discussions.

Many years ago, I was working on a mathematical problem. I was completely stuck and did not find any sensible solution. Disappointed I went to watch television and turned off any knowing. After only a couple of minutes watching, the solution suddenly came to my mind. It seems that disconnecting from the knowledge and mental process was the key to develop the solution. As being in a state without knowing and thinking and active knowledge freed the mind to develop the solution.

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images: A. Jakimowicz, J. Verbeke, royalty free photographs archive http://www.sxc.hu

In their paper $4^2 + 2^4 - 1$: Designing a Prime, the authors A. Jakimowicz and J. Verbeke introduce a variety of concepts and anecdotes which help to discuss and explore research by designing and artistic research. Although there was not enough space to fully cover each theme, the variety and anecdotes are intended to help and stimulate exploring and formulating new directions of research. The citations and the visual communication are intended to question and introduce different perspectives and positions.

The activity of designing is at the core of the field of architecture and design, as is the creative act in the field of arts. It is clear that there is currently a growing focus on research where the core competence of the field plays a crucial role as a research method. Many conferences have been organized such as the Sensuous Knowledge Conferences (2004-2009) Bergen, Norway; the series ‘The Reflective Conservatoire Conference’ of which the last one ‘Building Connections’ (2009) was held in Helsinki, Finland; ‘The Drawing Incident’ (2009) Ghent; ‘The Unthinkable Doctorate’ (2005) Brussels, Belgium; ‘Design Enquiries’ (2008) Göteborg, Sweden; ‘Research into Practice Conference’ (2008) London, UK; EAAE/ARCC Conference, ‘Changes of Paradigms in the Basic Understanding of Architectural Research’ (2008) Copenhagen, Denmark; ‘Artistic Research in Conservatoires’, November 2009, Maastricht, The Netherlands; ‘Communicating (by) Design’ (2009) Brussels, Belgium; and many others.

All of them develop and at the same time question how research in relation to the process of designing and creating (art) objects can be developed and interpreted; how insight, experience and the specific type of knowledge in the field can be captured and communicated; how art objects and designs can be interpreted and can play a role in research. It seems new values and entities are on their way to emerge.

At such moments in time where a field is developing, the authors believe it is crucial to explore many different ways and methods and to have these discussed. Only though a process of debate and communication, new languages to discuss research and be able to communicate research outcomes will emerge and become the foundation of new knowledge and understanding.

1 Jakimowicz, A. and Verbeke, J. (2010), $4^2 + 2^4 - 1$: Designing a Prime, in Reflections 14, Sint-Lucas School of Architecture (W&K), Brussels, Belgium, pp. 7-43.
contributions
Staff involved in the Research Training Sessions 2009

‘Batch 09’ - Session 1: Communication (20th – 22nd of November, 2008)

Gerard de Zeeuw

Gerard de Zeeuw studied at the Universities of Leyden, Rotterdam and Stanford (mathematics, statistics, econometrics, psychology). He did his Ph.D. at the University of Amsterdam (on a topic in the philosophy of research). His main work has been in the understanding of research methods as applied in the social sciences and as related to the use of their results. He is a retired professor of the University of Amsterdam (since 2001), and is director of the Center for Innovation and Cooperative Technology (in Amsterdam, NL) and of the Lincoln Research Centre (in Lincoln, UK). He now serves as professor of research of the University of Lincoln. He is the Director of the PhD programme of his Faculty, where he is responsible for about 60 PhD students (and supervises about 25). Some of his many publications may be found at (unfortunately not updated since 2001). The Journal of Systems Research published a Festschrift (it includes a paper by Johan Verbeke).

Rolf Hughes

Dr. Rolf Hughes is Senior Professor in Research Design at the Sint-Lucas School of Architecture (Brussels & Ghent), and Director of Research as well as Professor in Design Theory and Practice-Based Research at Konstfack University College of Arts, Crafts and Design (Stockholm). He has organized a series of major interdisciplinary conferences on architecture, skill and practical philosophy and has taught and lectured internationally. To date, Hughes has co-edited four collections of interdisciplinary essays: The Book of Models: Essays on Ceremonies, Metaphor and Performance (Open University, UK: 1998, reprinted 2003), Hybrid Thought (Open University, UK: 2003), Architecture and Authorship (Black Dog Publishing, London, 2007), and Second Nature: Origins and Originality in Art, Science and New Media (currently under consideration). Hughes is a member of the board of AKAD (the Academy for Practice-Based Research in Architecture and Design) and is co-founder (with Ronald Jones) and a member of faculty of a new MFA programme in Experience Design at Konstfack. He is a widely published critic, theorist, and prose poet.

‘Batch 09’ - Session 2: Knowledge (29th - 31st of January – 1st of February 2009)

Halina Dunin Woyseth

Dr. Halina Dunin-Woyseth is an architect and professor at the Oslo School of Architecture and Design (AHO). Since 1990 she has been the founding head of the School’s Doctoral Programme with over 40 Scandinavian and international PhD students. The Programme is opened to PhD students recruited from various “making” professions such as artists, designers, architects, planners, art and design educators and engineers. Her professional, teaching and research experience originated in Urban Design and Spatial Planning-related issues. She has a broad teaching and research
practice from Scandinavia and other countries. During the recent decennium she has been mainly involved in issues of knowledge in the design professions. Since 1991 she has edited and co-edited the journal Research Magazine, which documents the development of this field of inquiry in the context of vocational and research education. She has lectured extensively at the doctoral level and supervised PhD students in Norway and abroad. She has successfully served as a main doctoral supervisor for many PhD students as well as been external examiner at numerous public doctoral disputations in Norway and abroad. She has been commissioned as an evaluator by several research councils in Scandinavia and has also experience from assessing EU-funded research.

Fredrik Nilsson
Fredrik Nilsson, architect SAR/MSA, PhD, Adjunct Professor at Chalmers School of Architecture Göteborg, Sweden, Head of Research and Development at the architectural office White Arkitekter, and Professor at Sint-Lucas School of Architecture, Brussels. He has taught and lectured at several of the schools for architecture and design in the Nordic countries, and written on especially contemporary architecture, architectural theory and the relation to philosophy. Nilsson has studied the implementation of different philosophies in contemporary architectural practice with a special interest in the interaction between conceptual, theoretical thinking and practical design work. Later research also along two main lines: one focused on architectural knowledge, design theory and theory of science discussing the possibilities of producing knowledge through architectural practice; the other focused on implications of new technology for the practice and production of architecture as well as for the conceptual thinking in architecture.

Batch 09' - Session 3: Reflection (7th – 9th of May, 2009)

Ranulph Glanville
Ranulph Glanville has, over the last decade, worked as a freelance, vagrant professor, mainly commuting between the UK and Australia. In the UK he works at the Bartlett, University College London, where he teaches cybernetics. In Australia, he has had a major part in the development of the extension of the Invitational Masters through Practice to the Doctorate through Practice at RMIT University. He also works with other universities helping them develop research, and new courses and projects, particularly the Universities of Western Australia, Canberra and Monash University, Melbourne. He has written on Design Research for over quarter of a century, early on introducing concepts such as research as design and the importance of finding appropriate theory for design within design, rather unquestioningly than importing theories from other subjects. He has a long term working relationship with Johan Verbeke and, through him, with Sint Lucas Architecture. At the moment he supervises PhD students on 4 continents.

Adam Jakimowicz
Adam Jakimowicz teaches at Bialystok Technical University, Poland. His PhD thesis was titled "Sources of the Deconstructive Attitude in Contemporary Architecture". His research interests are ‘Theory of architecture’ (especially poststructuralist approaches in architecture theories) and ‘digital media in design’ (interpretative and intuitive approaches to digital environments and tools in design). He wrote several papers on digital media in architecture, architectural composition and innovative teaching methods and was co-author on a number of books. He participated at several exhibitions and international research projects (AVO-CAAD project (Added Value of CAAD)- international project ACCOLADE (Architectural Collaborative Design) – joint research project “Computer Mediated Collaboration for Multiple – Media Archives of Architecture”, with the CAAD Research Unit, University of Liverpool)

Batch 09' - Session 4: Design Cognition (4th – 6th of June, 2009)

Ömer Akin
Ömer Akin, Professor, School of Architecture, Carnegie Mellon University, is a frequently published researcher in the areas of design cognition and computation. His books include Representation and Architecture (1982), and Psychology of Architectural Design (1986, 1989) and Generative CAD (2006), and A Cartesian Approach to Design Rationality (2006).

His research interests include design cognition, computer aided design generation, case-based instruction, ethical decision making, and design virtual worlds, building commissioning, and automated requirement management. He is a registered architect in the Commonwealth of Pennsylvania and the Republic of Turkey. He has a small, selective practice. He has served on many professional and research panels and boards, including National Science Foundation, National Endowment for the Arts, and Educational Testing Center of Princeton University.

Burak Pak
Phd in Architecture, MSc in Architectural Design Computing (Istanbul Technical University), B. Arch (Yildiz Technical University), Burak Pak's research and professional interest areas are digital design and education, design computing, generative design, design technologies and virtual environments.
He started his career designing interactive media in Istanbul Technical University d4New Media design studio and worked there for three years. He contributed to various international and local conferences about design computing and information technologies as a member of the organization and reviewing committee. He actively involved in design workshops and visualization techniques courses as a visiting lecturer in ITU Faculty of Architecture. He worked in many design groups, architectural competitions and worked freelance for architectural offices like Kisho Kurokawa, Doğan Tekeli - Sami Sisa.

He was employed as a lecturer and as a member of the founding committee in ITU Information Technologies in Design Graduate Program for five years. He continued his research for 12 months as a Visiting Assistant Professor in Texas A & M University VIZlab and later, in Carnegie Mellon University.

Burak Pak has completed his PhD thesis in ITU Faculty of Architecture which is entitled “Design Activities and Decisions in Conventional and Computer Aided Architectural Design Processes” and co-advised by Arzu Erdem (ITU) and Ömer Akin (Carnegie Mellon University)

In January 2009, he received a three-year research grant from the Brussels government to work as a Postdoctoral Research Fellow in Sint Lucas School of Architecture on the design and evaluation of experimental virtual environments that support decision making.

‘Batch 08’ - Session 1: Why / How Design Research (11th – 13th of December, 2008)

Alain Findelli
Alain Findelli is Full Professor at the School of Industrial Design of the University of Montreal where he has been teaching for about 30 years. Trained as an engineer in physics (INSA, Lyon) and researcher in materials science (IIT, Chicago and Polytechnics, Montreal), he reoriented his career and interests toward the human and social aspects of engineering, technology, and design (M.A. in Architecture, Montreal; Doct. in Aesthetics, Paris).

He concluded his extensive study of the history of design education in his book ‘Le Bauhaus de Chicago: l’oeuvre pédagogique de László Moholy-Nagy’ (1995). His current research topics and recent publications cover more general philosophical issues of the theory and practice of design (logic, aesthetics, ethics) as well as some key pedagogical aspects of design research education. He is the founder and current scientific and pedagogical director of the Master’s program in “Design & Complexity” in Montreal.

As a Guest Professor at the University of Nîmes (France) in 2006, he is planning to introduce a research agenda on the most recent developments of design theory and methodology (service and social design, sustainable public projects, quality of place in urban living environments).

Rosan Chow
Rosan Chow is a Ph.D. candidate in information design from the North Carolina State University in the U.S. In her doctoral dissertation, she examines a ‘design-sensitive’ approach to user research in the context of HIV prevention communication. Prior to her studies at NCSU, she has studied briefly at Institute of Design in Chicago. She has also obtained a Bachelor (1988) and a Master degree (1998) in Visual Communication Design from the University of Alberta, Canada. She practiced visual communication design between 1988 between 1996 at Philips Corporate Design and Saitek Limited in Hong Kong. She taught visual communication design at the University of Alberta in 2002. She is now living in Hannover, Germany to complete her doctoral research.

‘Batch 08’ - Session 2: Artefact, Action and Observation (12th – 14th of February, 2009)

Chris Rust
Since May 2004 I have been Head of the Art & Design Research Centre at Sheffield Hallam University, England. I’ve been at Sheffield since 1991. Our subject area at Sheffield Hallam received 5 rating for its research in the 2001 Research Assessment Exercise, no institution in Art and Design received a higher rating than this so we feel that we must be doing something right, although research ratings in Art and Design are very volatile. My own research is concerned with the role of tacit knowledge in design, arising from our experience of research projects in which designing plays an instrumental part in investigations into problems in other disciplines. My main teaching role is in the MA Design Programme for which I was programme leader since 2000 until the end of the 2003/4 session. This is a multi-disciplinary programme with a mixture of students from the UK, Europe and further afield. I am also Chair of the Council of the Design Research Society the only international society open to researchers in every area of designing and every country. At the moment we are growing very fast and looking for new ways to support research and scholarship in design so it’s an exciting time.

Nicola Wood
Nicola Wood is an interactive media designer and, as well as undertaking freelance design work, am employed as a researcher at Sheffield Hallam University investigating applications for multimedia in learning. She has developed an active role in the preservation of rural crafts through working...
in partnership with her husband, who has been a pioneer in rediscovering lost woodworking skills. This provided the background to my doctoral research project, which involved collaboration with learners and craftspeople as well as engagement with questions of multimedia design. Whilst on the surface her research deals with issues regarding learning craft skills, on a deeper level it addresses communication problems that can be encountered in many areas of design and reveals methods for unlocking the knowledge of others. She would speculate that the understanding of craft learning and the model of apprenticeship she has developed could have applications not purely in the immediate area of the crafts, but also in any area where a tacit understanding needs to be developed.

Simon Bowen
My research interests include participatory design, human-centred design and critical design, and how they might be combined to enable a form of participatory innovation. Since 2003 I have developed design methods exploring these ideas and applied them in funded design research projects with colleagues from Sheffield Hallam University, the University of Sheffield and the University of Leeds. Through this work I have developed a “critical artefact methodology” for which I was awarded a PhD in 2009. I have subsequently led seminars on “critical artefacts methods” in Norway, Denmark and Belgium.

I am currently Participatory Design Research Associate on a five-year project investigating how methods and thinking from design (such as service design and designing for experience) can be applied in the context of the UK’s National Health Service to improve patient experience and quality of life.

‘Batch 08’ - Session 3: (2nd – 4th of April, 2009)

Leon van Schaik
Leon van Schaik studied at the Architectural Association (AA) in London and is professor of architecture at the Royal Melbourne Institute of Technology (RMIT) where he holds an innovation chair. From his base in Melbourne, he has promoted local and international architectural culture through practice-based research. In 2005, at the 75th anniversary awards of the RAIA he was awarded the inaugural Neville Quarry Prize for Architectural Education. On 26 January 2006 Leon van Schaik was awarded an Order of Australia, Officer (AO) in the General Division, for service to architecture as an academic, practitioner and educator, and to the community through involvement with a wide range of boards and organisations related to architecture, culture and the arts. He is the author of Mastering Architecture: Becoming a Creative Innovator in Practice (Wiley-Academy, 2005), and his latest book is Design City Melbourne, (Wiley-Academy, 2006).

Richard Blythe
Richard Blythe currently holds the position of Professor in Architecture and Head of School, Architecture + Design. Richard is a founding director of the architecture practice Terroir. The work of Terroir has been recognised through exhibition and publication nationally and internationally and their first book Terroir: Cosmopolitan Ground was published in August 2007 by DAB Documents, UTS Sydney. Richard is currently serving his second term as Chair of the National Education Committee of the Royal Australian Institute of Architects. Richard’s academic passion is in exploring research in the medium of design. Prior to taking up his position at RMIT Richard had lectured at the University of Tasmania for 14 years where he served as Deputy Head of the School of Architecture until mid 2007. Richard gained a B.EnvDes and B.Arch from the Tasmanian State Institute of Technology and an M.Arch (research) specializing in Australian architectural history from the University of Melbourne. Richard served one term as President of the Society of Architectural Historians Australia and New Zealand.

‘Batch 08’ - Session 4: By Design For Design (11th of September, 2009): BDFD2

Marc Gods, architect. Lives and works.

Guest Tutors BDFD2:

Kris Vleeschouwer, artist, ° 1972, Mortsel, got a master in visual arts at Sint-Lucas Antwerp. Afterwards he studied at the Higher Institute for Fine Arts where he graduated in 2003. In 2005 he won the Prix des Beaux Arts with the installation “Glassworks I”. That year he also was artist in residence at the Zentrum für Kulturproduktion Progr in Bern. The artist exhibited in Palais de Tokyo in Paris, Palais des Beaux Arts in Brussels, Akademie der Künste in Berlin, the Museum Quartier in Vienna and the Museum Kunst Palast in Düsseldorf. Since 2008 he is teaching sculpture at the Sint Lukas Hogeschool Brussels. He is also a member of the organization Arteconomy vzw which encourages, examines and promotes the collaboration between artists and economy. kris_vleeschouwer@hotmail.com

Whitney Sharry Grace Ngandu, fashion and styling, ° 1988, Antwerp: “I bet I could draw since I could hold a pen or a pencil. When I was seven my grandmother taught me the art of sewing. But it took me almost ten years to start working with a sewing machine. One of the first outfits I made, was an old dress which I turned into a skirt with a matching top and afterwards, at the age of 16, I made my first and last Halloween costume. I remember fashion has always been a big part of my life, but my mom always pushed me to be a student in general education. So when I graduated at the age of 18, I did what I always wanted to do: I became a fashion student for two years. After that I participated on a televised fashion program in Belgium, “The Designers” (also known
as “Project Runway” in the United States).

Afterwards I became a student in theater costume design at the Royal Academy of Fine Arts in Antwerp, because I wanted something different than the regular fashion classes.

Now I fill my days with working in a clothes store and a cocktail bar. Besides making my own clothes, I make dresses for girlfriends once in a while. And once in a while I work on a project like this one”. miss_sixty_w@hotmail.com

**Kris Verdonck, theatre maker, °1974, was trained in theatre, visual arts and architecture. His work straddles theatre and visual art, dance and architecture, installation and performance. His projects are not only made for/shown in theatres and museums, he also creates works in/for special locations. In the past, he has also developed social urban interventions in tandem with the Brussels organisation Citymine(d).**

The central theme in the work of Kris Verdonck is the relationship between man and machine, between living creature and dead object, between angel and corpse. 'Sensory deprivation' and feelings of loneliness and 'Unheimlichkeit' are core to the state in which the characters that people his installations and performances find themselves. In the theatrical project 'I/II/III/IIII' (2007), four female dancers moved like puppets on a string; their scope of movement was limited, and at the same time determined, by the machine at whose mercy they found themselves. The large production 'End' (2008) was equally situated in a theatre setting. Ten characters – both performers and objects – negotiated a circular course both on and behind the stage: they appeared from the side wings to the right, crossed the stage, disappeared behind the side wings to the left, only to reappear a moment later on the right hand side, and so it went on. krisverdonck@gmail.com


**Johan Verbeke**

Johan Verbeke, PhD, MBA joined the School of Architecture Sint-Lucas (W&K) in 1991 where he has the position of full professor since 2004. From 2003 till 2009 he was the head of the School. Since fall 2009 he became vice-dean of the Faculty of Architecture and Arts in the Association K.U.Leuven.

His main interests are CAAD, new technologies used for designing and teaching and management processes in higher education. Recently, he started working on knowledge creation processes, especially in design disciplines. He is the creator and in charge of the Research Training Sessions (RTS) programme of the School of Architecture Sint-Lucas. He was co-ordinator of many international projects (e.g. AVOCAAD, AVOCAAD-stage and AVOCAAD-MULTI under Leonardo da Vinci, [ACCOLADE] under the Fifth Framework of Research, and national projects (MECANO, DYNAMO, …). In these projects he brought the professional world and the academic research together to develop new ideas. He organised 8 international conferences. He is author of many papers and editor of several books/proceedings in the field of Computer Aided Architectural Design. Main area is the application of digital technology during the initial phases of the design process. He is Board member of eCAADe (Education and research on Computer Aided Architectural Design in Europe). He was evaluator and reviewer is the European Framework for Research (FP5 and FP6), especially in the field of Digital Cultural Heritage.
Reflections on supervising

Those who call themselves "scientists" always put the cart before the horse when they talk, though in practice they get things the right way round. They claim that laboratories, libraries, meetings, field notes, instruments and texts are only ways and means of bringing the truth to light. But they never stop building laboratories, libraries, and instruments in order to create a focal point for the potency of truth. Rationalists know very well that if this subordinate material life were suppressed, they would be forced into silence. A purely scientific science would rid us of scientists. For this reason they are careful not to kill the goose that lays the golden eggs.

Bruno Latour, Irreductions of the “Sciences”1

They had heard that we were great Philosophers, and expected much from us, one of the first questions that they asked was, when it would thunder.

Joseph Banks, The Endeavour Journal2

A supervisor of practice-led research in art, craft or design requires a critical imagination, one that combines empathy and judgment in order to increase the range of available choices for the PhD candidate. These notes try to explain why.

Having worked at various points in my professional life as a creative and critical writing tutor in universities and prisons as well as a lecturer in literature and drama, a researcher into the epistemology of skill and practical knowledge as well as a theatre director and poet, a professor of design theory and practice-based research as well as a supervisor of PhD dissertations characterized by meetings between architectural and design practice, history, theory and technology, post-criticality and, more recently, speculative, interdisciplinary design-led research, I have a long-standing interest in the accounts given by professionals attempting to articulate a way of looking at the world and certain artistic/design/research-related problems and priorities therein. Such an account, of course, is not exclusively verbal – typically a presentation fuses a spoken narrative of inquiry with often eloquent visual materials such as slides of sketches, photographs of sites, partly-built models, diagrammatic abstractions, material investigations, associative stimuli and so forth. The search for an appropriate terminology is an integral part of these early stages in the formulation of a researcher's sensibility – a reflective account of a series of cases, supported by the standard props of PowerPoint or Keynote, is sometimes followed, somewhat disappointingly, by a series of generalized theoretical postures or rhetorically bombastic manifestoes.
At such times, an ill-conceived pursuit of legitimacy tramples any tentative exploration of curiosity or wonder. Between presenter and listener, there is also, of course, an urgent question of ‘literacy’ – or, better, literacies – we do not understand a sketch the same way as a text, nor are there single, unwavering hermeneutic procedures for engaging with either form (and their myriad sub-genres). But we can usually understand each other, with a minimum of resources, should we wish to do so – a sympathetic engagement is often more important than linguistic or technical facility in this respect. We can, for example, slip the constraints of verbal/visual representation altogether and attempt to understand a concept through movement, interaction (such as a game or performance), improvisation, sensory experience (such as eating) or embodied rhythms (such as dance). We discuss spatial questions not infrequently through spatially challenged settings, as if bodily comfort, accessibility, or acoustic efficiency were optional extras in this supposedly bloodless ‘life of the mind’. Rarely do we stop to consider how a redistribution of the furniture, for example, or hacking the imprisoning logics of the presentation technologies we use so nonchalantly might change the sort of conversation about our work that we have, or might wish to have. The conversation itself, in other words, is there to be supported by design in a variety of different ways. This is why I try to emphasize to designers in early meetings that they possess already the mindset to succeed in research – that is to say, that research and design share common procedures, for example the notion of problem-setting over that of problem-solving.

We ought to ask how a practice is changed by an investigation into the practice. One important aspect for tutor and student alike to explore together concerns the advantages of making assumptions visible, the better to facilitate a conversation about the strengths and constraints of particular perspectives. Why? Because (without wishing to relapse into the tail-chasing discourse of relativism) we all speak from particular vantage points. Thomas McLaughlin writes, “Practitioners of a given craft or skill develop a picture of their practice — a sense of how it is or ought to be practiced, of the strengths and constraints of particular perspectives. Why? Because (without wishing to relapse into the tail-chasing discourse of relativism) we all speak from particular vantage points. Thomas McLaughlin writes, “Practitioners of a given craft or skill develop a picture of their practice — a sense of how it is or ought to be practiced, of its values and its worldview — and many are quite articulate about this ‘theory,’ aware for example that there are competing theories, that not all practitioners work from the same premises. These practitioners’ theories may contrast sharply with the theories of their practice constructed by academic theorists.... It would be possible to find the nurse’s theory of disease, the musician’s theory of audience, the computer designer’s theory of interpretation, the athlete’s theory of sport, the bookstore designer’s theory of reading, the casting director’s theory of character.” The point being that such theories are rooted in experience and yet may not be those that gain ascendancy in the all too logo-centric world of research applications and funding. Here then is a further role for research — to sever the umbilicus between practice and habit. Samuel Beckett, in his 1931 essay Proust, expressed what is at stake with characteristic verve — “the laws of memory are subject to the more general laws of habit. Habit is a compromise effected between the individual and his environment [...] the guarantee of a dull inviolability, the lightning-conductor of his existence. Habit is the ballast that chains the dog to his vomit. Breathing is habit. Life is habit. Or rather life is a succession of habits, since the individual is a succession of individuals [...] The creation of the world did not take place once and for all time, but takes place every day.” Research, in exposing habits and the implicit assumptions that support them, brings the designer’s own sensibility into play as a legitimate area of design intervention. This is sometimes called nurturing the capacity for critical self-reflection.

At Konstfack I am course leader for Research Perspectives – an obligatory Masters course for all first year art, design and craft students (approximately ninety from a wide range of cultural and disciplinary backgrounds enroll in departments spanning Interior Architecture, Industrial Design, Fine Art, Experience Design, Ceramics and Glass, Graphic Design, Textiles). At our most recent meetings, I sought to identify each group’s assumptions and presuppositions (there were six groups of approximately fifteen participants) by asking the deceptively simple question What is research? Everybody jotted answers for some minutes, then called out suggestions while I wrote their key terms on the whiteboard. We discussed the concepts, what they implied, how they might be related. Then I wiped clean the whiteboard and we repeated the procedure, but this time in response to the question; What is my attitude towards my practice? Again, the students reflected and took notes individually, which I then listed on the whiteboard for discussion. And so our sample of almost ninety international artists, designers and craft practitioners identified the following elements characterizing both research and their attitude to their own practice:

the courage to be doubtful, to experiment; to find new questions; curiosity and fascination; discover meaning – understanding, especially of the everyday; learning about materials; understand + command skill of professions (knowledge in action); prediction + (surprise en route) = result; exploring, testing, analysing, discovering; reconfiguring the question en route; search for new knowledge + critical self-reflexivity; distribution + dissemination; understanding, comparing, observing, perspectives (point-of-view); prediction + communication (audience) = impact; experience: testing, experiment, analysis, refining – judgment; limitations: understanding limits of concept/field; limitations: imposing limits on concept/field; positioning; clarity, reproductibility, dissemination; research in/for through practice (Frayling); understanding of relations; discovery versus confirmation; sustainable outcomes (non-commercial ); institutional/theoretical/academic/scientific; rule-bound, formal judgments – discourse (obedience); discovery versus confirmation; pressure towards establishing “truth”; revision; freedom to ask and test; new knowledge: “the difference that makes the difference”; defamiliarization – critical self-reflexivity; trial and error – testing; method – methodology (systematic-explorative-post-construction); theoretical and practical; reflec-
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I did not expect that the answers to the two questions would be so closely aligned, and so next asked whether the answers were, effectively, inter-changeable. To our considerable surprise, this was so – and thus was resistance to research banished at a stroke!

If only it were that simple. Very often, in my experience, instead of the commonalities between artistic/design practice and research, the differences are zealously stressed. Architects, for example, invest heavily in notions of professional identity perhaps because the borders of the practice are so hazy and permeable. This means that research has sometimes to be constructed as something alien and threatening rather than an integral aspect and extension of the design process – the rigorous pursuit of questions and experiments, the results of which are tested before a defined audience of peers and experts. You are not speaking from where I am listening, is the Batesonian aphorism that hovers sometimes between researcher and artist, architect or designer usually at times of heightened defensiveness and thus assertiveness (at conferences, for example). The risk of such a position is that it encourages a form of solipsism, sanctioned by a mono-disciplinary worldview as well as an abdication of the (ethical as well as professional) duty to communicate, one that decreases rather than increases the range of available choices. This is the logic of the ‘double-bind’ algorithm: I want to be legitimate; by legitimating me, you make me that which I am not, and therefore illegitimate. And so one has arrived at the tortured, self-fulfilling reasoning depicted by the radical Scottish psychiatrist R.D. Laing who, for example, in The Divided Self (1960), contrasted the experience of the “ontologically secure” person with that of a person who “cannot take the realness, aliveness, autonomy and identity of himself and others for granted” and who consequently contrives strategies to avoid “losing his self”, and who in Knots (1970) further elaborated the consequences of this ontological insecurity:

My mother loves me.
I feel good.

I feel good because she loves me.
I am good because I feel good

I feel good because I am good

My mother loves me because I am good.

My mother does not love me.

I feel bad.
I feel bad because she does not love me
I am bad because I feel bad
I feel bad because I am bad

I am bad because she does not love me
She does not love me because I am bad.

For tutor, researcher, and colleague alike, to such self-destructive introspection it is surely preferable to follow Heinz von Foerster’s often-quoted “ethical imperative” – i.e. “Act always so as to increase the number of choices.” This is to assert that research per se is concerned with (in the words of my colleague Gerard de Zeeuw) increasing degrees of freedom – a point no less important for its (apparently) self-evident quality once expressed. The architect, after all, is the negotiator of competing systemic demands. Here I refer the reader to de Zeeuw’s descriptions of recognition systems, judgment systems, inquiring systems, language systems, co-ordination systems and strengthening systems in research. Freedom – in design and research, as in life – is measured by degrees; it is never absolute.

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Abstract
Research has been interpreted in many ways. In the text, it is seen as an activity that separated from other activities to focus on supporting their development. Initially, at the end of the 16th century, such support mainly benefited the physical sciences. It has differentiated since into many other forms of support, often quite different from each other. They remain part of a family, however, with clear family resemblances. Research that supports architectural design is differentiating even further – as part of the same family.

Keywords: research, design, knowledge, action, description

Introduction
When people create a new activity, they usually also attempt to improve it. This holds for speed ice-skating (improvements in training and in skate technology) and for predicting the future (increasing the amount of data to predict the weather). In all cases, research has contributed strongly. It has been suggested that design and architecture proceed differently (Russell, Durling and Griffiths, 1999; Durling, 2003). The genius of the architect is sufficient. Linking them to research would be like taking astrology as a guide (maybe worse).

There may be good reason to attempt to reassess the link to research. One may not have found the approach that fits the purpose, so there may be forms of research out there that do provide support and direction. If one sees research only as what physicists do, for example, one obviously will be disappointed – as physics clearly does not include architecture or design (yet). While physicists may wish to discipline speculation, architects and designers may be keen to see research improve on their own way of creating.

In this paper, I intend to explore what form of research may fit the needs of architecture and design (if any) – while continuing to be research. As a start one obviously needs to identify what is labelled research. Some authors only accept what physicists do (or astronomers) and strongly reject for example parapsychology – or even psychology. Others refer to evidence based research (Melnyk and Fineout-Overholt, 2005). And there are those who see research as an attitude rather than as a specific support activity (Friedman, 2003).

It has not proved possible to find a referent that new forms of research may be compared to, to identify whether they are research. To resolve this difficulty I will follow Wittgenstein’s approach (1953-2001). He looked at games. One cannot find any properties that are shared by all games – except that of not sharing anything. This relation is named a family resemblance and the grouping polytectic. To identify membership one compares new activities to a limited number of games, given that these are members.

1 I recognise the stimulus due to the work of Dr. Procajlo (Procajlo, 2009), whom I had the honour to supervise for the PhD.
Recognition systems
The first author to attempt to characterise research was Descartes (2004; orig. 1641). His example still seems relevant. He focused on what burns to give light, can be moulded (e.g. into candles) and is a liquid as well as a solid. Remarkably, a group of such diverse phenomena may be called by the same name, that of wax. What may be even more remarkable is that the name also may help to recognise what phenomena belong to the same group, even if they have not happened yet, i.e. as a recognition or prediction.

In the context of research, names that facilitate recognition of what belongs to the named often are referred to as theory, model or code. When names have this property, they are called knowledge or recognition systems. This property is not widely shared, however, and is lacking in, for example, the use of simile, metaphor and analogy – as well as in the assignment of values, objectives and emotions. Calling something beautiful, sad or useful does not imply that it is named in the Cartesian way, so knowledge is not involved.

Such exclusions are obviously unfortunate. They imply that the Cartesian approach is unsuitable to support architecture (Fallman, 2008). Building a house requires not only combining materials such that the result can be recognised (by the name house) but also assigning values (e.g. beautiful), and/or intentions (e.g. residential) and/or emotions (e.g. loving the result). If research is to help, therefore, it should not only include Cartesian recognition systems, but also knowledge in the form of judgement systems.

Judgement systems
Unfortunately, authors that aim to enlist research for architecture often do not include judgement systems (Friedman, 2003). This is remarkable as there are already forms of research that can serve as judgement systems. The problem solving approach, for example, aims to find what is needed to reach a future state – not as a prediction, but as something to achieve. This means that one searches for resources that are necessary and sufficient to reach that state, rather than for its recognition once it has been reached (Dorst, 2006).

This approach consists of two parts. The first part is bringing those people together who wish to identify a future state. This is the judgement part. Unfortunately, one cannot compare judgements in the way one arrives at shared observations. People may come to similar judgements even if they differ in the values they assign – and vice versa. They will need to negotiate, therefore, to decide what assignments to opt for. The result will depend on who participates, when and where, and in that sense be embodied.

The aim of the second part is, firstly, to recognise what paths to follow to reach the preferred state. This implies identifying the ‘space’ of all available paths – its boundary and what it contains. Secondly, it should include helping to recognise what path leads to the preferred state and is ‘best’ in being efficient (taking the least time and effort of all paths) and effective in not leading to non-preferred states, i.e. not deviating from the preferred state by what happens outside the path. If such a space can be found it is a recognition system.

The two parts differ in the way they deal with individual contributions. In the first part, what is needed are the preferences as well as the backgrounds of people in embodied form. In the second part, those involved contribute the process of comparing whether some experiences belong together. Dependencies on their backgrounds tend to be evened out. The two parts constitute a whole, however. One cannot recognise the ‘best’ in the space of paths (i.e. solutions), unless one has identified their preferred future states (the problem).

Is it research?
A number of authors have argued that the link of the problem solving approach to architecture is indeed to be preferred to the link to the Cartesian approach as it includes both a judgement system, e.g. the preferences of commissioners, and a recognition system, e.g. design solutions. This does not necessarily imply that the combination constitutes research. It may happen, for example, that the approach simply helps to solve one problem (in the here and now) and does not facilitate finding solutions whenever the same or a related problem appears.

Various ways may help ensure that the problem solving approach facilitates solving such problems, i.e. those beyond the here and now. For example, one may attempt to solve the largest class of related problems. If this succeeds, the class becomes a recognition system that helps to recognise those problems and solve them as instances of the class. Such classes have been found; for example, the class of optimisation problems, or decision problems, etc. None seems to have been identified yet in architecture and design.

Fortunately, there is another, comparable way. Rather than search for a class as a recognition system, a group of people may negotiate a class of such states as a judgement system (to formulate and solve as a problem (Day, 2003)). In this case, the class can be delineated as those states that need to be reached to realise some task the group aims to achieve. It will include intermediate states, but also states beyond the preferred future state, for example when one prefers the solution to the original problem to continue, or to stop.

One may visualise this approach as a group of people trying to achieve some task competently, i.e. such that the task is achieved but no new problems are raised thereby – which obviously would be a waste of resources. To achieve this kind of competence,
members will have to 'talk' to each other to coordinate their contributions. Not every form of talking will achieve competence. Not understanding each other, providing confusing contributions will prevent realising the task or allow it to become very costly in effort.

Interestingly, these additions to the problem solving approach do suffice to make it into a form of research. As a coordination system, it combines a recognition system and a judgement system. It is not Cartesian, therefore. It shows a family resemblance to research in that the collective (in its competent form) contains the contributions of its members and thereby names them. If the collective is able to maintain itself in that form, it allows for recognition of the contributions as instances of the name, i.e. of the collective.

**Characteristics**

If one wishes to have research support an activity like building a house, we may now advise that one create a collective (e.g. of commissioners, researchers and stakeholders) that becomes able to do so – by developing competence and thereby providing the knowledge necessary to achieve the task. This means that the task will be achievable even if there are problems (sub-problems to the task), including members of the collective leaving and others joining, such as new owners of the house with new requirements.

To clarify the notion of research somewhat further, it seems useful to point out what it is not and what it is. What it is not is an architect getting some people together to ask them to collectively define some objective or problem – and then using the result as part of his or her own design. This approach is sometimes referred to as the participatory approach (Arnstein, 1969; Fagence, 1977). The problem is that the group does not develop competence. It becomes a resource to the architect, but not to the task or to its maintenance.

What the notion of research is may be exemplified by applying it to have a city’s inhabitants support its development. The task would be to identify what paths lead to a city that supports them to become as creative as possible – and maintain that support when it is achieved. One path might be to make neurotic people feel welcome, another to allow them to experiment (Florida, 2008; Landry, 2006). Once such paths have become recognisable, inhabitants may choose to follow or switch paths and become competent to maintain the result.

The difference between this approach and more traditional approaches to city design is that it helps people to coordinate their efforts to achieve a purpose within the constraints of some concept. This allows an ‘Eigen’ logic to develop, i.e. stable structures that over time support what people become (e.g. ‘neurotic’ city). This stands in contrast to when the non-human part of a city is designed to fit some vision, without attention to how this vision might destroy or support the activities that are needed for a city to grow and maintain itself.

**Conclusion**

This contribution was inspired by some authors who seemed to claim that research does not make their work as architects more viable and/or creative. While doing so, they used the word research as a shibboleth – to enter the community of research. The aim of this contribution has been to argue that research changes as much as any other activity, and that one cannot simply say that it – as defined at some moment in time – does or does not support architecture (or education, or community development, or innovation).

If one wishes to link research systematically to new activities to improve them, one should be aware of this change – and not advocate changing the world via forms of research that have been successful in getting to know how the world works. The latter are still useful, and they remain part of the family of research. But the family still grows and differentiates. Newer forms of research still develop. Knowledge increasingly appears to reside in collaboration between people – to understand the world while changing her.

**References**


An Emerging Research Culture – Building Doctoral Scholarship in Architecture and Design at Sint-Lucas

The authors claim that a special field specific research has been developed at Sint-Lucas School of Architecture. This institution has always been at the forefront of development in the professional fields of design and architecture. Several years ago, the intentions of the school for their prospective research pursuits were therefore defined to be experimental, practice-based concepts rather than attempts at emulating discipline-based research, characteristic of the academic fields (Verbeke, 2006:9). The Bologna-Berlin policies, recognizing doctoral studies as the third cycle in European higher education, have prompted a process of establishing at the school a new doctoral scholarship, based partly on research educational activities and partly on producing new research by the doctoral students.

We appreciate very much that we both have been given the opportunity to be part of that development the recent four years.

One objective of this paper is to present and discuss an epistemological-pedagogical stance with regard to research education for practitioners. Some opinions hold that practice-based researchers do not need epistemological and scholarly foundations – or even should avoid verbal theorising and references to other disciplines – in order to pursue practice-oriented research. Our stance is that practice-based PhD students should be introduced to broader “knowledge landscapes” and be trained in certain generic and transferable research skills. Such training will prepare the alumni of the prospective professional doctoral programmes to contextualise and position their research as well as to be communicative and innovative in a broad professional field.

Another objective of this paper is to assemble some of our experiences from and reflect on the period of the four years of our engagement in the process of developing this new doctoral scholarship at the Sint-Lucas School of Architecture. The leadership of the school invited manifold of approaches to research education as represented by the guest tutors, and it was therefore possible for us to develop, besides the Research Training Session on Knowledge, of which we were responsible, an autonomous research education unit within the overall curriculum. The paper will present this autonomous research education unit within the doctoral curriculum at Sint-Lucas. It will discuss how this unit might have contributed to building a culture of doctoral scholarship in architecture and design at the school.

While describing the autonomous research education unit we shall apply the framework of Goodlad and his co-authors, who define and address five levels within the domains of curriculum: ideological, formal, perceived, operational and experiential
curricula (Goodlad, 1979:60-64). For each level a different kind of description will be used in order to better express their different characters within the whole of the "curriculum ladder".1

Research by design. The ideological curriculum

There have been broad and intensive discussions on how to integrate the field specific insights and reasoning of architecture and design within research, and there is still a lot of confusion about it both in the milieu of the practitioners and of architectural researchers themselves. During the last forty years there have been ongoing debates on the importance of perspectives "from within", and of the "craft aspect", or the "making aspect", as a core focus of the design-related research (Gombrich, 1991:68; Gombrich, 1993:177; also Abrams, 1989; Dunin-Woyseth & Michl, 2001).

It is necessary to develop architecture and design as disciplines of their own ensuring a qualified dialogue within academia, while at the same time, searching for new forms of architectural research engaging practitioners who have the strongest potential to develop the field of expertise. While the former strategy would depend on developing a discourse on the premises of academia in order to make the field "academically researchable", the other one should generate a new mode of research based on the premises of the field of the expertise itself. Then another challenge within this strategy will be how to engage in a dialogue with other knowledge producers, those from academia and elsewhere.

With the advent of post-academic science (Ziman, 2000) one can imagine a fruitful development for architectural and design research "from within" the practice and for its search for new modes of generating and communicating it within the context of an equal dialogue with other knowledge producers.

Several concepts are now in use trying to delineate this specific kind of ‘in practice model’ of research, and especially in the field of architecture and design there are several around the notions of ‘research by design’ and ‘practice-based research’ (Frayling et al., 1997; Rust et al., 2007; Biggs, 2004). These concepts have in the context of "post-academic science" and Mode-2 research opened up for new developments in research in the professional fields of architecture and design. Knowledge production in creative practice has earlier been seen as completely outside of research and scholarship. New conceptualisation of the knowledge field of design and architecture, together with more inclusive and practice-based models of scientific research, is gradually achieving academic recognition as well as gaining the vital interest of the practitioners. (Dunin-Woyseth & Nilsson, 2008)

1 This presentation and discussion is an abbreviated version of the paper "Building a culture of doctoral scholarship in architecture and design. A Belgian-Scandinavian case" presented by the authors during the international conference “Professional Doctorates”, organised by the United Kingdom Council for Graduate Education in London on 9-10 November 2009.

At Sint-Lucas, the international conference ‘The Unthinkable Doctorate’ in 2005 was a step in formulating the vision of research and setting up a research education program. Important aspects of this vision were formulated by the rector of the school in 2006 as: “Research at Sint-Lucas School of Architecture clearly gives a central position to a syncretic and holistic approach (‘designing’ as a verb; the process is important after all) and fuels it in a multidisciplinary manner from theoretical and analytical perspectives. (…) The research in the School of Architecture Sint-Lucas is developing as a reflection of this integrated approach, without also excluding rigorously defined research within the specialist fields of the staff involved. The emphasis in the School is currently on strengthening designed-based research.” (Verbeke, 2008:12-13)

The Research Training Sessions (RTS). The formal curriculum

The formal scheme for the research education program at Sint-Lucas School of Architecture was implemented as four research training session (RTS) modules in 2006, which were adjusted and supplemented by another four modules in 2007 as a continuation in a second year for the group of those attending the first RTS series. (Verbeke, 2008a; Janssens, 2006b) The research training sessions are now described as a two year program.

The focus on research by and through design is emphasized in the description and curriculum. The program was intentionally designed to foster a diversity of perspectives and opinions, and not to reflect the vision of a single person or methodology (Verbeke, 2008b). The goals of the RTS program are formulated in six points with the aim to: Facilitate discussions on research directions in the fields of architecture and design; Develop the research focus for Sint-Lucas; Support researchers at Sint-Lucas (and others); Establish international collaborations between schools of architecture; Create input for research within the different domains of research and education; Prepare researchers for design-based research projects or a PhD in architecture (or design).

It is explicitly stated that the content of the program modules should be on a meta-level relating to research and design methodology and culture rather than to the specific content of individual doctoral projects. Individual supervision and guidance was not a part of the program at the start, but was subsequently formalized through part time positions offered to several international guest-professors.

The intention of the Research Training Session program is to discuss fundamental issues of research by design in such ways that each participant can develop his/her own research ideas and research questions. The aim is that when finished the two year RTS program the participant should have prepared a research project mature enough to be formally started.
The missing “mezzo-level”. The perceived curriculum

After we executed twice our Research Training Session on knowledge (in 2006 and 2007), we were invited to join the staff of the Sint-Lucas School of Architecture as senior professors (among a group of six guest professors in part time positions). This new form of affiliation assumed extended educational responsibilities, including regular mentoring of the prospective PhD students. This close and frequent contact with the groups of previous participants of the RTS opened for discussions about how they perceived their own learning situation.

During the RTS on knowledge, we attempted to introduce various “landscapes of knowledge” and some emerging modes of knowledge production. We discussed, among other forms of post-academic science (Ziman, 2000:67), Mode 1 and Mode 2 of knowledge production and how design research could relate to both. The founders of the Mode 1 / Mode 2 movement maintain that in order to master the tasks of Mode 2, one has to get through an apprenticeship in Mode 1. One has first to develop a kind of intellectual identity of Mode 1 in order to be able to acquire multiple cognitive and social identities for practising research in Mode 2 (Gibbons et al., 1994:149). We regard research by design as a form of post-academic science, and as such its prospective practitioners should be introduced to the principles of traditional research in their own field, but also be trained in some transferable and generic research skills which are common to Mode 1.

We agree that the research training sessions offered a certain meta-level in the research education. The sessions have inspired many of the participants to continue their involvement with research, and the RTS have been research-educationally successful in building bridges between the participants’ everyday experiences of professional practice and the possibilities to make them the basis of their field specific research. The two internal publications (Janssens et al., 2006; Hendrickx et al., 2008) witnessed that the RTS opened for new horizons and interests, and for building grounds for a new culture at the Sint-Lucas School of Architecture.

While “mapping” the research education program, we found the individual tutoring of the prospective PhD students by numerous guest teachers as a micro-level. Frequent contacts with teachers from various intellectual “schools” of research have given many opportunities to discuss one’s research interests from various angles. This propitious situation helped the individual persons to “find” his or her way of thinking. Yet many students seemed not quite to perceive the relations between the macro-level of inspiration of the sessions and the micro-level of their own emerging research project.

Keeping in mind the knowledge stance, based on the conviction that even the pioneers of new ways of producing knowledge should have some orientation with regard to traditional research, and that they should master its generic and transferable skills, we recognized a missing mezzo-level in the offered research education program.

The mezzo-level is one of transferable skills which prepare prospective scholars “…to be able to formulate research questions / problems, to access literature, to collect data / to plan and execute field work, to write a thesis / report, to defend one’s findings” (Frijdal, 2007).

Recognizing this, we formulated an independent unit of research education, consisting of four seminars. The first two of them were given a common name of “scholarly criticism”, the two others of “scholarly craft”. If one recognizes research as a practice, one has to acknowledge ongoing criticism of one’s own and of others’ practice as one of the most important generic skills in the professions. Without mastering the field specific craft, one cannot become a full-fledged professional. We found these skills common both for the design professions and for the “research professions”. Our intention was to address through these seminars the transferable and generic research skills, with the hope that the mezzo-level would have the potential to bridge the macro-level of the Research Training Sessions and the micro-level of the individual tutoring.

The autonomous unit of the research education: the macro- mezzo- micro levels of the operational curriculum

The macro level

The Research Session Training on knowledge which the authors have been responsible for, has been focused on different forms of knowledge and how these forms originated. A specific focus has been put on the forms of knowledge present in the domain of architecture and design, in relation to other kinds of knowledge. Established modes and notions of scientific knowledge have been discussed together with other ways of knowledge production. The so-called “Roskilde Model” has been applied as a frame for the pedagogical structure of the training. The basis of the model is to organise short periods of concentrated ex cathedra teaching by international lecturers, preceded by intense literature studies and followed by practical exercises such as writing of essays. The “Roskilde model” has been based on the pedagogical principle of learning by doing, which has relevance for both architectural design and architectural research.

Following the “Roskilde Model”, the required reading for the session made up the basis for a pre-start assignment of preparing a concise paper. The lecture part of the session consisted of a general introduction to various knowledge forms and to the field specific knowledge in the design professions (Dunin-Woyseth, 2009; Nilsson, 2004). After the lectures the participants were requested to answer the questions:
‘Why?’ ‘What?’ and ‘How?’ with regard to their ideas about a prospective PhD project. This assignment was done both in an academic way – a written paper – and in a designery way – an image of their proposed research project.

The results of the session assignments have each time turned out to be fruitful for the students’ progression in developing their ideas towards a research proposal. Their ideas expressed in both written and visual form demonstrated that the participants familiarized with various types of knowledge and were willing to discuss their design-based knowledge within a broad “landscape of knowledges”. (Dunin-Woyseth & Nilsson, 2006:171-172; Dunin-Woyseth & Nilsson, 2009:43-44)

**The mezzo level**

The first of the seminars, *Scholarly Criticism I*, was focused on training the doctoral candidates in the “art and craft” of academic evaluation. The object of such evaluation was a recent doctoral thesis. The two and two participants of this seminar were to present the chosen thesis and thereafter discuss some aspects of it.

The second seminar, *Scholarly Criticism II*, had two objectives: (i) to introduce and train the PhD students in constructive criticism; and (ii) to get feedback from the peers, which would give a concrete support to the research projects. This time the PhD students were to study and give criticism to the colleagues’ research proposals.

The objective of the seminar *Scholarly Craft I*, titled “Producing a Dissertation”, was to build an overview of and discuss the different phases and skills needed when producing a dissertation. A textbook on the matter was chosen by the teachers as the basis of this seminar (Borden & Rüedi Ray, 2006).

The second seminar, *Scholarly Craft II*, held under the title “Navigating in various knowledge landscapes”, was an attempt to elaborate the issues of the RTS Knowledge, with emphasis on academic research. A textbook was chosen to give a concise and rudimentary view on philosophy of science, the relation between architecture and natural and social sciences, as well as humanistic studies (Mo, 2001), in order to give a perspective on the potential of architectural and design research with regard to the disciplinary knowledge of the academia.

**The micro level**

During the years of our engagement as senior professors at Sint-Lucas, we met on numerous occasions the doctoral students in traditional one-to-one tutorials, but we also practised what could be called “tandem tutorials”. The latter were meant to stage small seminar discussions to build an academic culture and strengthen the PhD students’ scholarly awareness, besides the traditional tutoring around the doctoral student’s own research project.

**The response of the doctoral students to the unit’s content and its impact. The experienced curriculum**

This part is based on written response from some of the doctoral candidates at Sint-Lucas delivered to us in September 2009.

**Research Training Session: Knowledge**

“I reread the articles we had to read and the little paper we made for this session: almost everything was very new and overwhelming to me then. Now this knowledge on 'Knowledge' seems common to me after these years, but then it was the first time I heard about Mode 1 and 2, tacit knowledge, explicit knowledge, transdisciplinarity and so on. I remember reading the articles, having a hard time to comprehend. (...) It is comparable to learning a new discipline: too many things have to be understood together in the beginning before some comprehension takes place.” (Laurens Luyten)

“The RTS session in which the concept of Mode 1 and Mode 2 have been introduced have been very clarifying, not only for me but for the whole research community at Sint-Lucas. The required reading (...) have opened up our collective mind’. The texts guided us through the first and often most dangerous ‘minefields’ in a country we had never been in before (...) This input also cleared the way to a first scheme of my approach, that still holds good today: it is still ‘there’ in my current scheme and my actual lines of thought. (...) But above all, it was an excellent exercise in self-positioning, like racing the top of a hill, enabling the wanderer to reward himself with an overview on the whole situation. And this was more than necessary.” (Jo van der Berghe)

**Scholarly Criticism I: Studying in depth a PhD thesis**

“This whole new concept for a PhD opened up my eyes again: the concept of a PhD appeared to be ‘designeable’! Could it also be a ‘thing’ like this? (...) The awareness of the possibilities concerning this matter began to emerge. (...) Altogether, this gave me a view on my own practice and was an excellent exercise in self-positioning, or: positioning my work in the wider landscape of knowledge.” (Jo van der Berghe)

“While discussing at the workshop (...) it became obvious that there are ‘schools of research. (...) Research in my opinion can not be (only) an introspection in the own design (processes). It has to have a purpose beyond the self.” (Johan Liekens)

**Scholarly Criticism II: Research by Design, Theories, Methods, Projects**

“I remember that we discussed how certain people critiqued paper presentations at a conference. For me that was very useful: this whole academic scene is really unknown to me, and I like to know what drives different actors on this scene and how they relate to each other. It makes it more distinct to me what I can expect when acting on
that scene. (...) In the end this workshop was very useful for me at different levels. By making such an official moment of delivering critique my timidity dropped away and it was possible for me to learn it by doing it.” (Laurens Luyten)

“The combined use of constructive criticism (during the process) and normative criticism (after the process) offered me an additional tool. This was a very professional session, in that it offered us much information that enables us to become ‘professional’ academics, to learn the skills, to adopt the state of mind so necessary to pass the official gatekeepers, but also to help us build our research project in the direction of something that can be managed, be mastered by ourselves through the method and not vice versa.” (Jo van der Berghe)

Scholarly Craft I: Producing a Dissertation

“This workshop came at the right time for me. I had written with great difficulty my first article for Reflection (...) So this book by Borden and Rüedi Ray (…) was a great help in getting an overview of how to produce a dissertation and what I had to take into consideration while researching (e.g. what to bear in mind when doing an interview). (...) Most of the book helped me a lot in starting up my research activities as a novice. For me reading the first part of the book was already the success of the workshop. And it got better when people (…) showed me how they conducted research or wrote articles. (…) It was helpful to team up for the preparation because we could exchange practical information.” (Laurens Luyten)

“This session had the same characteristics and qualities as Scholarly Criticism sessions. It has demonstrated to be a very important input for me in terms of academic skills.” (Jo van der Berghe)

Scholarly Craft II: Navigating in various knowledge landscapes

“The knowledge presented in this book seems to me important in order to be able to operate at the Mode 1 scene. Of course this book is a dense presentation of a very broad field. (…) I think it was the right choice to the reading of the book and let everybody present a part: it was a lot of knowledge to share. And even if I did not understand all of it, I know where to find it now, and that is maybe the most important outcome for me of this workshop. (…) And in conclusion, I believe that knowledge covered in the workshop is an important part of any PhD-education. And I am glad that have participated in this workshop”. (Laurens Luyten)

On the “educational unit” as a whole

“There has to be a structure in learning how research (through design) is done. This has to be done in subsequent sessions. This has to be done in dialogues, to provide insights beyond what we think we see. Therefore we need joint moments of working, on topics, that are related to but that are not our research topics. In his way we can see structures instead of (poetic) content. The workshops (scholarly criticism- scholarly craft) provided in my opinion a setup of a strategic frame of learning and established strong connections between some of the participants in that respect, these workshops to me were the most powerful instruments during my RTS-period.” (Johan Liekens)

“We have to know (have notions of) Mode 1 to operate meaningfully in Mode 2. Why are architects / artists so afraid of what exists, of what is done, and of how it is done? Why do they want to invent everything from scratch over and over again? Why cannot they show the respect for ‘science’ they are expecting back? Why do architects want to communicate through media only they understand, while they are proclaiming to be in search of new universal ways of communication?” (Johan Liekens)

“The whole presented education-package is very consistent and has helped me in general to have a broader view on what I am doing (or should be doing) while acting on the research scene. All of the workshops were fun and interesting for me to do.” (Laurens Luyten)

Towards a new research culture of doctoral scholarship at Sint-Lucas School of Architecture

Some ten years ago the leadership of the Sint-Lucas School of Architecture launched the process of building a proactive milieu for research at the institution. Early in this process it became clear that a narrow academic perspective on studying architecture would not be preferable in the vision of research; various research perspectives should be promoted side by side. While the academic perspective would still be welcome, a new research approach, based in practice, research by design, would be the priority for the future development. While academic research on architecture was most often based on using the methodological tools borrowed from other academic disciplines, this new mode of research would need exploring new, adequate tools, based on designerly thinking. The challenge within this mode will be how to engage in a dialogue with other knowledge producers, those from academia and elsewhere. A certain apprenticeship in the academic research provides a researcher with various generic and transferable skills which will be of great use, while addressing post-academic research.

The Research Training Sessions have inspired the prospective PhD students to engage in research by design. Many of those who attended the RTS began to formulate research proposals as the basis for their future doctoral studies. This group involved in peer-learning and self-organising of research educational activities. With the support of some of them we were able to organise the mezzo-level of their doctoral studies.
This level has been devoted to train scholarly craft and skills to be able to engage in dialogue with other knowledge producers, both inside and outside of academia.

From this we assume that the autonomous unit of research education which we organised in cooperation with the PhD students have helped this group to develop some generic and transferable skills and prepared them in some way to engage in dialogue on research issues in academic contexts as well as in professional practice. This group seems to have initiated a new culture of doctoral scholarship at Sint-Lucas. This propitious development builds certainly on the grounds of the "big design", laid wisely already ten years ago.

References:


The participants were Leslie Burm, Sint-Lucas / Building Technology; Ashley Hennekeam, VUB / Cultural Theory (Phd Student); Aurelie De Smet, Sint-Lucas / Prospective Researcher; Annelies De Smet, Sint-Lucas / Interior Architecture Studio; Mira Sanders, Sint-Lucas / Mixed Media; Dimitri Van Grunderbeek, Sint-Lucas / Mixed Media; and Thomas Laureysens, Genk Media and Design Academy. The tutors were Ömer Akın, Carnegie Mellon University and Burak Pak, Sint-Lucas.

Research by [DESIGN] Research

The RTS tutorial session on design cognition was held during 04/06/2009-06/06/2009.* The session focussed on developing a better understanding of how designers design and the factors that influence this through high level inquiry and research. It included lectures as well as hands on exercises to give participants a first hand impression of what it takes to uncover the cognitive mechanisms responsible for design. Further detail is provided at http://www.designcognition.info/.

Intent

The session ended with a retrospective review and assessment of the RTS tutorial sessions in relation to design cognition. Several important views on design research (covered in this session) and research by design (covered in other sessions) were articulated. This has led to the following reflections that I am compelled to make on the union/dichotomy of research by design versus design research.

The “official” text on the Sint-Lucas website entitled “Context of Research (by Design)” states:

Architecture is a field of enquiry that is characterised by a multi-disciplinary and holistic scope. It is influenced by knowledge and methodologies from Humanities and Exact Sciences. Moreover, the design activities have traditionally a strong link to the arts, inspiring and stimulating the creative conceptual work. Because of this, different methodologies are being applied in research. The design process is seen as the core process during education as well as later in practice. Most current research activities however are related to either the exact sciences or the humanities. Research focus on the process of designing seems to be underdeveloped, but recently receives plenty of attention. Architectural practices have up till now been the place for real life experiments and innovations.


Here design is legitimately seen as the cradle of human experimentation and innovation with things yet to be created, as opposed to the traditional sciences that attempt to explain, predict and control phenomenon already known to be in existence. The difficulty in merging design and scientific research together lies in the fact that exploration and innovation are not equal to explanation, prediction and control. There are fundamental differences between art and science as there are between research and exploration (Akin, 2006). The Sint-Lucas text continues to say:

Criticism has been stating current academic research has only little relevance for these design practices. Since more than a decade, discussions and conferences on research in the field of architecture seem to focus on research by/through design. Consensus seems
to be growing these types of research (although still under discussion itself) merit more focus and support by academia. [http://www.architectuur.sintlucas.wen.k be/index.php?id=2778]

The critical question is to whether we should wear the both-and hat or the either-or hat. Should we bring design and research together to show how they are similar capitalizing on the strength one may draw from these agreements; or should we show how they are different making sure that one is not confounded with the tenets of the other?

Emergence of new knowledge from the interaction of academia and practice is an area that justifiably should be of interest to all designers, as it is to other fields of practice. There is an equivalent of this in the realm of the natural sciences also: as applied research ventures into the realm if innovation through the engineering fields. The research practices in these fields can be an analogy for the type of research that we may fathom in the realm of design.

What characterizes engineering research is akin to the underlying tenets of scientific research: transparency of problem description, methods and findings. In order to allow others to verify the validity of knowledge acquired through research by design, as is the case in research by science or any other means, to be able to understand and if necessary replicate the explorations and experiments that led to the acquisition of knowledge. Incidentally, these are also the parameters that help us distinguish well-defined problems from ill-defined problems that populate both ends of our research spectrum: design and science. There are both design and science problems that qualify as well-defined or ill-defined.

Problem Description

There are well established domains of research that exemplify such research. A notable one is known as “design research.” The literature in this area is extensive and dates back to the 1960s. It has produced some of the critical ingredients in the emergence of new disciplines, such as important conference venues, journal publications, seminal works and centers of research. Wikipedia defines this area in the following terms:

Design research investigates the process of designing in all its many fields. It is thus related to Design methods in general or for particular disciplines. A primary interpretation of design research is that it is concerned with undertaking research into the design process. Secondary interpretations would refer to undertaking research within the process of design. The overall intention is to better understand and to improve the design process. [http://en.wikipedia.org/wiki/Design_research]

As is the case in any domain that is recognized either by a field of practice (as in design practice) or research (as design research), there are prerequisites that are critical to its emergence and recognition as legitimate endeavors for academics and practice.

First there is the emergence of the domain through methods that are either newly created or adopted from other fields to apply to a set of novel problems in the new domain. Through these explorations a coherent approach to defining the set of problems of interest emerges. There is general consensus on what the first-order problems of a domain should be.

For instance, what is creativity? How do designers learn? What distinguishes a good design from a bad one? What distinguishes an expert designer from a novice? Furthermore, there emerges consensus about the methods of investigation. Should we introspect about the answers to such questions; use observational methods borrowed from empirical-social sciences; or should we use an analysis of the designs produced after the fact? Whatever method(s) we decide to employ they must adhere to the tenets of research (used as a neutral term not belonging either to the sciences or the arts) articulated earlier: “transparency of problem description, methods and findings, in order to allow others to verify the validity of knowledge and to be able to understand and if necessary replicate the explorations and experiments that led to the acquisition of knowledge.” There should be consensus about the goodness of these methods as well.

Finally, there has to be an accumulation of substantial findings that emerge from this work that converges into a body of knowledge through consensus. The mechanisms that bring to the collective consciousness of the participants of a domain the consensus that emerges from such activity is diverse but at a minimum set should include refereed journal publications, textbooks, conferences and professional societies. To this list we should add concerts, performances, shows, manifestos, installations, buildings and environmental interventions in the domain of design and fine arts. The Design research movement illustrates these parameters of an emerging domain.

Some of the origins of design methods and design research lay in the emergence after the 2nd World War of operational research methods and management decision-making techniques, the development of creativity techniques in the 1950s, and the beginnings of computer programs for problem solving in the 1960s. A statement by Bruce Archer encapsulated what was going on: ‘The most fundamental challenge to conventional ideas on design has been the growing advocacy of systematic methods of problem solving, borrowed from computer techniques and management theory, for the assessment of design problems and the development of design solutions.’ Herbert Simon established the foundations for ‘a science of design’, which would be ‘a body of intellectually tough, analytic, partly formalizable, partly empirical, teachable doctrine about the design process.’ [http://en.wikipedia.org/wiki/Design_research]
There are two immediate concerns about a scenario of this kind: the intensely individualistic nature of design and creative exploration does not lend itself to consensus and convergence that easily, and the counter innovative tendencies that emerge once consensus is reached and design work falls into generally acceptable categories. This can be a serious threat to innovation and creativity.

History of design and art (not to exclude architecture) attest to the fallacy of these arguments. In spite of the personal nature of design and artistic creation the fields of the arts are populated with schools of practice and creation that follow from one work to the next. In the architectural realm alone, we can capture most of the work done by all architects, save a few isolated pockets of obscure practice, through a series of stylistic categories such as antiquity, gothic, neo-classicism, renaissance, mannerism, baroque,rococo,art nouveau,art deco,constructivism,modernism,post-modernism,deconstructivism, and so on. This attests to the fact that even creative domains like design and architecture are not immune to coherence and consensus of its participants creating pockets of imitative and replicated work, which should not be seen as a threat to further creativity. Thomas Kuhn captures this idea for the sciences in his seminal work on paradigms and paradigm shifts as a model for advancement of human knowledge. After each cohesive pocket of practice and belief comes a dismantling of the old regime and introduction of a new paradigm.

Bruce Archer encapsulated the view in stating his new belief that ‘there exists a designerly way of thinking and communicating that is both different from scientific and scholarly ways of thinking and communicating, and as powerful as scientific and scholarly methods of enquiry when applied to its own kinds of problems’. This view was developed further in a series of papers by Nigel Cross, collected as a book on ‘Designerly Ways of Knowing’. Significantly, Donald Schön promoted the new view within his book The Reflective Practitioner, in which he challenged the technical rationality of Simon and sought to establish an epistemology of practice implicit in the artistic, intuitive processes which [design and other] practitioners bring to situations of uncertainty, instability, uniqueness and value conflict. [http://en.wikipedia.org/wiki/Design_research]

Methods

There is a good deal of field experience with methods that can get us from the problem definition to acceptable solutions, not only in art and architecture but in other engineering design fields as well. Millman and Bainbridge (2008) describe anecdotal evidence that points to the value as well as pitfalls of method-based design requirements and testing.

True story: At Sterling Brands in New York, we have a wonderful cleaning woman named Marta who comes to the office every night around seven o’clock to clean the place up. One evening not so long ago, we had a client review that ran rather late into the night. We were all gathered around the table in one of our conference rooms, where we had narrowed a wide range of package design options down to what we all considered the top three. We sat there with furrowed brows as we pondered the three finalists and attempted to make a democratic decision on the favorite. Suddenly a light bulb lit up over our client’s head. With bright eyes and a sudden burst of enthusiasm, he jumped and said, “I know what to do! Let’s get Marta in here and see what she thinks!” [http://www.aiga.org/content.cfm/design-meets-research]

Innovation through user perspective is not new but remains a powerful approach to design. Defining the problem --- design requirements --- and testing the goodness of a result -- how do we know when we are done designing? -- are the two bookends of the three tenets of good design as well as good research: problem > method > result.

Yet, this approach remains less than perfect. Users as well as designers are saddled with the nearly impossible task of imagining that which does not exist. This is the greatest distinction one can draw between traditional science and design.

 Culturally speaking, people are generally stymied by self-determined limits to create and invent. As a result, prior to the invention of the car, the mass pre-conceived boundaries of our collective imagination were constrained by notions of what seemed possible, tangible and even logical. The idea of an “automobile” was as foreign and mysterious a comprehension then as time travel might seem to be now. … Cut to present day and we find that Malcolm Gladwell, author of runaway anthropological bestsellers Blink and The Tipping Point, has called for the abolition of focus groups. He contends that because human beings cannot rationalize initial impressions it is both misleading and dangerous to ask people to explain what they like and why they like it. [http://www.aiga.org/content.cfm/design-meets-research]

One of the ways with which we can get around the difficulties of introspected or interview-based elicitation of design requirements is Ethnographic Research.
Ethnography is the branch of anthropology that provides scientific descriptions of individual human societies. Ethnographic research involves rigorous one-on-one conversations and observations with consumers in their everyday surroundings, be it at home, at work, shopping, in a bar and so forth. This approach helps marketers and designers understand consumers on a much deeper level than any other qualitative research technique. [http://www.aiga.org/content.cfm/design-meets-research]

The advantages of focus groups are (1) they can give quick and controlled feedback, (2) they are better used to explore broader conceptual themes than tight executions, and (3) design can be utilized to stimulate emotions versus land at solutions. The challenges of focus groups are: (1) the environment is usually unnatural (e.g., one-way mirrored room), (2) respondents often say what they think you want to hear, not what they really feel, (3) the temptation is to treat consumers as if they were art directors and experts, and (4) the forum is often perceived as old-fashioned.

A more rigorous approach is the quantitative market research using eye-fixations. In this approach the aim is to define, measure, and report on the relationships between various elements of a design by comparing one design to another in a very specific environment.

Eye tracking is simply the tracking of the pupil as it moves across an image. Eye tracking technology is highly effective at measuring the speed in which a design is seen in a competitive context and the way consumers navigate that design (i.e., what they look at first, what they pause at longer, etc). [http://www.aiga.org/content.cfm/design-meets-research]

The advantages of quantitative eye tracking include (1) marketers often believe that which is not measured is not fully valued, and (2) eye tracking is significantly more sophisticated than any other type of quantitative research in terms of noting who sees what, speed of noting how quickly they see what, and reexamination of who returns to look at something again, (3) you get multi-dimensional measurement: aesthetic appeal, product expectations, imagery, shelf impact, purchase intent, etc., (4) it yields numerical and projectable ratings, and (5) it is an excellent test of impact and alienation. The challenges include (1) it is sometimes used as a “go/no-go” decision maker versus as a diagnostic tool to guide a final decision, and this can be shortsighted, and (2) quant testing cannot realistically project sales impact.

Through online testing it is possible to get feedback from large groups with speed and at low cost. However there are problems of accuracy and quality of information since the responders’ parameters and motives are not known even problematic. The advantages of online testing are (1) it casts wide net, (2) it is time and cost efficient as well as flexible, and (3) it is kind of “cool.” The challenges are (1) there is often a misconception about speed—it is not really that fast, (2) there is a limit to how long respondents will stay involved online, (3) there is no way to ensure the purity of polling sample, and (4) there are inherent issues with quality control; design subtleties can be lost on screen.

In the Final Analysis

It should be evident from the discussion above that the formative ideas about a meeting between design and research are not in short supply. By the same token, the difficulties of the task are as numerous as these ideas. Therefore, we find ourselves in a position to mediate between conflicting and contradictory paradigms of research in design. I would advocate a starting point that takes stock of the where we are using the parameters of research in general: problem definition, method, and results. There are many slices we can take through these parameters (Table 1).

Table 1: Slices of Research Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Design Research</th>
<th>variants in between</th>
<th>Research by Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>problem definition</td>
<td>- design methods</td>
<td>- user needs</td>
<td>- designs</td>
</tr>
<tr>
<td></td>
<td>- design process</td>
<td>- user testing</td>
<td>- new styles</td>
</tr>
<tr>
<td></td>
<td>- design decision making</td>
<td>- marketing</td>
<td>- manifestos</td>
</tr>
<tr>
<td>methods</td>
<td>- protocol analysis</td>
<td>- introspection</td>
<td>- intuition</td>
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<tr>
<td></td>
<td>- ethnography</td>
<td>- experimentation</td>
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<tr>
<td></td>
<td>- eye tracking</td>
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<tr>
<td></td>
<td>- retrospective reporting</td>
<td></td>
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</tr>
<tr>
<td>results</td>
<td>- describing design acts</td>
<td>- novel designs</td>
<td>- novel designs</td>
</tr>
<tr>
<td></td>
<td>- good design tools</td>
<td>- novel approaches</td>
<td>- novel approaches</td>
</tr>
<tr>
<td></td>
<td>- training designers</td>
<td>- novel patterns of thinking</td>
<td>-</td>
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<tr>
<td></td>
<td>- teaching creativity</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- measuring expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>strengths</td>
<td>- verifiable</td>
<td>- individualistic</td>
<td>- non-verifiable</td>
</tr>
<tr>
<td></td>
<td>- replicable by others</td>
<td></td>
<td>- non-replicable</td>
</tr>
<tr>
<td>weaknesses</td>
<td>- non-individualistic</td>
<td></td>
<td></td>
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</tbody>
</table>

The picture that we see in each of these slices depends on whether we are looking through the lens of design research or research by design or hybrid views that lie in between. If we realize that there is a spectrum of positions between design and research and these positions constitute a continuum from Design Research to Research by Design, with some interesting variants in between, we have a better chance of making sense of where we stand.

Ömer Akın
References and Bibliography

10. Millman, Debbie and Mike Bainbridge “Design Meets Research” (February 22, 2008) http://www.aiga.org/content.cfm/design-meets-research
Reflection

For four years Adam Jakimowicz and I have run a workshop on reflection as part of the Research Training Sessions course at St Lucas Architectuur. In writing for St Lucas’ “Reflections” we have played with the recursion and self-reference inherent in publishing about reflection in a book series called Reflections, and in reflecting on reflections of the workshop in order to, reflectively, publish these reflections of reflections in Reflections. We have told other stories, of (for instance) self-discovery through reflection and of a failure to learn caused by ignorant arrogance rejecting the reflective design process of conversing with oneself thorough the medium of paper and pencil (my failure!). This year, with help from both Adam and Burak Pak, I shall write about what we do, now that we have established this well enough to conclude our collaboration.

Reflection, as a strategy for learning, may be thought of as considering something you already know in a different (and alert) way, thus allowing the person doing the reflecting to reconsider. As a word it has become more familiar through the (re-)discovery over the past 10 years that it is an essential human activity and one of the central sources of learning. As far as I am aware, in spite of Donald Schön’s work in the early 1980s, the word did not have great currency in academic circles before the start of the millennium.1 In the sense of reflecting back, it is clearly a form of circular action, and is essentially cybernetic. In fact, because we reflect on what we do, it becomes reflexive and second order. To reflect on reflecting is thus a “second-order” activity, as, for instance, second-order cybernetics: the consideration of cybernetics in cybernetic terms.

We have “taught” our session as an unstructured workshop. Apart from time constraints, little or nothing is firmly planned. We have started with introductions, asking what people think reflection is and why we should spend time on it. But from that point on we improvise, responding to what our participants tell us, to the dynamic of the group in the situation. Reflecting on what they give us, we shape how we will move forwards, filling time until we reach the official end, reflecting in order to change our understanding, finding a new light. As the participants tell us, the taking part is at least as much a reflection as any techniques and understandings developed as a result of participating.

There are many ways we can see something in a new light. In the extreme, some argue that, because we learn (or because the world is flux), we never see the same thing in the same light. As Heroclitus (actually Simplicius, restating Heroclitus) used to tell us: you can’t step into the same stream twice.2 Under these circumstances, it is often difficult to know what “the same” means! How do we know it’s the same thing, if it’s different?

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1 The etymology goes to Latin: to bend back.
2 More precisely, according to Wikipedia, “Ποταμός τοῖς αῖτοῖς ἔμβαίνομεν τε καὶ οἶκ ἔμβαίνομεν, εἶμέν τε καὶ ὁδὸν ἔμβαίνομεν, εἶμέν τε καὶ ὁδὸν ἔμβαίνομεν.” “We both step and do not step in the same rivers. We are and are not.” My great teacher, Sam Stevens, had an equally profound variant: you can’t step into the same river once.
Designers (amongst whom I include artists, because I think we share the same central creative process) don’t usually have too much difficulty with this concept. We become used to uncertainty and incompleteness, to continuous process, and so the idea of a same that is not the same (of a same that changes) is not so difficult for us to grasp. Often, we develop special practices that help us change something under consideration, either to develop it, or to get a new appreciation and understanding of it. This latter action is an action of reflection.

The key strategies we have used in the Research Training Session Reflection Workshop has been responsiveness and transformation: often transformation that involves changes in relative spatial position. A simple version of transformation is to re-present what we are learning. By this, I mean to present it again, and in a different manner. Over the years that Adam Jakimowicz and I have worked on this workshop together, the techniques we have used have been several.

The simplest transformation we have used, consistently and with surprising success, has been re-organisation by re-positioning and re-placing. We ask participants to write words related to their understanding of reflection and how they do it, on regular pieces of coloured paper, and to place these on the wall in spaces that define personal collections. We discuss these collections, looking for agreements between participants over terms. Often, we rearrange terms not by people but by grouping similarities in terms, but we will use whatever criterion seems appropriate. We discuss and rewrite, add and remove, and re-order on the wall.

What is most surprising, at least to me, about this simple device is its deceptive depth. Each sort of the sheets gives rise to new discussions, peeling away layer after layer of the infinite reflective onion: the simple act of arranging bits of paper with single words or very short phrases on them, on a wall, provokes, teases out and reveals, while questioning and consequently answering gains in intensity and profundity. As depth of understanding is gained, so there is more to reflect on, and more terms may be added (while some may be taken away).

There are seemingly endless riches to be had from stating, positioning, reconsidering, changing, re-arranging, although we have also found recursive processing which often leads to a stable “self-reproducing” outcome: a fixity that, when some understanding is operated on (as in the manner, above) just leads to the same understanding re-appearing.

An extra, and much more graphic dimension was added (as Adam writes) through visual mapping. As well as the familiar connecting of (names of) concepts that are the basic material of mind mapping, we persuaded each participant to elaborate visually both on what the concepts words mean to them, and on their general feeling about the material and the activity of making mental maps at the time they are made (reflecting on their mood as they made the maps), within the context of a workshop focussing on reflection. Participants were asked to think by doing—writing, drawing—to concentrate more on the process, on being “here and now”, than on making “the” statement. Thus, mapping becomes both a medium and an environment of exploration, and its product, the written and drawn content, with suggested relations between the items, becomes a powerful material for further reflection.

Following the general line of the reflection workshop, which is based in improvisation and listening, the mapping activity (in its main part) focused on the conversation within, inner monologues and dialogues, which can be visualized and recorded. Therefore the maps were intended to act not as posters—visual manifestos—but as modest accomplices in the process of reflection: and this aspect was quite challenging and difficult. Sometimes it happens that it is much easier to make a powerful conceptual statement, even one that is quite artificial, than to open oneself for an honest exploration, and to patiently proceed with questioning, listening and visualizing, especially on personal level.

These maps provide a very different (but complementary) view, which enriches the view both contained by and derived from the words.

As we all know, “A picture is worth a thousand words”: and, as most of us then forget, “A word is worth a thousand pictures”. Each inspires the imagining of and in the other.

Mental map prepared by the RTS participants, Batch 2007
This year, we happened upon something new. I write “happened upon” to emphasise the non-planned-ness (or openness and responsiveness) of the way we work. It combined elements of both the words on the wall, and the graphic mind maps, in a structure inspired by the structures of “topics that may be learnt” that the great cybernetician Gordon Pask invented and called Entailment Meshes.

Pask's Entailment Meshes are vast structures of topics that might be learnt, which are taken to constitute some field of interest. Pask's design recognises that learners come to any field they wish to study with different prior knowledge, different ways of learning, and seeking different outcomes and knowledge. They also understand differently. This means that anyone can start anywhere they chose (at any topic or topics), and that they can go to (seek to learn) any other topic(s) they wish. For this reason, any route that might go from A to B must also be able to go from B to A (B can be derived from A, and A from B). In addition, to transform A into B, some further topic (C) is required to act with or on A, thus making the difference between them. So A can't just go to B: A and C act together to achieve B. Reversibility (called local cyclicity in Pask's terminology) means that A and B act together to achieve C, and B and C act together to achieve A, also. The whole mesh is richly cyclic, and very full. It has no hierarchy: hierarchy comes as a result of how the student sets up his or her start and end points, and then "prunes" links in the mesh to provide a hierarchy that comes not from an order in the material to be learnt, but in the knowledge and wishes of the learner.

Let me give an example that Pask liked to use. Consider these three topics that might be part of an Entailment Mesh on the field of geometry:

X: circle
Y: rotation
Z: compass

If I rotate a compass, I derive a circle (Y and Z give X);
To make a circle with a compass, I derive (and apply) rotation (X and Z give Y);
A circle is produced by rotation, from which I derive a compass (X and Y give Z).

Of course, the examples I give are minimal examples: you need at least 2 topics to generate the next one, so the minimum number to form a local cycle is 3.

It is a major task to provide the sort of structure which is required to construct an Entailment Mesh, and to complete this is tiresome. But a completed Entailment Mesh, following all the rules, is required when we wish to study some clearly defined body of knowledge that makes up a field. In the Reflection Workshop we are not doing this. We are learning to operate in a particular way, with each other, in a special environment. What we are making is a jointly authored proposition, the beginning of a research project that might eventually lead to a formally complete and proper Entailment Mesh. We are using the Entailment Mesh not as a Paskian ideal but as a means of approaching that. It is an authoring tool, rather than an environment in which we come to learn a defined field (although we study in order to author).

So it is not our intention to make an Entailment Mesh, but to take first steps that begin the process, through which we can see rich and alternative paths between a set of topics that the participants have generated and which they compose together, working as a group to explore the different ways they each understand the ensemble of topics, and their generative relationships. We also simplified by placing several topics under one (general) heading, and allowing the introduction of what should be new topics that provide the extra topic for and indicate the direction of derivation. As such, what we produced is a briefing towards the construction of an Entailment Mesh—a Quasi Entailment Mesh (QEM).

But it is far more. It allows participants (and later others) to explore differences in how they each conceive the topics and their relationships. This transformation of the material into a collectively generated map, full of layers and contradictory interpretations, massively “incomplete”, allows and encourages discussion and questioning, and, through them, new and richer learning. It gives rise to a powerful form of reflection through the transformation and enrichment of the original material.

In the time since the workshop, we have made several attempts to translate this map into electronic form. With the help of Burak Pak, a research associate in the school, we have finally made an electronic version of our QEM that, itself, maps many of the qualities of the original. It is available for inspection at:

http://d-ref.blogspot.com/
At this site you can find both the electronic QEM, and a blog. I hope that, if you visit, you will leave your comments, and perhaps give your answers to the following questions:

How successful you think the QEM is?
Can learn by exploring it?
How you would improve it?

These questions are intentionally a little vague so you can explain not only your response, but how you understand the question.

These questions have already been asked of two special groups: the group who made the original QEM; and participants in the Reflection Workshop from earlier years. One important comment was that the electronic QEM did not recreate the experience that participants had in creating the map and in working together. Of course, it cannot recreate this for those who were not part of the group, though such viewers might themselves create some interesting experience in their interaction with the QEM which might conceivably be similar to the experience of those who made it; and it has material qualities that are very different than the original, which was made with string, paper and nails, on boards.

In creating the electronic version of the Quasi Entailment Mesh, Burak Pak and I ask the question, whether this sort of electronic map might be valuable as a device to help learning. We will develop this questioning in presenting a paper that discusses reflection as a mechanism, and the translation into a multi-authored electronic version based on Pask's conception of the Entailment Mesh.

Burak Pak adds the following notes, explaining unique aspect of what we attempted.

There are many maps on the web similar to ours (where the links of the visualisations have been sent by participants)

However, most of them only visualise:

Nodes
Links connecting them

We are introducing:

Parent and Child nodes
Links (uni- and bi-Directional)
Explanation of the Links
Signs indicating directions of the relationships.
Interactive exploration of concepts by visualisation of the first and second degree related nodes and number of connections

Moreover,

We are using a radial scheme with different levels, custom designed for the existing analogue data structure that students created.
This allows different type of relationships to be mapped on different levels (radiuses).  
(relation type one: parent-child / relation type 2: interrelations between parents)
Which gives rise to a dynamic model and other maps can be created with other data.

This visualisation study relates to work in the Post Doctoral Research Project for Brussels Capital Region, "A Virtual Environment Model for Analysis and Evaluation of Alternative Urban Development Projects for the Brussels-Capital Region" being carried out in St Lucas.

Working with Professor Johan Verbeke, we are exploring new ways to represent intangible aspects of Alternative Urban Development Projects.
Screenshot of the (dynamic) Quasi Entailment Mesh (QEM) (post-workshop study in collaboration with Burak Pak)

**Ranulph Glanville (with Adam Jakimowicz and Burak Pak)**

**Photo credits:**
Research Training Sessions – ‘batch 2009’: Ranulph Glanville
Mental maps, ‘batch 2007’: Adam Jakimowicz
Numerous artefacts are made in the design process in addition to the ‘end product’ – sketches, prototypes, specifications, mock-ups. Designers can also use artefacts to enable those likely to use or be affected by what they produce to be involved in the design process, which ensures that these stakeholders’ needs are accounted for in what is designed. Through a discussion of prototypes and two participatory design approaches I will propose distinctions between: designers’ intention in using artefacts in this manner; the character of those artefacts; and the form of stakeholders’ engagement with them.

Participatory Design

Participatory design (Greenbaum & Kyng 1991, Schuler & Namioka 1993) (and other related terms such as “collective systems design” (Ehn & Badham 2002) and “community architecture” (Oberdorfer 1988) ) refers to a range of methods that seek to include the stakeholders of an object, system or space in its design. The principles of this involvement are twofold: firstly that such people have a democratic right to be included in the design of what affects them and will benefit as a result; and secondly that including them in design activities results in better objects, systems and spaces (for example more efficient, more usable, more profitable). Ehn (1993) refers to this as the political and technical features of participatory design. Participatory design aims to produce ‘happier’ (empowered, enabled, fulfilled) users and stakeholders, and better products/productivity.

Within the breadth of participatory design approaches, stakeholders working with members of the design team can produce two forms of outcome: new designs and understanding to inform later design work. In some methods stakeholders and designers co-create new or refined designs (e.g. Sener & Van Rompuy 2005). In other cases members of the design team engage with stakeholders in order to understand their wants and needs (e.g. Luck 2003). The outcomes of stakeholder participation activities are not restricted to one or the other of these possibilities, but may include a combination of both. Considering designers’ introduction of artefacts into such participation activities, an obvious starting point is the use of prototypes.

1 The term ‘user’ narrows the relationship between the designed artefact and the person interacting with it to one of “use” when these relationships can be multiple (others might be expressed by ‘owner’, ‘consumer’, ‘critic’ etc.). It also restricts the function of the designed artefact to satisfying a particular ‘use’. The term ‘stakeholder’ may offer a broader set of relationships, referring to anyone with a ‘stake’ (a vested interest) in something. However the use of any term brings with it a set of assumptions and ‘stakeholder’ is used here with a recognition of its inherent limitations (c.f. Buchanan 2001, Wright, Blythe and McCarthy 2006).
Prototypes
The concept of prototypes and the activity of prototyping within the design process are widely discussed. Houde & Hill (1997) suggest three classes of prototype in software development: those that prototype the role of the product (to ascertain whether the role is suitable), those that prototype the implementation of the product (to work out how it is technically constructed), and those that prototype the ‘look and feel’ of the product (to evaluate its appearance and functionality). Buchenau & Fulton-Suri (2000) extend this idea with “experience prototypes” that encourage evaluation of what it would be like to experience a product. When presenting product prototypes to clients, the design consultancy IDEO have clarified prototypes’ purpose using the terms “looks like”, “works like”, “behaves like” and “feels like” (Pullin 2007). In each of these examples, prototypes are used to test something: styling, functionality, technical construction etc.

The programme committee of the 1983 Working Conference on Prototyping suggested three classes of “prototyping” – activities employing prototypes for particular ends (Floyd 1984). Although the committee identified three classes in relation to computer software development, two of them appear relevant to the use of prototypes in design more widely:

Prototyping for exploration, where the emphasis is on clarifying requirements and desirable features of the target system and where alternative possibilities for solutions are discussed, prototyping for experimentation, where the emphasis is on determining the adequacy of a proposed solution before investing in large-scale implementation of the target system.” (ibid.)

To make the classification more general, ‘designed artefact’ may be more appropriate than ‘target system’ and ‘testing’ may be a more accurate term than ‘experimentation’ – the latter term suggests an open enquiry whereas Floyd discusses it in relation to the “experimental use” (ibid.) of software to test its suitability, a more closed enquiry. Re-phrasing then suggests two categories of prototype:

- exploratory prototypes – prototypes used to work out what stakeholder needs the designed artefact should respond to and what the features of the designed artefact might be;
- test prototypes – prototypes used to check the suitability of certain aspects of the designed artefact.

This classification then suggests another use of prototypes: for exploration.

Prototypes may be employed within design teams or with groups of stakeholders with a focus on testing – to refine design ideas into finished artefacts – or with a focus on exploration – to open up possibilities for designing finished artefacts. However there is a sense in which the term ‘prototype’ itself does not completely capture all the possibilities for using artefacts to engage stakeholders. A dictionary definition of the noun prototype offers:

1. a first form of something from which other forms are developed or copied
2. a typical example of something” (Oxford University Press 2002)

In these terms a prototype implies an appreciation of the design activity’s destination or direction – the prototype is either a ‘first attempt’ at a final product or somehow typifies a final product. What if the final product is unknown to some extent, or if the design team are more concerned with understanding the context for the design work (such as stakeholders’ practices and values)? Two approaches suggest uses of artefacts that enable designers to engage with stakeholders in alternative ways: Ehn & Kyng’s use of mock-ups and my critical artefact methodology.

Mock-ups
Ehn & Kyng (1991) describe the use of “mock-ups” in the Scandinavian UTOPIA project. This project aimed to include journalists and typographers in the participatory design of new computer-based systems for newspaper layout in 1982 when such technology was in early development and not in widespread use. The ‘professional designers’ in the project, including Ehn & Kyng, had produced a series of detailed system descriptions for the journalists and typographers to evaluate. However these stakeholders began not to understand the system descriptions. They could no longer relate them to familiar work situations and consequently could not see their role in the use of such systems. The activity of designing stalled because the stakeholders could no longer participate in it; they could not use the system descriptions to work out possible solutions.

Ehn & Kyng overcame this obstacle by using “mock-ups” – simulations of technical artefacts initially using basic materials and existing objects (such as a cardboard box with a label saying “Desk Top Laser Printer” stuck on it, Figure 1) – to enable stakeholders to “play out” work situations (ibid.). The activity of designing could then continue as the users could creatively engage with how a computer-supported page layout system might work by ‘pretending’ to use it rather than getting stuck comprehending the technical feasibility and operation of its parts. Ehn & Kyng wanted their stakeholders to move from simply evaluating design proposals to participating in the designing itself. Stakeholders’ hands-on experience provided the environment for them to develop new designs, and the mock-ups enabled the creation of novel settings for this experience: ”hands on the future’ as opposed to ‘eyes on a system description” (ibid., p181).
But this approach is not simply a case of making mock-ups of novel technological systems out of cardboard and getting users to ‘make believe’ with them. Ehn & Kyng identify key characteristics of their mock-ups that enable them to work. Firstly the stakeholders are comfortable pretending a cardboard box is a laser printer (say) because it is part of a “design language game” (ibid.) that has a family resemblance to other language games they play. Ehn & Kyng draw from Wittgenstein’s ideas about language games here – that we all play such language games, we can participate in human activity because we all know the unwritten rules of that activity. If one stakeholder asks another to “pass me the proof from the laser printer” she would be unlikely to say “don’t be stupid, that’s a cardboard box” as she would be going against the unwritten rules of the ‘game’. The ‘game’ in this example is the conversations and activities that might occur around a laser printer that, crucially, have a family resemblance to the conversations and activities that do occur around a proofing machine. The stakeholders know the unwritten rules of this ‘game’ because they are experienced journalists and typographers and recognise the similarity to the existing language games associated with traditional proofing machines.

Secondly Ehn & Kyng suggest that it is important that mock-ups are, to use their term, “understandable” as not being the ‘real thing’. From their construction it is clear that they are simple ‘placeholders’ for technical artefacts rather than physical or functional models of them. Using a matchbox as a mock-up of a computer mouse, stakeholders would not question why it was rectangular, yellow and had a strip of sandpaper on the side. The stakeholders know it is a matchbox ‘standing in’ for something else in the game they are playing. Likewise if a drawing simulating a graphics display falls off the wall, stakeholders don’t think the graphics display is broken, they realise this is just a problem with sticking paper on a dusty wall.

Mock-ups are props to enable stakeholders to enact existing and potential practices (their working practices in the UTOPIA project). For Ehn & Kyng, this simulation of practices and the subsequent modification of props and practices is where the stakeholders and ‘professional designers’ do the actual designing (of computer artefacts and work operations). But stakeholders’ use of mock-ups also helped the ‘professional designers’ understand the context for the design work: it revealed the stakeholders practices.

There are obvious practical reasons for making mock-ups out of basic materials. They are cheap and quick to make, saving development resources and time. They lend themselves to easy modification with no pre-requisites for technical knowledge. And they are ‘fun’ to use. But Ehn & Kyng show there are other, more fundamental reasons that make such basic mock-ups valuable tools for participatory design. They enable stakeholders to imagine future situations and participate in designing for them via hands-on experience.

A Critical Artefact Methodology
Participatory design methods are suited to the development of objects, systems and spaces that account for the existing needs of their likely stakeholders. Participation enables stakeholders and designers to share and explore their combined understanding of the context for the design work (stakeholders, primarily) and technological and creative possibilities (designers, primarily). However a challenge for participatory design is the development of significantly new designs that are relevant to stakeholders’ existing, future and latent needs – radical, paradigm changing innovation as opposed to gradual change. How can stakeholders and designers develop radical innovations that lay outside their combined understanding and expertise? A quotation, attributed to Henry Ford, characterises the problem:

“If I’d asked people what they wanted, they would have asked for a better horse.”

How can designers and stakeholders explore novel design ideas if their understanding of possibilities is limited? One strategy is to use provocative conceptual designs to challenge stakeholders’ (and designers’) assumptions about what is possible.

2 The Design Council’s glossary of ergonomics terms includes a definition of latent needs as “user needs which the users themselves may not have thought about but which when met, deliver delight and exceed expectations” (Davis 2008).
This tactic proved useful in a design project where I aimed to develop novel product ideas for the display, storage and organisation of digital photographs (Bowen 2007). The initial participatory activities with stakeholders did not yield useful results. For example, in co-creation activities, stakeholders tended to re-create what they already knew, such as a ‘traditional’ album with a keypad to enter the year of the photographs displayed. To broaden the space of possibilities for exploration with stakeholders, I produced a series of provocative conceptual designs, or critical artefacts as I refer to them.

The Forget Me Not frame (Figure 2) is one of the six critical artefacts that I presented to groups of stakeholders for discussion. I communicated the concept via a series of photographs to present a usage scenario – a ‘photo essay’. In the concept, the frame has a lever on its side that fades out the photograph. The lever also slowly descends over time and needs continually pulling up to prevent the photograph disappearing. The frame also communicates with other digital photograph devices. For example, in the photo essay: my mother is on the phone to me; we have an argument and she slams the phone down; then walks over to the Forget Me Not Frame and pushes the lever down; this ‘disappears’ the picture in the frame; but also any other photos of me displayed on other digital devices in her home.

The presentation of this critical artefact prompted illuminating discussions from the stakeholders. It appeared that, although participants could not imagine wanting the product, they did engage with the ideas and concepts expressed through it. Forget Me Not Frame prompted the comment that “the whole concept of wiping someone out [is] horrible”, but participants went on to discuss the effects of changing family relationships and how being able to ‘edit out’ particular photographs could be beneficial – i.e. with an increasing number of relationships ending in separation and divorce, it could be socially tactful to remove certain photographs on display during family visits.

The critical artefacts were not presented to the stakeholders with the explicit aim of resolving them into final products. Rather they opened up a conversation about alternative functions for technology and stakeholders’ needs in relation to them, which could then inform the design of further concepts. The stakeholders did not want Forget Me Not Frame as a product, but the discussion it provoked showed that another device that enabled selection of photographs to avoid awkward social situations was a relevant need. So, in this application, critical artefacts express a (provocative, challenging) vision of what could be to enable designers and stakeholders to explore a broader area for what should be.

Subsequently, I have continued to use critical artefacts in this manner and, through my research, have developed a “critical artefact methodology” (Bowen 2009) to support such applications as a form of participatory innovation. The aspect of this methodology relevant to the discussion in this paper is the use of critical artefact as critiques to prompt reflection.

My use of provocative and challenging artefacts was inspired by Critical Design (Dunne 1999, Dunne & Raby 2001) and related practices, which offer themselves as alternatives to ‘traditional’ or ‘mainstream’ design by producing artefacts that are not practical solutions to obvious user needs and not explicitly intended for sale, but rather are provocative and prompt reflection in their audiences (often being encountered in exhibitions and publications). Critical Design is a form of ‘design for debate’, questioning the role and products of design rather than conforming to popular expectations:

“Critical Design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products play in everyday life.” (Z33, Dunne & Raby 2007)

Dunne (1999) has related Critical Design to Critical Theory and I have discussed (Bowen 2009) how critical design practices, more generally, share features with Critical Theory. In short, Critical Theory and critical design practices suggest that:
There are contextual factors that affect and situate understanding – i.e. designers’ and stakeholders’ understanding of how design operates and the role of designed artefacts; the unthinking acceptance of these factors propagates ‘oppression’ – e.g. maintaining a society of passive consumers; and critiques offer a way of challenging understanding, and therefore afford change.

In Critical Theory, critiques are alternative views (theories) of society that aim to change society. In critical design practices, artefacts-as-critiques (critical artefacts) embody alternative possibilities (social practices, applications of technology etc.) that aim to change the role of design and its products. In both cases critiques operate via their readers’ intellectual engagement with the ideas presented within them. This relates to Critical Theory’s notion of theory as both explaining and constituting the social world – to change the world, think about it differently.

To summarise my critical artefact methodology: presenting stakeholders with artefacts that challenge their assumptions of what is possible will enable them to reflect on their unwitting limitation of possibilities and consequently enable stakeholders and designers to explore a broader space for design ideas relevant to stakeholders’ existing, future and latent needs.

Comparing uses of artefacts for design participation

Through my discussion of prototypes above, I suggested that designers might employ artefacts to engage with stakeholders for testing or exploration. These could be seen as points on a continuum on which to plot designers’ intention in such activities. I also identified that the term ‘prototype’ does not encompass all possible uses of artefacts in participatory design and described Ehn & Kyng’s use of mock-ups and my critical artefact methodology as other possibilities. There is little intention to suggest a design direction or destination (as could be said of a prototype) in my use of critical artefacts, and this is only part of the intention in Ehn & Kyng’s use of mock-ups where the focus is on exploring practices rather than products. Another continuum is therefore appropriate to plot the intended character of the artefacts, from ‘provocative’ at one end to ‘prototypical’ (suggestive of a design direction or destination) at the other. This provocation may be towards intellectual reflection (as within a critical artefact methodology) or towards enacting practices (as with mock-ups). Figure 3 illustrates these continua.

We might also characterise the different ways in which stakeholders engage with artefacts in these activities. Ehn & Kyng (1991) use Heidegger’s terminology to unpick types of engagement. When their stakeholders used the mock-ups to ‘play out’ practices, the mock-ups were not present as objects in themselves, rather, to use Heidegger’s terms, zuhanden (ready-to-hand) in the activities they envisage. The stakeholders’ engagement is with the activities themselves rather than detached reflections over them. However they note that occasionally the process breaks down and the mock-ups become vorhanden (present-at-hand) to the stakeholders – a visible collection of objects: cardboard, paper, matchboxes etc. Stakeholders’ engagement with prototypes seems to be more of this form – attending to a direct evaluation of the artefacts. Stakeholders’ engagement with critical artefacts, as I employed them, appears to fit neither of these forms instead being intellectual reflection. This suggests a three-axis continuum as shown in Figure 4.
By enabling design participation via artefacts, designers gain an understanding of stakeholders’ needs. Such methods could then demonstrate a form of “research through practice” (Arch 1995) and the distinctions presented here offer a framework for unpicking such practice-based research.
A good record? The use of video in practice-led design research

Over the last eight years, the duration of my ongoing practice-led design research project, video recording has developed from an expensive luxury to being ubiquitous. Whilst this opens up many opportunities for documenting and disseminating research projects, there are also potential drawbacks.

I am a multimedia designer who makes extensive use of video both as an observational tool and as a means of helping convey tacit/experiential knowledge in creative practices. In this paper I will discuss the use of video for such purposes, drawing on my own experiences and the research of others who use video in design research.

Figure 1. The author filming at a Gallery/workshop event with a video camera on a tripod and another hand-held on a monopod.

Background

My research brings a designerly approach to the problem of capturing and passing on the skilled knowledge of expert craft practitioners. It follows an eight year investigation into tacit learning and multimedia and has led to an understanding of how craft skills may be elicited and embodied in learning resources.

My practice engages simultaneously with the two problems of what is to be learned and how it will be learned. It brings together experienced practitioners, learners and designer in hybrid activities that provide an arena for generating understanding of skilled practice, embodied in learning materials rather than stated explicitly in formal conclusions.

1 This research has been carried out in association with Professor Chris Rust at Sheffield Hallam University and funded by the Arts & Humanities Research Council.
A central feature of this practice-led research has been the use of video to record the practical knowledge of skilled craft practitioners and make it accessible to those wishing to learn the skill. To observe authentic activity I often work in locations that are highly compromised by bad lighting, difficult sight lines and shifting objects of attention.

**Video observation**

The use of video for observation has the advantage that it can accurately capture very rich material, but there is a danger that the act of observation will change the situation being observed. On most occasions researchers are wishing to observe authentic activity rather than a performance for the camera. In my experience successful video observation depends on careful selection and use of equipment, along with good interpersonal skills to ensure that recording results in a useful record but does not intrude on the activity.

In my earlier research I limited the intrusion of the recording process by using a very small (and quite inexpensive) digital video camera; the footage was only for my own research purposes, so it did not need to be high quality. I also learned how to make best use of natural light so additional lighting was not necessary. Wherever possible I used a tripod so I could keep my distance from the camera and favoured a G-clamp mini tripod that could be discreetly attached to a shelf or door frame whenever possible (Wood 2006 p21).

My later research was in very noisy workshops so I needed a more sophisticated camera that worked with external microphones to pick up voices above the sound of machinery. Again I attempted to minimise intrusion by using a cut-down professional camera designed for TV documentary makers’ and discreet wireless lapel microphones (Wood & Horne 2008). However, the behaviour of the researcher is easily as important as the equipment that is used. As Hutchinson et al comment in their workbook *Modern media and reflective practice* (1995 p15),

“… you must be aware of the threat of the medium and seek to assure those you use the medium with. You must attempt to suppress your own ego and respect the individuals who participate with you in this project. Always be overt with your aims and intentions, let people get used to the camera, you are not directing you are observing, video in this project is assisting your observation. … the only way to achieve this is to use the camera with people rather than on them.”

In his research, Hawson (2006 p106) sought to give his participants an understanding of the importance of video recording to the project, and suggested that using the equipment right from their first meeting “helped reduce camera and microphone shyness.” Leon (2005) refers to his attempts at becoming invisible as he undertakes his research. Given a limited time span with those he is observing, he seeks to rapidly acclimatise them to his presence, relying on “interpersonal skills to gain intimate access and rapport to sustain the observation.”

In my experience there are a few, simple, practical steps that can be taken to help put participants at ease. I find it worthwhile spending time in advance becoming familiar with the workings of my equipment so I can use it with confidence, and I aim to minimise interaction with it whilst I am recording. If I am hand-holding a camera, I try to keep it at waist level and use the external screen to frame the shot; this is far less intrusive than holding it in front of my face. I get everything ready and test it before I start, keeping a spare tape and battery in my pocket ready for a swift change-over. I find if I am calm, confident and relaxed with my recording equipment, my participants are more likely to be so too.

2 Sony HVR-A1E miniDV camera
Processing video data

The large volume of both visual and auditory data captured during video observation can present a challenge both for the immediate processing of the data, and making it accessible longer term during ongoing research. The more video that is captured, the more difficult it is to effectively index it, to make it usable and allow subsequent review of the material.

The social science approach to processing video and audio recordings is to use qualitative data analysis software such as Atlas Ti, NVivo or Transana which enables the dialogue to be fully transcribed then coded, mapped and linked. However, this is very time consuming if a significant amount of material is involved, so often the initial process is undertaken by a professional transcription service. This results in the researcher mostly engaging with the transcripts rather than the raw video data.

In my experience, reviewing the video in full myself shortly after the event is very enlightening. It has enabled me to pick up on subtle occurrences that I had not seen the significance of when I had been filming and to reflect on my own role as a researcher (Wood 2006 p23, Wood & Horne 2008). Similarly Hawson (2006 p147), a furniture maker whose research involved a series short work placements with Icelandic craft practitioners, highlights the importance of reviewing his video record as a reflective tool when subsequently undertaking work in his own workshop.

As I watch the video I use an approach I call “event logging” which quickly produces a concise narrative that acts as a key to the video for later use (Wood 2006 p22). As Buur et al (2000) propose, “video recordings ... are no longer hard data but rather the first attempts to create stories that frame the design problem and impose order on the complexity of everyday life.” I produce my logs using a table in a Microsoft word document with one column for the video time code and one for a description of the event.

Figure 4. Section from a video event log showing annotations highlighting key points in the procedure of the craftsman being observed.

3 At the time I started, suitable specialist software for a Mac computer was not available. I still find Word fulfils my need so have not found it necessary to look for an alternative.

In this instance I was using the video to examine a craft practitioner’s procedure, so used the event logs as the basis for a flow chart summarising the key points observed. This flow chart was subsequently used by a more novice practitioner to test the procedure, with the event log providing a link back to the key points in the video which the learner watched when clarification was needed (Wood et al 2009 p5). The final outcome of this project was an online learning resource, a public version of which can be seen at http://foldingknives.designinquiry.wikispaces.net/.

Figure 5. Flow chart developed from the key points highlighted by the event log.

Whilst this example is specific to this particular aspect of my research, very commonly I use the logs for more general purposes such as locating key pieces of dialogue which might subsequently be transcribed in full, identifying discrepancies between what participants have told me at different times, or simply locating important pieces of footage for use in presentations.

In my experience, event logging is both an effective means of reviewing video for immediate reflection and also provides an efficient method of subsequently accessing video data.

Video as an output of research

Finally, there is the use of video recordings as an output from research which, from my perspective, falls into two areas. First is the use of video for instruction, which had been my initial intention when I started filming craft practitioners, although subse-
quent experience has revealed that it is only suitable in certain circumstances. Second is the use of video as a means of disseminating research, which I believe opens up some exciting opportunities in the context of creating online multimedia documents.

When I first started working with craft practitioners I had imagined video providing the key to recording and transmitting craft knowledge (Wood 2003) as it is commonly used for that purpose; the “How to” section on the video sharing site YouTube has many thousands of videos covering a wide variety of topics. The HandMade project by DistanceLab [online] claims “HandMade captures an immersive record of the way someone uses their hands. ... The point-of-view camera angle allows viewers to map hand movements more directly to their own bodies, enhancing the ability to learn these techniques in the absence of the subject.”

HandMade provide no substantiation for that claim and my experience leads me to believe that such video is only useful for those already experienced in the skill. In my own research I have found that, for the beginner, video is a very difficult medium to learn from. In my work with wood turning learners I found they were keen to watch video of the expert demonstrating, but frequently struggled to relate what they had seen to their own work (Wood 2006 p126).

My interpretation of this is that, for complex skills, a large proportion of the knowledge of the expert performing the demonstration is tacit, so video has a tendency to conceal rather than reveal the practice. The expert practitioner makes the task look easy, tacitly responding to subtle cues that may be any combination of kinesthetic, visual, auditory or olfactory. Whilst they may be able to verbalise some of this, much will remain unspoken. The observer has to interpret what they are seeing themselves and attempt to replicate it in their own activity, a difficult task for the novice.

In response to this I have developed a multi-layered approach to interpreting the skills I have been recording, using interpretation based on images and text as a starting point for novices, providing them with a bridge across the knowledge gap between themselves and the expert (Figure 7). Video remains an important medium but is used for contextualising each stage of the process and for more advanced learning where the learner has the ability to form their own interpretation (Wood et al 2009 p3).

Finally, there is the use of video in disseminating research and in particular creating multimedia rather than paper-based documents as an output of research projects. When I was working on my PhD I had a feeling I wanted to produce a multimedia outcome rather than a traditional thesis, but by the time I was writing up my urge to finish overcame my desire to be experimental!
However I had the opportunity to progress the idea two years later on completion of my post-doctoral research project. The Transmitting Craft project involved working with traditional Sheffield knife makers to record their skills and make them accessible to a new generation of creative metalworkers. This research saw a major shift in my working practices away from highly structured conventional multimedia materials to the use of online web 2.0 resources that invite participation and encourage collaboration. In this project I used a private wiki, initially to share with co-researchers the interpretive materials I was developing, and subsequently as a prototype learning resource to gain feedback from participant learners.

Working in this way presents a challenge to the designer who is used to having close control over what is produced. Firstly, the wiki software offers only fairly basic formatting options, and secondly content can be generated by other users over which the designer has limited influence. However, my experience was that the benefits of being able to quickly generate content and the ease of sharing and collaborative working far outweighed these drawbacks. I also soon learned to manipulate the layout tools that are provided to produce a more ‘designerly’ output.

As a result, the two major outputs from this project were also produced using the wiki; a public version of the learning resource (Wood 2009a) and the final project report (Wood 2009b) which was primarily for the body who funded the project, but also made accessible to the wider research community by publishing in this way. Whilst in many ways this is a relatively modest achievement, it is significant because it enabled me to make accessible images and videos from the research alongside more conventional text and academic papers, and can continue to grow as we continue to write about the project.

I have recently been filming for two projects outside my own research, and for both my remit was to document the research methods rather than producing an observational record. The first, KeyPiece, was a combined public exhibition and research event that brought together ten leading practice-led researchers in metalwork and jewellery and the output from it will be an online interactive multimedia resource that should be a more important development. The aim is to create an engaging, accessible and durable documentation of the event that can be explored in a non-linear manner and will have an appeal beyond the professional research community (Keypiece 2009).

The second project is run jointly by Sheffield Hallam University and a local National Health Service (NHS) hospital, and is part of a large co-design project seeking to improve the hospital’s service by bringing together medical staff, patients and designers. The NHS is a conservative institution and their anticipated outcome was a short video to be distributed on a DVD, however they have expressed an interest in other formats and I am currently encouraging them to consider also developing online multimedia documentation.

It is my intention that both of these project and future research I am involved in will have outputs that are more than standard web sites and will represent the research in ways that will make it widely accessible.

Conclusion

There is an increasing use of video in practice-led research because the equipment and consumables have become easily affordable. However, care needs to be taken if the resultant footage is to show authentic activity rather than a performance for the camera. Researchers need to be familiar with their recording equipment so they are relaxed and confident with it and develop their interpersonal skills to put those they are filming at ease.

Additionally the sheer volume of data generated by video can render it virtually unusable unless a strategy is developed in advance for how the footage will be processed. If this is contracted out to a third party a valuable opportunity to reflect on what has been recorded will be lost. Taking the time to review the material personally and also creating a concise log of the content enables immediate reflection and provides an index for future use of the footage.
Finally, video is an engaging medium that is useful as an output of practice-led research. For instructional purposes it needs using with care and often an interpretive layer is necessary as video of a skilled practitioner can conceal as much as it reveals for the novice. However, it offers much potential for conveying rich contextual information about the research undertaken and can form an important part of an online multimedia document that can make research outputs widely accessible.

Nicola Wood

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Design Practice Research: The Method

Notes on a lecture at the inaugural RMIT Design Practice Research Conference (GRC/EUR) at St Lucas Gent, Friday 20 11 2009 at 6.30.

The lecture was constructed around a few ideograms:

1. a perspective of the process, from review of past practice, a consideration of current practice, to a speculation about future practice
2. a plan view of the process
3. a conical view of the process from documenting past practice at the base to the PhD moment at the tip, with the pipette for extracting the PhD from the research piercing the cone
4. The analytical cube shown on the GRC poster
5. A diagram of the different modes of doctorate in the RMIT design practice research program

What is design practice research?
It is closely observed design practice.

Who does design practice research?
Design practitioners with an established body of work do this research, guided by design practice research leaders (their research supervisors) who are also their peers.

How is design practice research conducted?
It is conducted through a structured process that commences with a careful documentation to an appropriate archival standard of the practitioner’s previously existing body of work. This is accompanied by analysis of the work, presented at two Research Conferences to a panel of research leaders and to an audiences consisting of peers.

How is the work analysed?
Within an analytical framework that includes (see ideogram 4 and the GRC Poster)
• an evaluation of the practitioner’s status relative to the oscillations between centre and periphery that characterise the ‘natural history’ of the creative individual (Van Schaik 2005).
• An accounting for the public behaviours adopted by the practitioner, their chosen forums for recognition, their enchainments to other creative practitioners, their position within the three poles of practice (commodity, firmness and delight). This research defines the community of leaning that the practice addresses, or seeks to address (Van Schaik 2005).
• An accounting for their own history in space and the mental space that they currently inhabit, an investigation into their ‘spatial intelligence (Van Schaik 2008).
How is the research progressed?
Examination of the existing body of work gives rise to propositions about the nature of the research questions driving the work. Mapping and analysis of the practitioners enchainments to peers, mentors and challengers also places the design practice in the context of the communities of learning that are focused on those questions. Gaps between the achievements of the past work and these clarified propositions are identified. The work of the practice continues in the light of the gap identified, and attempts are made to close the gap. Those attempts are evaluated at biannual research conferences (see below); gaps are redefined; the community of learning is redefined (if necessary). This process goes through three iterations. Typically this provides enough data about the ways in which design practice responds to conscious, structured investigation for the practitioner to achieve a ‘PhD moment’ – that position of being able to look back over the research and see how to communicate the research through a PhD.

How is the research concluded?
A plan for documenting the research (see the plan ideogram) in an appropriate digital record is devised and presented for approval. A design for an exhibit that communicates the research is presented for approval. Once approved these are completed, submitted and then presented to a panel of examiners in front of an audience of peers. This semi-public event is filmed. There are thus three components to the PhD:

- A durable visual record (which must be digital but can also be material)
- An exhibition
- A presentation that is filmed.

Where is the research conducted?
It is conducted in and through the design practices of the design practitioners, and in the context of regular contact with their research leader (supervisor), and in the design practice research conferences.

Where is the research evaluated?
At the biannual research conferences, where findings are presented for feedback from invited panelists and peers, and a future research plan is discussed.

Why do practitioners do design practice research?
Because it surfaces the deep structure of their intuition, transforms their ability to access their interiorized knowledge, clarifies the research questions that motivate their practice and greatly improves their ability to communicate with clients and meet the needs of their clients – to the benefit of the community, the environment and the practice. Practices become able to give a full account of their design approach(es) and are thus much more able to differentiate themselves from their peers and more able to target the projects that suit their approach(es) (Barnacle 2002)

CAPTIONS TO IDEOGRAMS:

**Ideogram 1: A perspective of the process**
In this ideogram, to the left, the practitioner profile is turned to look back down the slope of past practice (shown as a tube). This is how the reflection begins. Then in the centre, the practitioner looks full face across the current work in their practice, now informed by the research into their past practice. Then to the right, the practitioner profile looks to the right up the slope of future, prospective practice about which the research has enabled a meaningful design speculation.

**Ideogram 2: a plan of the process.**
This plan is a temporal plan, and should be read from the left to the right.

- The first lobe of the plan is the development of propositions (or research questions) out of an examination of the practitioner’s past practice. What were the propositions driving this work?
- The second lobe of this plan is where the enchainments to others and to projects by others who have engaged with similar propositions is located. This search defines the community of learning that a practitioner is addressing, or seeks to address. It is a necessary early activity, but it is a search that continues throughout the research. The practitioner evaluates the ‘gap’ between their position and that suggested by the propositions that they have unearthed, and the ‘gap’ between those propositions and what others pursuing those propositions have accomplished in their designs.
- The third lobe is a tranche of work (tranche 1) carried out in the practice following the identification of these gaps. This is followed by an evaluation (presented at a Design practice research conference) of that work and the extent to which it has closed the gaps. This is also when other gaps become evident.
- The forth lobe houses a second tranche of work (tranche 2), conducted with the re-defined gaps in mind.

1 This term is used in deference to its use by Professor Gerard de Zeeuw’s coinage.
A similar evaluation takes place, and in the fifth lobe there is a third tranche of work (tranche 3). Why three tranches? This pattern has emerged spontaneously form within the research process. It seems that three tranches give sufficient evidence of shifts in design practice for the significance of the research to be demonstrated. Fewer can be dismissed, more are not needed.

The sixth lobe refers to ‘the PhD moment’ the process through which a PhD is extracted from the research.

And the final lobe is the concluding speculation about future practice that has been enabled by the research.

Across the top of the ideogram the acronym GRC appears repeatedly, indicating presentations at a Research Conference. Typically the process takes three to four years.

**Ideogram 3: A conical view of the process.**

This ideogram is read from the bottom upwards:

- At the base of the cone is the practitioner’s body of existing work. Above that – a thin double line – is the gap evaluation.
- Above that is the first tranche of ongoing work.
- Above that – another thin double line – is the gap evaluation that follows.
- And above that is the final tranche of work (in this research!)
- At the tip of the cone sits the PhD moment – a place of ease from which the entire research can be contemplated, and a pipette inserted into it – here shown entering from top right – and taking the samples from which the PhD narrative is extracted and constructed.
This ideogram encapsulates the analytical frameworks used in examining past practice:

- The left hand face concerns ‘the natural history of the creative individual’,
- the right hand face concerns the ‘public behaviours’ that sustain creative action,
- while the top of the cube concerns ‘integrated scholarship’ a way of understanding the different modes of researching present in different phases of practice.
- The cube rests upon the spatial intelligence of the practitioner (Van Schaik 2008)

This suite of approaches is discussed in Mastering Architecture, the book that documents the process through the research of fifty practices that had engaged in Design Practice Research through our process at RMIT by 2004. There have now been sixty PhD completions.

Ideogram 5: The range of Design Practice Research PhDs at RMIT

The range commences with a PhD that can be taken on immediately post-professional qualification. It is concerned with building a body of design practice research work. It continues with a PhD that works through design practice research towards establishing a theoretical position regarding design practice in general. There is then the core of the Design Practice Research PhDs, which concentrates on a body of work that has been established through design practice. This is the model that most practitioners undertake. Finally a higher doctorate is available to those who have completed a PhD.

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4. "Leon van Schaik, 2005 Mastering Architecture, Becoming a Creative Innovator in Practice, Wiley Academy, London Book p 248. Describes the findings of fifteen years of design practice research conducted with over fifty award winning practices from three continents. This book was used as the base for the second RIBA (Royal Institute of British Architects) research seminar in 2007, attended by 240 delegates. The book has influenced the research policies of this institute and the AIA (Australian Institute of Architects, 2009), which policy has been endorsed by the Committee of Deans of the Built Environment, Australia.


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BY DESIGN FOR DESIGN 2

BY DESIGN FOR DESIGN 2 is the second in a cycle of presentations with exhibition value, taking place in context of the Research Training Sessions and exposing speculations about possible research projects alongside projects already running or freshly starting up. BY DESIGN FOR DESIGN wants all possible designerly dimensions of research and all possible research dimensions in design, to come to light.

BDFD wants to explore the design dimensions of research and the research dimensions of design.

What design and research can mean to one another is a topic on which we can differ. A question each of us will (have to) answer in his/her own way. This can lead very far. Probably we will have to design everything about our research. The research question and how, where, when and why we want
BDFD wants to be an environment where tutors and participants are equally weak or equally strong. Both the tutors and participants are asked to display an artifact, developed parallel to a text and supposed to embody the design dimension of their research. An object or a small installation that should be able to be expressive without much words, as 3D as possible, using the medium or media of choice – a self standing artifact to be placed on the mirror coated tables we provide to support the reflection. For both the tutors and participants a way to crash test a working hypothesis. What is the design dimension of a current project or research? How to translate that designerly dimension into an artifact and how to put that on display? If the artifact on display has to function without words, if it has to be deciphered without having been verbally or literally commented first: does it work as display and carrier of information? And is this information relevant to the research project in question? How do artifact and text relate?

First some reflections over BDFD...

This article summarizes the reflections that came out of the discussions I held with Adam Jakimowicz, Johan Verbeke, Katrien Vandendorpe, Maaike Waterschoot, Sarah Martens a.o., following BDFD2, preparing the next one. It gives you an overview of what was presented by tutors and participants during the BDFD2-edition and the status of each presentation. Plus some visual clue to the atmosphere of the event, some feedback and the overview of people who helped shape BDFD2.

Marc GODTS, December 20, 2009
BDFD uses speculations about the possible output of potential research projects as study material. Researchers, artists, architects, designers, those who they address ... can easily meet over output. Output is shareable, accessible and can easily be approached in a designly way or considered in terms of design. Starting from the designing of a possible output a potential research by designing project can be reverse-engineered.

BY DESIGN FOR DESIGN incites participants and tutors to speculate in a designly way about the possible output of a research project (the tangible form in which the research or its findings and argument are to be presented). These potential outputs are the working material of BDFD.

The invited guest tutors of the session are practitioners that have a research quality to their creative practice. Tutors and participants meet on equal foot. Both are asked to put on show by means of an artefact, a working hypothesis prefiguring the output of a potential research project and test-crash it. The meeting is backed up by “second wave reflectors” and “reporters” out of the RTS-related worlds: pedagogic, academic, professional. External participants (researchers, designers, artists, PhD-students, ...) out of different fields (art, architecture, design, ...) are invited as much as possible to join the session.

During the session each prefigured output is questioned in a direct way. How does it "read as text". How does it “function as object”. What is its "status" regarding the knowledge it represents. In the same session a "second wave reflection" is initiated. What designing or researching processes could inform such a prefigured output? What is needed to formalise such a project as research?

BDFD is one of the sessions of a RTS-cycle, not necessarily its final session, better not its conclusion. In addition to being one of the sessions it can be a Door to the research climate of Sint-Lucas School of Architecture.

The connection between BDFD and RTS is of primary concern.

BDFD is one of the RTS-sessions. Comparative to other sessions (as inciter along the way to a potential research) but distinctive (in how it incites). Regarding it as “conclusive” for a RTS-cycle (as we did with BDFD2) puts too much stress on the event. It is more coherent to see BDFD as one of the many starting points RTS offers for the formulation of a research project.

We can think of BDFD in terms of a "door" (two way or revolving :-). In any way allowing a relax but intense in and out to a sportive meeting between RTS-participants, practitioners and researchers. And because of the exhibitive nature of the event itself, also, informally, BDFD connects worlds: pedagogic, academic, professional...

The visibility of BDFD - for students, teachers and researchers at Sint-Lucas School of Architecture – is very important. Its visibility for a larger but interested public is added value.

Its "readers guide", its public opening or closing can be taken as opportunity to enhance the BDFD-exhibition, offering people a view to a larger whole: the research climate at Sint-Lucas School of Architecture.
Pro memory - some points of attention in the preparation of the next BY DESIGN FOR DESIGN / regarding the event:

earlier organization in the whole and thus also better and more announce-ment of the BDFD-event and exhibition (cultural agenda’s, press, … ) – optimi-zing the organization

looking for more professional event and exhibition-conditions, logistic support and project partners - but keeping BDFD visible for the school-community, each year switching location (Brussels/Ghent)

using the evening-activity to connect the day-activity with the research community of Sint-Lucas and also with other platforms and publics (academic, professional, artistic, pedagogical) – a better announced and organized evening lecture/talk /debate: help public to read the BDFD exhibition + give them a view of the research climate of Sint-Lucas School of Architecture.

and regarding the exercise:

optimizing the combination of people taking part (the number is now OK and +/- max): 12 participants (RTS obligatory BATCH + invited participants internal/external), 3 guest tutors out of different creative fields, 1 or 2 “2nd wave reflectors (academic field, practice, pedagogical field), 1 or 2 reporters (for immediate return and for reflections and why not external reportage) – 1 mystery cook (design menu) - 1 artistic director/curator (me)

sharper definition of exercise, table readings and debates / plenum activities but also their artistic direction > along the new options

checking the learning: optimizing the channels for “immediate return” during the event, opening them up for the participants + definition and preparation of the feedback moment (closing of the exhibition) + organising a briefing or introduction of the exercise

BDFD2 and the status of what was presented, then and there.
Deleuze analysis of Leibniz states that he attempted to define an intellectual attitude facing the theological crisis of the 17th century. This happens through a very specific philosophical system, aiming to understand the infinite diversity of the material world inside a unitary whole - God. This system is constructed around the « monades », which are irreducible souls which contain and reflect the whole world's potential, but that are unique through the specificity of their « lightened zone » or « point of view ». Each monade is an actualization of the virtual, but only exists through its realization in materiality. There is a fusion of the concrete, the corporal, and the immaterial, the spiritual.

The Baroque is the era of representation, referring to Foucault's « the order of things ». Reality was subjected to representation in order to tabulate, manipulate and understand it. As a consequence, baroque architecture could not be more than a symbolic representation of Leibniz framework. Or better yet, a personification, an allegory of Monadism.

Three centuries later, an architectural echo of Leibniz, or at least, of Deleuze’s understanding of Leibniz, can be found in the introverted, sacral, sensuous and tactile buildings of Zumthor. Monadism here is not represented in a symbolic way outside itself. It is embodied: each building is almost exclusively the realization of its small, irreducible material or technological principles.

But in the XXth century, the crisis of theology gave way to a crisis of reason. At the turn of the XXIst century, since more than 50 years, or even a century, the continuous deconstruction and Nietzschean frivolity in creative and intellectual fields has led to a balkanized situation, seemingly condemning us to silence. In this context, Ponge is a poet working at the border between literature and philosophy, attempting to maintain his language practice up while the evidence and coherence of its object is threatened. Refusing silence, he sticks to - tentatives of - descriptions of things, in order to create their verbal equivalent. A marriage of verb and matter, reminding the baroque way.

Our architecture practice at AgwA is incidentally fused with readings of Ponge. He was already part of my student these in 2000-2001, three years before the founding of the office. One preoccupation lies central in the office’s work: how to keep structural, formal, material or even functional topics out of our architectural input, in order for it to be no more than the embodiment of its hypothesis. We aim for our buildings to be the architectural equivalent of their central principles.

The research aims the understanding of the crossed relationships between the Deleuze-Leibniz couple, baroque architecture, Ponge, Zumthor and AgwA. This in turn will help define a coherent design attitude facing the current absence of framework beyond mere pragmatist survival and arbitrary fashions.
A trace of an artistic process.

Mira Sanders

THE JOURNEY

A note on journeying
A notation (on perceptions)
A notebook
A sketchbook
A sketch for a book
(nothing)
Image
Imagine

By means of the metaphor The Journey, used as a working title for my research and as a possible working method, I propose an exploration in the ways of perceiving and representing the site and its actors. You approach a site and its signs with your senses (seeing and hearing). You discover traces and you enquire in the Archive (collective memory). You develop a problem and a solution-focused strategy (recognition system). The walk is the motor and the drawing, the word, photography, and video are the media for recording and visualizing (mapping) the site. You travel into time and space and you encounter the Other.

My research issue is close to my artistic practice. I wouldn’t develop a research without working on issues in which I wonder to know or acquire knowledge. Like Paula Amad writes in Virtual Voyages, Cinema and Travel, “Travel as the mean to knowledge.”

The journey as a term is a metaphor. The aim is not only to travel abroad. Cause journeying, can mean as well, journeying in your own working studio. It is a construction wherein ways of perceiving and representing the world are questioned and studied.

For example, nowadays we are used to take quickly pictures with digital cameras, to capture images of a building or a city. Because of this capture, you think to know the building or the city. But did you look well to it? Strategies and/or experiments by recording the site with the drawing, ask you to sit down, look, look deeper and maybe learn more on that specific site. Though each medium has its own capacities and ways of representing the world.

Silent China, a work I realized in 2006–2007 during a residency period in China, is a case study for this first presentation wherein I question ways of perceiving and ways of recording and representation through the medium of drawing, video, printed matter and the word.

Mira Sanders, September 2009

Synopsis:
1/ SILENT CHINA
2007, 13’02”, video, text English & Chinese, sound

Silent China, a video with excerpts of recorded sounds and notes I made during my journey in China. The title of this video refers also to the title of the exhibition by this I send you some noise from the city I am in (CEAC, 2007). Noise can have several meanings; the ‘noise’ of traffic in a city, the ‘noise’ of machines, … but as well ‘noise’ in the head. Questioning a time being, questioning your perceptions. Not that the aim is to find answers, on the contrary, but realize a story with an open end. Writing is a silent medium. But if you read the text, it’s a sound, a voice in your head.

2/ SILENT CHINA
2007, newspaper

Drawings that were made in the city of Shanghai and Xiamen. Transcriptions of urban landscapes and their noise.
Can the understanding of FOOD and the complex phenomenon of eating inspire designer to design urban environment? EATING is a fundamental activity of everyday life and the core of many social activities that drive a society. FOOD very often reflects the way we live and the values of a particular place. Therefore FOOD can be seen as a primary transforming force capable of organizing the city and enhancing the urban experience.

Here is my own experience of how eating habits shape the built environment, and possibly vice versa. I have less than an hour lunch break in Rotterdam, where I simply join the ‘lunch table’ organized by the colleagues in the office. Or, I step out to have lunch in a temporary semi-outdoor market place where food, small office gadgets, clothing and DVDs are sold in Bangkok. And, very often, I find myself on the move during lunch to grab takeaway sandwiches in London. The one example that most contrasts with all the above is when I have a two-hour lunch break in Barcelona, where most of my local colleagues either sit in a small restaurant having a three-course meal with a glass of wine, or they go home for lunch and a little siesta, but I go to a local swimming pool to combine my lunch with sport. Comparing the morphology of these different cities, Rotterdam has obvious centers where all the high street brands from clothing to food are concentrated, Bangkok has an enormously complex fabric of informal sectors attaching all over the city, London is like villages within a city with multi-centers for different purposes, and Barcelona has several clusters of multi-functional neighborhoods (almost an accumulation of villages), each of which serves all the needs of everyday life within the neighborhood itself and in which the individual single-owner places of commerce and restaurants are still intact.

The core issue of the research will be to understand and turn FOOD into a useful tool for recognizing social patterns and their relation to architecture and urbanism. Therefore my role as the researcher / designer in this research will be editing the overlap areas of the following three major fields of knowledge. They are the knowledge of current event, the knowledge of Food and the knowledge of Architecture and Urbanism in a particular locality depending on the case study and its context.

The knowledge of current event is the understanding of current politic, economic and social issues of the particular locality. The knowledge of Food is the understanding of Food histories, patterns, habits and culture of the particular locality. And finally the knowledge of Architecture and Urbanism is the understanding of how architecture and urbanity of the particular place have been evolves through time and what are the elements of influence.
Projective Modelling

Projective Modelling describes an exploratory, reflective, design research focussed on making models in architecture. It aims at introducing a media perspective in design research. Media are seen not as neutral tools in architectural design, but as active elements in an iterative cycle of representation, interpretation and reflection.

Projective hints at the role of the model in design as a vehicle for exploring the new, projecting future realities. It sees modelling as a process rather than as a result – i.e. the working model or model for, rather than the presentation model.

Projective modelling acknowledges the mediated nature of the design process and the idea of the model as a layered, hybrid construct, that incorporates both mental, material and digital realities. It explores deliberate and sequential medial shifts, transgressions between media, as crucial steps in a design process. It considers the simultaneous multitude of representation media, as a field of action and reflection.

Every medium implies its own space – the monocular space of linear perspective, the embodied tactile space of physical model-making, the discrete, mathematical space of parametric modelling. In each media-space the model takes on a slightly different form, highlighting certain elements while repressing others. Media shifts project these media-spaces into each other: through transgression between different media, hitherto new perspectives on the design are developed.

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How can I **optimize my role as a spatial designer** by using the trialogue in the development of new sacred spaces for the future?

The trialogue is developed from working with teams that were looking for new forms (spaces, objects, acts...). In the beginning we had a very linear way of developing the project: first analysing and formulating the right question, related to the target group and out of that developing an exact form for the substance. We saw that not everyone liked that first stage of thinking (too abstract, philosophical, long-term-thinking,...). We also experienced that the content got new impulses or even was questioned while we let grow the form. So a new approach grew: the trialogue. There we start from three dynamic actors in the changing process: the man (the individual, the team and the target group), the form (the building, the object, the text, the ritual...) and the meaning (motivation, inspiration, drive, values, believes, tradition,...). When one lets these three actors communicate in permanent interaction, one gets an interchanging deepening, broadening and inspiring of the project. That creates a greater involvement and more opportunities for coincidences, diversity, authenticity... Our approach changed from a logic, predictable, linear approach to a dynamic less predictable, concentric approach. I did the experience of the trialogue as a consultant in changing processes, but as a space designer I was also stimulated by my new dynamic role in a project. While in former times I came at the end of a process to give a spatial answer, I can be useful within the development of the process. I feel myself better in my role because as designer I can accompany the team better in a project and I don't need to have the last word alone. So I can work with people who gave me an order and who are not only committed but who also have a basic insight and language (inside the space design) to become a real partner at the same side of the table.
A conceptual image of a research target.
Dominique Pieters

auteur Dominique Pieters
uitgeverij Phaidon, Londen
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formaat 15 x 26 cm
A re-test (scale 1:1).
Wim Goossens

"Spreken over architectuur die nog niet gebouwd is, is iets raar. Je hebt altijd de indruk dat je woorden te kort komen om de ingebeelde ruimte te beschrijven en tegelijk is elk gesproken woord er één te veel en doet het afbreuk aan de ruimtelijkheid waarnaar het verwijst. Het beeld dat je bij de toeschouwer kan oproepen op een presentatie vooraf stemt zelden overeen met de verwondering bij de gebouwde realiteit. Wat doe je dan als architect wanneer je gevraagd wordt wat over je project te vertellen? Je zwijgt… Je zwijgt en vervangt het gesproken woord door een landschap van klank en beeld. Je creëert fragmenten die, wanneer je de stukken van de puzzel samenbrengt, iets onthullen over een architectuur in wording."

The research environment.
Thierry Berlemont

(re)classify

Classification is a method to organize and structure knowledge in a domain or field of experience by arranging information in categories according to common relations or attributes, with the goal of facilitating, of making the knowledge communicable and usable. Classification is a very powerful tool for revealing resemblance, differentiation, multiplicity, diversity, for linking and increasing understanding.

'Architecture only exists when it is materialized by its construction, before it is image' 1. The process of going from architectural image to architectural construction is as old as architecture itself. Construction principles, methods and actions, whether technologically high-end or based on plain practical common sense are as important as concepts and ideas to shape the appearance of the architectural artifact.

Construction technology is essentially instrumental and oriented towards the practice of construction. The final goal is the real-life act of building. For this purpose, we have an enormous and ever increasing array of very diverse technological knowledge at our disposal, made available in disciplinary textbooks and manuals, describing material properties, processes, systems, operations, solutions.

The underlying structure and logic is mainly two-fold. On the one hand ‘the theory’ and on the other the guides for/to ‘good’ practice, the ‘how to’ - the description of the practical solutions and the ‘processes of production as an organized sequence of technical operations’ 2. Nevertheless, both aspects share a same fundamental property, as they are based on scientific rationality and proof, and the translation in rules and regulations describe the ‘exact’ way to handle problems. Often the ‘how to’ becomes a ‘have to’, and the conceptual creativity is lost in the process.

To keep track of the technological information or to keep it apprehendable for the architect/designer, the existing data is organized using classification methods that create a sense of architectural relevance - for example by material, by element, by process, by discipline, by details/components, etc. - but are in fact mainly based upon and coherent with the scientific logic and rationality, the logic of practical and physical constraints. This logic does not necessarily fit the conceptual, reflective and explorative nature of the architectural design process.

An integral and innovative approach regarding the integration and synthesis of architectural construction and design also has to be based upon novelty in data-structure, on an alternative classification in which information about technology and material assembly is integrated with architectural concept, morphology typology, appearance, experience, etc. The goal is to reconnect information and explore relationships and connections between elements that are not visible in other classification schemata and disclose novel and existing or in time forgotten possibilities of creating by opening up architectures ‘wunderkammer’.

Besides from aiming at being a classification project, (re)classify is based upon the personal pleasure of searching, looking for, browsing in architectures treasure boxes and collecting stuff, images, ideas, material and constructional concepts, methods, solutions,... ‘not in search for the best..., but everything, the entire business of coming closer, along with all its errors’ 3.

A method to produce intermediate steps generating new questions.

Arnaud Hendrickx

Proximity and displacement.

Often research results in a scientific text. Often a scientific text is constructed in a recurring pattern:

- First, the author starts by isolating and (re)defining a handful of crucial terms. While the reader advances in the text these terms become gradually charged with a more defined (and more complex) meaning.
- Secondly, when the author has helped you in placing the right associations with these terms, he can start to play around with them. By combining (placing terms in proximity of each other) and/or displacing (using terms in an unusual context) a new insight is generated and a new conceptual artifact is created.
- This concept encompasses a higher degree of complexity as the terms used to construct it.

This frequently used way to guide a reader in finding access to nontrivial matters, is also applied in other media. When we talk, we spontaneously apply the second step, the combination and displacement of concepts, by the use of (living) metaphor. The first step, controlling the associations we make with certain terms, is replaced by the assumption that these associations are shared as general knowledge.

When dealing with hybrid artifacts (simultaneously conceptual and material artifacts) like art and architecture this approach seems relevant too. Placing objects in proximity of each other may induce the mind to see relations between the complex associated properties these objects provoke. Displacing the same object in the proximity of another object can highlight other relationships. Displacing the object into another (or unusual) context we might discover an unanticipated potential it possesses.

Image 1: There have been inspiring projects that focus on relationships and associations by bringing artifacts into proximity and/or displacing them, that I consider useful in my search for an ample research output format: Denis Diderot and Jean le Rond d’Alembert: Encyclopédie ou dictionnaire raisonné des sciences, des arts et des métiers, Buckminster Fuller: Chronofile, Marcel Duchamp: Boîte-en-Valise en Andy Warhol: Time Capsule project.
A Goodbye (I’m still having fun).
Tomas Ooms

FRACTUS///RE FRACTION

The artefact is a model for the scene of an opera:

“FRACTUS///RE FRACTION
A Silent Opera for Mezzo Soprano and Female Voices”

Synopsis: In a new art school in A a person, called Protagonist (part for Mezzo Soprano) is told by letter (part for Female Voices) that his/her (research) proposal was rejected. In the communication that follows they try to figure out what to do next.

Location: KASKA DKO, Blindestraat Antwerpen, Belgium
Design and Photography by Tomas Ooms for Arch-I RDBM
Reference: All reference and likeness to people, living or deceased is intentionally. All possible autobiographical elements are indeed autobiographical.
Research: The artefact is made for an exhibition By Design For Design in Brussels, 09/2009 10/2009. The general theme of the exhibition is the position of design in research. The artefact has nothing to do with the research project although since it was made, the author is impelled to consider it as a core contribution to his disquisition.

RESEARCH!
REJECTION
SADNESS
DRAMA
OPERA
FRACTUS///RE FRACTION
OPERA
OPUS
CYCLE OF WORK
RESEARCH?
“Het schilderij als tijdsmachine” (voorlopige werktitel)

“il a une profonde connaissance du passé. Mais sa relation au passé est de l’ordre de la réminiscence. Et la réminiscence est un pure mouvement de temps, non pas une mémoire submergée de souvenirs, de dépendances et de citations d’œuvres d’art. C’est une vision qui se réalise dans l’acte de la peinture.”

Youssef Ishagh over Morandi in “Lumière et mémoire”

Het vatten van een eigen persoonlijke omgeving is een van de uitgangspunten in mijn werk en bepaalt in grote mate de keuzes van mijn beelden. Schilderkunst blijft de hoofdmotor, maar daarnaast integreer ik ook polaroid en video in mijn werk, die dan op hun beurt mijn wijze van schilderen bepalen. In mijn werk vertrek ik vanuit mijn eigen positie in de wereld, mijn eigen realiteit. Mijn werk gaat over mijn ervaringen, mijn blik en mijn in-teractie met anderen. Het zijn geen picturale re-producties van foto’s, maar realistische, figuratieve schilderijen naar “levend” model. De werken passen binnen de traditionele schilderkunst, maar tonen tegelijkertijd hoe die schilderkunst uit zijn belangrijkste fasen, actueel, gevoelsgebonden, zelfs sub-versief kan werken en verplaatst kan worden naar een harde, nieuwe werkelijkheid. Ik probeer in mijn werk de realiteit terug te ervaren, in interactie met wat er “achter” het schilderij ligt, maar ook met het ding zelf. In zekere zin maak ik portretten van de schilderkunst zelf.

Als basis materiaal voor mijn schilderijen registreer ik alles op polaroid en video. Deze werkmethode is voor mij noodzakelijk en doelbewust. Schilderen is een langzaam werkproces en geeft daardoor een verzameling afzonderlijke momenten weer. Video en polaroid leggen daarentegen het moment in de tijd vast.

Ik wil onderzoeken hoe in mijn werk het beeld getuige is van zijn tijd, wanneer het niet meer in de tijd zelf bestaat, en hoe de schilderstaal tegenover de schilder/kijker iets zegt over de concrete tijd waarin de schilder reflecteert over “de tijd”. Naast elke video maak ik vanuit exact het zelfde standpunt een schilderij. De video’s worden dan bij gewoon daglicht op de schilderijen geprojecteerd. In eerste instantie als een versterking van het licht, waarbij je echter een minimale beweging kan herkennen, alsof het schilderij leeft. Het is echter belangrijk dat de twee media ook autonoom kunnen blijven functioneren. De schilderijen zelf zijn 2mx2m en hangen 18 cm boven de grond, zodat je als je ervoor staat, erin kunt stappen.

Met elk schilderij probeer ik hierbij het paradoxale van een beeld bloot te leggen, hoe het “het hogere niets”, zeg maar het ultieme zwart van het brein, of het maagdelijke wit van de plamuurlaag, het schilderij of de afbeelding gebruikt om te ontsporen in lijn en kleur, m.a.w. in de schilderkunst zelf.
The doctoral research project *The metamorphic ornament: Re-thinking granulation* (2005-2010) aims to discover, with the technique of granulation as a case study, new meanings and metaphors in traditional processes and media and implement them in a contemporary way. It is a quest for methods where techniques and concepts from one discipline, the art of goldsmithing, will be transformed and applied in another discipline, the art of sculptural silversmithing. The main object of research is therefore the metamorphic process of granulation into sculptural silverwork rather than the technique of granulation itself, which is the starting point and source of inspiration.

The first point of departure in this project is to bring into question the ornamental status of granulation and to concentrate mainly on granulation without a surface. In this sense the granule—the original ornament—loses its primary, decorative function and changes into the essential building material of the object; ornament becomes structure as well as the independent base of the work. The second approach searches for the expressive potential of the technique of granulation. The objects made within this framework will not necessarily be built up through granulation. Instead, the technique of granulation will evolve into concept and used as a subject matter, which reaches beyond the technical aspects towards a poetic dimension. These works extremely magnify the whole micro world of granulation with its technical, formal and conceptual features, and present them as metaphors for more universal ideas. Parallel with these two contexts this project searches for the artistic potential of imitation, a phenomenon that is present through the whole history of goldsmithing in general and of granulation in particular. In this light the ‘real’ materials and processes of granulation will be questioned.

The first group of works, where the granules are the building blocks of the object, is again divided in two subgroups. (1) The first subgroup consists of objects of which the external shape is decided in advance (e.g. through a mould) and comes before the parts. The granules adapt to the mould and organize themselves in complex patterns. An object that represents this concept is *Pearl Globe* (fig. 1) (2) In the second subgroup the shape of the whole is not decided in advance, instead it grows through the construction of the parts, as a consequence of their inherent qualities in combination with a particular stacking method. The object *Fractal Chaos* (fig. 2) represents his group.

Regardless their shared object of research, materials and techniques, the two above mentioned construction methods and their approaches towards the relationship between parts and wholes, lead to completely different types of objects. From a formal point of view it is clear that *Pearl Globe* came into being through thinking, it is after all necessary to make the mould in advance. In contrast, the shape of the objects from the other subgroup is not determined by reason, but rather by doing. Making is in this context not only a method to execute the object, it is the first place a method that inspires and instigates.

Moreover, in both types of objects one can observe an explicit contrast between the general shape and their details. The well-reasoned objects show great spontaneity in the detail, while the spontaneity of the ‘made’ object *Fractal Chaos* seems more present in the general shape and the considered aspect in the detail, in the DNA of the object.

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1 Granulation is a decorative technique in which tiny metal spheres, also called granules, are heat-fused to a metal surface without the use of solder, generally in an ornamental or figural arrangement. It is considered to be one of the most important and magical techniques in the history of goldsmithing. From the moment of its conception, in the third millennium B.C., until present day, granulation was almost entirely used for decorative purposes mainly in gold and on small objects, most often on jewellery.
An illustration of a field of energy and inspiration around one question. (A Lab).
Kris Verdonck

INSTALLATION / PERFORMANCES
Presented “Installation / Performances” ascertain themselves in a field of tension between the theatrical and visual arts. The basic assumption is the classic dramatic action, which, during repetition process, is extremely reduced.
This reduction results theatrically in a partly physical disappearance of the human being, a machine, a sound or an image represents him. And if man is physical present than it’s in state of unconsciousness; under water or while sleeping. It’s a story between mechanics and life.

OBJECT / BODY
The clearest interaction between human and object is the machine. The computer- and biotechnology slowly reveal the borders of possible interactions: By means of nanotechnology a literally unity of bodies and objects is made possible. And from there futuristic speculations can be made, clones, implants, cyborgs.
The object expands itself in comparison with the human and by this a dangerous relationship is created were the physical appearance of the human being is questioned.
The body disappears in interaction with the machine and the function of the body is taken over by the machine. People who spend most of their time in cyberspace have the feeling being “there”, a feeling of absence.

TIME
Maybe the most important convention played with is time: Begin Middle, end. If a visual art piece is created for eternity, the essence of theatre is its temporary character.

TEXT
The theatre- or prose text is the linchpin, an investigation is held to the mechanics or foundation of a text or language. The theatre author writes his texts especially for the medium theatre and uses specific theatrical codes. His language and images serve theatre. By the use of different media the “theatrical” can be overwritten.

PERCEPTION
Every “installation / Performance” has got its proper site-specific communication. Sometimes the semiotics of a theatre space is necessary, sometimes the semiotics of an exhibition space. Both imply a very specific perception. The installations exist in the field of tension between the theatre space and the exhibition space.
A bottle, thrown into a recycle container in Brussels, causes falling glass in an exhibition space somewhere else in the world. A swimming fish in an aquarium opens a bottle of champagne. Two people sitting on a bench in the northern part of a particular city, illuminate -without knowing- a bench in the south part of that city. Every movement has an effect, even when the cause of the movement is happening miles away from the result.

In my work of the last years I studied how I could transform impulses into interactive installations and sculptures. Nowadays my interest moved more and more into the impulses itself, the essence of my work. Therefore I’m creating a new laboratory where I collect and create new and current impulses. By making them as object of my research I create new questions and mysteries. Is it possible to visualize the essence of my interactions? Is it possible to analyse a city or a place by registering its impulses? Which locations do I choose and on what basic? Is there a question of chance in a calculated system? Is there any difference in an installation triggered by a goldfish, a computer or a person?
My topic for this project is: "Wedding dresses". Wedding dresses have always fascinated me, although I know I would never get married. I’ve chosen a folding screen to display the progress on. A folding screen isn’t only an attribute to separate rooms, but it’s also used to change clothes behind it.

The progress of making a garment consists of a few steps. The text below is a guide for my display, so you can perfectly follow which (main) steps I take.

The first one is: an idea, an inspiration, a dream or the vision of a client. To get an idea on paper requires a drawing of course. Which already can be filled in with colors or details to give a total image. So the drawing is the second step.

The third step is the translation of the drawing into patterns. To make sure the dress perfectly fits, I make an example in bale of cotton or another cheap material. This way any kind of adjustments can be made without wasting the good or expensive fabrics.

The next step is choosing a nice material. That depends on the design. Keep in mind that not every material is suitable for any kind of garment.

The final step is executing the dress in the desired materials and of course adding the finishing touch.
A designed Menu.
Erwin Persoons

Breakfast
perfect Nespresso, Tea, Juice and Pastries

Power Potage
Gaspacho (cold) with a Brunoise of Peppers and Oignons
Cressonette (warm) with a Slice of smoked Eel

Starters
Bruschetta of Tomato, Leaf Persil and fresh Garlic
Oysters with a Vinaigrette d’Echalotte
Tartar of fresh Salmon
Toast

Plat de résistance
Saffron Risotto à la Minute with Mange Tout and Oven dried Ham
(Vegetarians will leave the Ham aside)

Gouter-Souper
Salade Vinaigrette
Real Bread with
- Rillettes de Canard
- 2 Varieties of Paté de Viande
- 2 Varieties of Paté de Poisson
- French cheese
“BDFD was a very unique experience - positively astonishing me. Preparing the project took me a lot of time, but every minute of that has proven worth it: the event opened my eyes. It is best described with ‘thinking out of the box’. I have witnessed some thinking and arguing I would not easily have deployed myself – but I was the youngest of the lot and only at the beginning of things. The amount of creativity was a nice surprise... It was a long day but the culinary highlights kept us going. BDFD was a challenge I took with pleasure. And if you ask me, from what I saw, the future of architecture is promising”.

Whitney Ngandu
“50% tendency of participants to talk, explain, motivate, or even manipulate…
50% tendency of participants to smile, and stimulate the story, …
50% tendency of tutors to search for extra associations and links or ask direct questions, …
50% tendency of tutors to talk, fantasize, interpret, … Both tutors and participants tend to stick to their attitude though content of conversation differs after each shuffle”. An ARC-reporter about tendencies during the reading of the artefacts.

“All kind of questions seemed to be a good story”. An ARC-reporter about the readings of the artifacts.
“Brain teasing!” An ARC-reporter

Virtual table shuffles by the guest tutors:

1st SHUFFLE: from object (form/material) to concept (rational)

Intuition  Material/Form

Rational

2nd SHUFFLE:

About Architecture  In Architecture  How to work, Methodology

3rd SHUFFLE: according to energy / motivation

a. feeling of material – sensitive way of working
b. philosophic approach
c. economic point of view
d. organising Architecture

Designing as an ACTOR of the process, which generates knowledge, which does no t simply illustrate it.
Or Design as HYPOTHESIS, not just as an image

Stories  Processes  Metaphors  Classification

4th SHUFFLE: division by likeness - visual or conceptual:

a. visual architecture, reading architecture
b. inner spaces – easily transformable in real environment
c. action - reaction

5th SHUFFLE: a supra-arrangement… Is it possible?
“The in depth discussions about research by design are too theoretical for my taste. Cooking for example is continuously re-design, using similar ingredients yet offering often very different results... Research out of a failing result, that's the drive!! Design without research is like bad kitchen”. Erwin Persoons
Credits for BDFD2:

Guest Tutors: Kris Vleeschouwer, Kris Verdonck, David Huycke, Whitney Sharry, Grace Ngandu, fashion and styling / Design Menu: Erwin Persoons, architect / Mirrors: VINK NV / Moderators / 2nd Wave Reflections: Patrick Labarque, architect and former teacher of Sint-Lucas Architectuur, and Adam Jakimowicz, architect and professor of RTS / Reporters: Sarah Martens, Gudrun De Mayer and Ben Robberechts, ARC / Logistic Support: Katrien Vandendorpe and Maaike Waterschoot / Practical Support from Mariette, Kunthea and Sofie (STUVO) / Assistants on the floor: Michiel Moyaert and Ashley, with feedback / Feedback Session with Participants: Marc Godts and Johan Verbeke / Artistic Director: Marc Godts marc.godts@architectuur.sintlucas.wenk.be
Participants of Research Training Sessions – ‘batch 07’

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Civil Engineer Construction, Architect / co-founder Babel ingenieurscollectief / PhD-student at Chalmers University / teaching Structure and researcher IVOTO at Sint-Lucas School of Architecture

*The proof of the pudding is in the eating; …or is it in the cooking? In this article the author compares his personal design and research process. It is written in extension to the attended workshop ‘Positioning in Knowledge Landscape’.*

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ir. Architect, SBA / PhD-candidate at Chalmers University / teaching design studio and researcher at Sint-Lucas School of Architecture

*Food Architecture & Urbanism: ‘We live the way we eat; we eat the way we want to live’. Can the understanding of FOOD help us to generate design tools in Architecture and Urbanism?*

**Thierry Berlemont** – thierry.berlemont@architectuur.sintlucas.wenk.be
architect, RAUW (www.rauw.org) / Media production references: Amplify (www.amplify.be) / teaching construction technology and researcher at Sint-Lucas School of Architecture, teaching architectural design at VUB-University, Brussels

*The (re)classify project is intended as an exploration of architecture’s “material culture” and an exploration of the relationship between ‘experiencing’ architecture and the mechanisms for ‘constructing’ it.*

**Corneel Cannaerts** - corneel.cannaerts@architectuur.sintlucas.wenk.be / introspector.be / mmblog.be
ir. architect-ontwerper / teaching mixed media and researcher at Sint-Lucas School of Architecture

*“projective modelling: shifting media spaces, tries to acknowledge the importance of design media in architectural design. Building on the complex relation between model and architecture, it looks at the impact of emerging digital technologies on architectural design practices. From a series of design and teaching experiments, projective modelling is an attempt to frame a hybrid design process that explores media-spaces and media-shifts.”*
Harold Fallon – hfallon@agwa.be
ir Architect, (Agwa) / teaching design studio and researcher at Sint-Lucas School of Architecture
“My creative method in a deconstructed design field” is a short multidimensional text corresponding the nature of a critical architecture practise. Left pages explore some historical, philosophical, architectural topics, forming a (hopefully) coherent framework. The right pages propose short project analyses. I do not want to fix the reading order. Left and right pages can be totally independent. Or the project could be looked at through the lens of the facing theoretical fragments. On the contrary, the left pages can also be questioned by the projects. And in the end, perhaps is it one, and only one story.

Tomas Ooms – tomas.ooms@architectuur.sintlucas.wenk.be
architect, co-founder a&t architecten, staff member rdbm architecten&adviseurs / teaching design studio and researcher at Sint-Lucas School of Architecture
FRACTUS//RE-FRACTION, Pictures at/from an exhibition.

Dominique Pieters – dominique.pieters@architectuur.sint-lucas.wenk.be
Architect / journalist / artistic director open architecture-association Archipel / author architecture books and magazines / teaching design studio and researcher at Sint-Lucas School of Architecture
The contribution to this Reflections-edition is the short story ‘grey murmuring’ that can be characterized as a small research experiment. The goal of the research ‘utopias explored’ is to design and develop a hybrid medium in which comics, photography and literature are used to bring a message based on architecture theory to the lay public.

Participants of Research Training Sessions – ‘batch 09

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visual artist, architect / coordinator [pyblik] / researcher at Sint-Lucas School of Architecture / research assistant at Center for Public Space Research, Royal Danish Academy, School of Architecture, Copenhagen, Denmark.
‘Mute Tracks’ should only be thought of as a draft on crossing, travelling and connecting paths, traces and songs of the research project ‘Mute Discourses’. ‘Mute Discourses’ arises from the myopic act of perceiving and experiencing urban public space as: a set of conceptual frame(s) and the outside of the frame of the observer. The inexhaustible tension between those frames is seen as the propelling-force. Through practice based, experimental and inductive search ‘Mute Discourses’ intends to map ways and potentials of the experiential sense in the spatial context of urban public space.

Ashley Hennekam – ashleyhennekam@gmail.com
Global Education and the teaching of Research by Designing in the curricula of the Sint-Lucas institute have common interests and goals. A comparison of both educations gives some insight into this statement.

Mira Sanders – mira.sanders@architectuur.sintlucas.wenk.be
visual artist / docent teaching mixed media and researcher at Sint-Lucas School of Architecture
By means of the metaphor ‘The Journey’, used as a working title for my research and as a possible working method, I propose an exploration of the ways of perceiving and representing the site and its actors. You approach a site and its signs with your senses (seeing and hearing). You discover traces and you enquire in the Archive (collective memory). You develop a problem and a solution-focused strategy (recognition system). The walk is the motor, and the drawing, the word, photography and video are the media for recording and visualizing (mapping) the site.
Participants ‘batch 2007’
The proof of the pudding is in the eating
...or is it in the cooking?

A personal tale

Generalizations have been made before about the relationship between ‘researching by design’ and ‘designing’. In this article I will give a personal view of some similarities between my research and my design process. The following is an extension of the attended workshop ‘Positioning in Knowledge Landscape’ with Fredrik Nilsson and Halina Dunin-Woyseth, held in September 2009.

My work as a structural engineer (at my school of architecture and in my engineering office) has a more creative part (e.g. designing a structural concept) and a more scientific, computational part (e.g. dimensioning a structural element according to the building codes). My interest of research lays in this creative, non-computational part, especially in designing the structural concept in accordance with the architectural concept. This involves incorporating architectural design objectives in the structural design process, and vice versa incorporating structural objectives in the architectural design process.

I consider my research a ‘research by design’ because both the use of my design experience and of my design abilities as structural engineer (i.e. the creative part) are required for my research activities. Furthermore I use my design practice for research experiments which gives me the possibility to record my inner thought as engineer.
Similairities between designing and researching

A wicked problem

When analysing my own research activities and my design activities as structural engineer, I can find several similarities. In both cases it starts with a specific practical problem, with no definitive formulation, and with a solution that is neither true or false, but rather good or bad. It is a wicked problem as Rittel and Webber have described it (Rittel & Webber 1973), where the problem only becomes defined when a solution is found.

In my work as engineer, the problem presents itself as a question to design a structure for a given architectural design proposition. Although this problem is specific, all the involved design criteria are not known at the beginning of the design process (e.g. if an extra column can be incorporated in the architectural design, if it would be needed) and thus the problem formulation evolves during the process. There are many structural solutions possible, which might be ordered from worse to better, but not as true or false.

My research goal is to improve the integration of structural design and architectural design in a professional field where engineers often have to design a structure to fit in an already detailed architectural design. Although my goal is clear, defining the actual problem is not. As with designing a structure, many starting points are available for developing a valuable solution (e.g. focusing on the engineering abilities of the architect or on the design process instead of the actors). Only by pursuing a certain research path and evaluating the findings, the problem becomes more clear. And of course any found solution will never be absolutely true or false, but rather good or bad.


Designing and researching are both a cyclic process. It starts with a proposition to the presented problem, then an evaluation of this proposition which leads to a better understanding of the presented problem and an adaptation of the problem formulation. This brings the cycle back at the beginning by developing a new proposition for the adapted problem formulation.

When developing the first proposition, the presented problem is often still very unclear. So my first throw at finding a solution is based upon my personal ‘experience of doing’ (i.e. experiential knowledge) and upon my discipline-related theoretical knowledge.

Experiential knowledge

The experiential knowledge I use as engineer, is developed through all my previous projects where I designed structures before: I know which kind of structural solutions were good for certain projects on the level of conceiving the concept, collaborating with architect and contractor, and putting the structure together.

The experiential knowledge I use as researcher is based upon my previous collaborations with architects as engineer, upon my work as engineer designing structures, and in a smaller extend upon my work as architect designing architecture. Most of my experience in scholarly research lays in the field of natural sciences and not of design.

Theoretical knowledge

The theoretical knowledge which helps me to design structures as a paradigm to operate in, is part of the structural engineering sciences. It enables me to calculate structures, which in turn tells me how they work, and finally leads to understand the logic of structures, which is essential in designing structures. It also represents a catalogue of structural typologies to choose from during design.

For my research, the acquired theoretical knowledge lays mainly in the field of architecture and engineering sciences. My knowledge on creative collaboration, (multi-disciplinary) design, communication, research by design and other areas of interest to my research-project, needed to be further developed.

Proposition

The structural design proposition is mainly the structural concept, which represents the way the structure brings all the imposed loads to its foundations. It consists of the structural elements (e.g. beams, slabs and columns) and their connections.

The research proposition is mainly a concept for improvement. In the beginning I was focused on helping the architect to deal with the structural knowledge needed to pre-design a structure. My aim was to develop a software-tool made for architects, to pre-dimension structural elements, and to reorganize the current structural knowledge to enhance the structural insight of the architect.

Evaluation

In structural design the proposition is mainly evaluated by dimensioning some crucial structural elements to check if they meet a self-chosen structural goal, by comparing the structural volume with the architectural building volume, and by presenting the proposition to the architect for approval.

In the beginning of my research process the evaluation is done through hypothetical testing: imagining what such a software-tool could be and how it could be used in my
ongoing design projects. This software-concept is also presented to architects to get their opinion. As the research progresses the testing becomes more real: by actually developing the software-tool unforeseen problems become apparent. And in a future stage a final software-tool could be tested by architects for evaluation.

Adaptation of the problem formulation

When a structural element fails to meet a structural goal (i.e. often an optimisation requirement), the choice is made to except this shortcoming or to redesign the structure and try to acquire this goal. In case the structural volume does not fit into the presented architectural volume, the structure is presented as such to the architect for negotiation, or redesigned in order to fit. When the structural design is presented to the architect for evaluation, new architectural requirements may appear which change the problem formulation.

New proposition

A new structural proposition can range from a new designed structural concept to a further refinement of an already approved concept. Compared to my research process, the amount of cycles in the design process is often limited due to my experience in structural designing and in collaborating with the same architects. My new research propositions can also range from small adjustments to big changes of the previous proposition. Small adjustments on the software-tool are made first, trying for example to incorporate the building reality of structural systems, to the point that so many adjustments are needed that the software loses its ease of use for architects. Eventually the problem formulation is shifted towards the collaboration of architect and engineer and leads to a major change of the research proposition: from a structural design tool for architects to a communication language for design negotiation between architect and engineer in the early phase of the design process.

Different ways of making pudding

In both cases of design and research, producing a proposition is the first step of the cycle and the most creative part of the process. (The evaluation of the proposition is often a more apparent step to take). A key element in creating a proposition is getting inspired. In design, inspiration is sometimes found in looking at design examples, but also in many other things not directly related to the design subject like watching a movie, reading a book or seeing a flower. Inspiration comes often unexpected through a medium that was not always intended for that use. The designer generally does not need to understand the intended meaning of the medium or how it inspired him. His main concern is to deliver a valuable design by any necessary means of inspiration. (However understanding the intended meaning can sometimes become useful for further inspiration).

The designer is (practical) solution driven: he aims at producing a single design (for a specific problem) that meets certain standards. The path to get there is of less importance. The proof of his pudding is eventually in the eating: the value of the design is proven in the final use and appreciation of the end product. In my case this means that when the building still stands (without cracks) after several decades and the architectural design remains an issue. This made me conclude that the answer may not lay in making the architect a better engineer, but that more is to be found in the collaboration of architect and engineer. Where both actors are expert in their field and able to be creative designers, but mainly need to get their separate design process in tune with one another. This change of problem formulation is a consequence of my endeavour in finding a software tool to help the architect and of my scholarly reading, which both delivered new elements of the problem.
structure has contributed to the architectural quality of the building, the structural
design has proven to be good. The process I followed to come to this end design has
very little impact on this proof of quality.

When the designer is doing research and operates in the world of scholars, his
working process comes into focus. In this world, propositions are developed from
established theories. The developed terminology in these theories are only to be used
according to their intended meaning (and not according to the designer’s personal
interpretation). Here the used methods of operating (i.e. researching) are to be made
explicit and applied according to scientific rules. The researcher is theory development
-driven: he aims at producing a theory applicable to different cases, where the value
of this theory is mainly proven by the way he researches. For the researcher the proof
of the pudding is in the cooking. Through rigorously applying the existing scientific
theories and methods the researcher builds a case to prove the value of his findings.
The designer doing research tends to be less rigorous in applying these theories and
methods, because he is mainly used to look for inspiration and not for proof during
the process: the designer finds proof in the end result alone. (His working process is
mainly a personal matter not intended to be made public). In my opinion the modus
operandi of the designer and the researcher can lead to two different ways of making
pudding: a more experimental way of trial and error, where the cook creates a pudding
he likes before presenting it to others for approval, and a more thought-through-
approach in consultation with other renowned chefs, creating a good pudding recipe
before actually making the pudding.

During my research I have used both ways of making pudding: testing in practice
personal ideas of improvement with little theoretical knowledge on the matter, and
gradually getting acquainted with theories and methods of research on multi-disci-
plinary design. The first gives me a quick practical way into the problem I’m dealing
with, the latter broadens up the problem formulation to me which enables a wider
range of proposition creation.

How do I expect to proof the value of the pudding I’m making? The language I’m
developing now for negotiation between architect and engineer, needs to work in my
practice first. Here the proof must be in the eating (i.e. actually me eating this pudding).
Then this language can be presented to other practitioners (i.e. peers) for their
opinion. And if my findings are practically applicable, it could even be scientifically
tested in practice and evaluated.

In case the findings are less testable, more emphasis will lay on the way the findings
are produced to proof their value: this will lead to post-rationalisation of the research
project. Here the proof is in the cooking: building a sound case from established
theories and methods with a clear route mapping of the research process to argue for
the research findings.

Conclusion

As designer and researcher I both have to deal with wicked problems, where the
problem formulation is not definitive and the problem only gets known when the
solution is found. To come to an end result a cyclic process is followed of making a
proposition for the current problem formulation, evaluating this proposition which
in turn leads to reformulating the problem. The cycle then comes back to the starting
point by looking for a new proposition for this reformulated problem. In my design
process there are less cycles to follow than in my research process due to the differ-
ence in complexity of the problems and in my experience of designing and research-
ing.

As designer I’m used to be focused on the end result and little on the design process
itself. As researcher I need to develop more rigour in the working process by looking
at established theories and methods and by presenting a clear route mapping of my
research. It is a different way of making pudding than I’m used to, but both the de-
signer and the researcher in me have the same goal: making an excellent pudding!

Laurens Luyten

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155-169.
Participants ‘batch 2008’
Food & Urbanism

How can an understanding of human activities relating to FOOD in a local support urban and architectural design for that locality?

Introduction
Can the understanding of FOOD and the complex phenomenon of eating inspire designers to design urban and architectural environment? EATING is a fundamental activity of everyday life and the core of many social activities that drive a society. FOOD very often reflects the way we live and the social values of a particular place. Therefore FOOD can be seen as a primary transforming force capable of organizing the city and enhancing the urban experience.

Here is my own experience of how eating habits shape the built environment, and possibly vice versa. I have less than an hour lunch break in Rotterdam, where I simply join the 'lunch table' organized by the colleagues in the office. Or, I step out to have lunch in a temporary semi-outdoor market place where food, small office gadgets, clothing and DVDs are sold in Bangkok. And, very often, I find myself on the move during lunch to grab take away sandwiches in London. The one example that most contrasts with all the above is when I have a two-hour lunch break in Barcelona, where most of my local colleagues either sit in a small restaurant having a three-course meal with a glass of wine, or they go home for lunch and a little siesta, but I go to a local swimming pool to combine my lunch with sport. Comparing the morphology of these different cities, Rotterdam has obvious centres where all the high street brands from clothing to food are concentrated, Bangkok has an enormously complex fabric of informal sectors attaching all over the city, London is like villages within a city with multi-centres for different purposes, and Barcelona has several clusters of multi-functional neighborhoods (almost an accumulation of villages), each of which serves all the needs of everyday life within the neighborhood itself and in which the individual single-owner places of commerce and restaurants are still intact.

The central issue of this research will be to understand and to turn FOOD into a useful tool for designers for recognizing social patterns and their relation to architectural and urban environment. The type of knowledge as such has not yet been previously studied; therefore there is the need to bridge this gap by combining the knowledge in different fields to form the base knowledge for this research // see Fig 01//. In this research I suggest to overlay the following three different fields of knowledge: the knowledge of FOOD, the knowledge of Architecture and Urbanism and the knowledge of current event in a particular locality depending on the case study //see Fig.02//. The knowledge of FOOD is the understanding of Food histories, patterns, habits and culture of (and in) a particular locality. The knowledge
of Architecture and Urbanism is the understanding of how architecture and urbanity of a particular place have been evolves through time and what are the elements of influences. And finally the knowledge of current event is the understanding of current politic, economic and social issue of a particular locality.

My role in this research is to bridge the missing gaps between these different fields of knowledge. In this research I am not only the researcher and the designer, but also the editor. As the editor to work is to select and study the overlap areas of these three fields of knowledge.

Reflection
The academic year 2008 - 2009 is the year that I make my journey into the domain of “FOOD”. This journey involves reading, searching for experts in the field, attending workshops, seminars and further engaging in discussions with other researchers in the field of food. As far as I understand the field of food studies is still very new and undefined, I would like to use this research as the opportunity to perhaps bring in another perspective to define this new field of knowledge. In this reflection, I would like to reflect on this very 1st step of my experience into the subject of FOOD.

What is FOOD?
Definition/Description
In this research FOOD is not only the material that we eat, but it is also the human activities that evolve around it. The main focus of “FOOD” in this research is to look at how people are moving around in relation to their activities surround food. “FOOD” is written in the capital letters is the attempt to define the word, but not to describe it. I would like to use this reflection to reflect on this statement; and below here are the selections of what FOOD can be described. However this research is still at its beginning phase therefore I would like to use this moment to explore, but not meaning that all of them will be included in this research.

FOOD as systems //see Fig. 03//
One of the goals of this research is to unveil the patterns of food related activities in an urban area. Following this statement, there are two main subjects in this equation: food and people. Food is the material that is being moved around by people and vice versa people are moving around by motive surrounding food. This relation between the two can be looked at in two scales, the large and the small scale of food systems. The large food system is a more complete covering the whole life cycle of the food. It is looking at the relation between food production (hunting, gathering, fishing or farming) > food processing (industry) > food searching (buying, supplying) > food preparation > food consumption (eating) > food disposal and perhaps loop back to the beginning to form a cycle. The small food system is looking at the relation between food searching (buying/supplying) > food preparation > food consumption (eating).
FOOD systems

These food systems described above need to be translated into their architecture and urban context in order to make them meaningful in this research. In other words, it is the translation of food as systems into food as patterns in space. Food patterns is the tracking and understanding of how people moving around in an urban area in relation to food, or how food are being moved around in an urban area in order to meet the demand of consumption in a locality.

FOOD in different scales //see Fig. 04/

Food patterns can be studied in three different areas. First, it can be looked at from the FOOD supply perspective, meaning looking at the relationship between the growing and the buying of the products in a region. Regional scale will be the main domain of working from the design perspective. Secondly, it can be looked at from the FOOD preparation prospective, meaning looking at the urban dialog between the preparing (the food makers) and having it served (the consumer). And finally, it can be looked at from the food Habits perspective, meaning looking from individual in relation with an urban area.

FOOD as patterns

Before getting into the description of food habits, I would like to briefly explain my understanding from the work of a social anthropologist, Jean Pierre Poulain (Poulain 2005), who points out that food habits (espace social alimentaire) is formed by three constraints: the physical constraint as human body, the culture constraint as the value of a society and the environmental constraint as available resources in a territory. He claims that these constrain shape the way we eat. In this research these three constrains can form the structure of the fieldwork, the aim of the field work is to investigate how culture value and environment shaping the way we eat? And thereafter we can reverse the question to; can the understanding of food habits help us to understand the build environment?

FOOD as food habits //see Fig. 05/

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FOOD as sustainable thinking

Food Habits in this research is to understand how, what and when do we eat? Who we are? And how we live? In other word, it can be an investigation of the eating habits and their relationship to the environment, both on the individual and on the collective level. The environment in this sense could be not only the build environment, but also as broad as the natural environment. The issue of environment is playing increasing important role in the current public awareness on sustainable development and climate change. This is a complex area which involve many stakeholders, it is necessary to be aware of and thinking of this issue in the background. This research should not be proactive trying to hook up with this issue.
FOOD as social statements
Food habits are not created by individual persons, but rather by external factors. These external factors can be the improvement of technology, the promotion of political ideas or trends in social values such as described in the book "Delizia: The Épic History of the Italians and their Food" (John Dickie 2007) and the news report on the fast-food ban in Los Angeles. These social statements are powerful that are able to shape the way cities developed.

"Mobility and Leisure combined to multiply the forms of culinary transformation. As bicycles and carts were replaced with scooters and cars, millions gained the freedom to zip into the city centre and meet friends at a pizzeria, or to take the family out into the country for Sunday lunch. The age of mass motorization profoundly changed the Italian culture of the table, introducing wholly new food experiences, such as driving to the seaside in August to eat spaghetti with clams, or stopping for a bite at an Autogrill – a motorway service station. During the miracle there was a rapid reduction in the number of people who grew what went into their meals. Instead Italians became infatuated with products from the food industries. Their infatuation has increased over the years. In fact, the miracle set in motion panoply of changes that are still unfolding today. Less and less time is devoted to preparing food. Simultaneously, the meaning of eating a metamorphosis: no longer merely a biological necessity or even a collective ritual, it a form of entertainment, like going to the cinema or watching a football match. Strange new habits, like snacking and dieting, are adopted. Special foods are created for novel sub-categories of consumer, from babies to body-builders. Day-to-day food responds to urgent bulletins from the frontiers of science, and to the convulsive dictates of fashion. The marriage between television and advertising has radically changed the meaning of food for millions. Humble goods like ham, pasta and oil are enveloped in the magical aura of capitalist merchandising. Consumers no longer eat food: they eat icons of desire, promises of love and success." (John Dickie 2007)

"The Los Angeles City Council unanimously approved (12-0 vote) today an Interim Control Ordinance (ICO) drafted in response to a motion, authored by Councilwoman Jan Perry and seconded by Councilman Bernard Parks, designed to address the imbalance of changes that are still unfolding today. This will allow time for City planners to study the economic and environmental effects of the over-proliferation of fast-food restaurants in these communities and develop permanent solutions." Jan C. Perry (D), Councilwoman, Ninth District, City of Los Angeles 2008)

FOOD in history
Drawing the parallel history of food and the history of architecture and urbanism can bridge the knowledge between the two fields. By reading the book "Food culture in Belgium" (Scholliers 2008) I discover the rise and fall of the bread vs. potato in relation to the changing landscape in Belgium in 17th and 19th century. I see the significant role of building up the body of knowledge to bridge Food –Urbanism by looking at the parallel history crossing the two fields not only their content, but also the method of constructing the material. What can we learn from the past? and how can we project this into the future scenario?

What is written in this reflection is the collection of thoughts and in–puts that comes into this research during the past academic year. It is still an ongoing process and what has been written above is the reflection of how to frame the word “FOOD”. It is going to be a challenge to put all these pieces of all these findings and ideas together. It is the big challenge of what should be dropped out and what should be remained in this research in the following phase.

Acknowledgement
Since 2007, I have been following two years of the RTS (research training session at Department of Architecture Sint Lucas Brussels and Ghent, Belgium). The subject of my research has been "Food, Architecture and Urbanism", today the title remains the same, but my perception of the topic have moved further from where I started. Without the support from many of you, I would never have come far enough to start this research project. Many thanks to Halina Dunin Woyseth, Fredrik Nilsson, Gerard de Zeeuw, Rolf Hughes, Omer Akin, Burak Pak, Ranulph Glanville, Adam Jakimowicz, Chris Rust, Nicola Wood, Simon Bower, Leon van Schaik, Richard Blythe, Marc Godts, Livia de Bethune, Dag Boutsen, Johan Verbeke, Peter Scholliers, Tomas Ooms, Tom Callebaut, Corneel Cannaerts, Harold Fallon, Wouter Cornillie, Dominique Pieters, Thierry Berlemont, Lucas Devriendt, Elise Mognard, and Rene Hansen.

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Bibliography
Introduction

Architecture is closely intertwined with our daily lives. Its spatial setting constitutes the framework for almost everything we do. Architecture has a purpose and is meant to be used and experienced. We stand on floors, touch walls, see through openings and are covered by roofs. The physical elements that buildings are composed of determine their sensorial qualities and functional performance. Utility and sensorial experiences are dependent on the presence of a physical reality, or in other words: ‘Architecture only exists when it is materialised by its construction, before it is image.’

Innumerable elements define the arrangement of the architectural setting and influence its failure or success. Within this vast range, the mechanisms for materialising architecture through its construction undoubtedly have a particular role to play. This is not an original finding, since it has been the case throughout the history of architecture.

The act of constructing architecture is often regarded as being primarily practical and pragmatic, i.e. as ‘processes of production organised as a sequence of technical operations’. This point of view is very common and finds its roots in the renaissance-based dissociation between architectural conception as an intellectual activity and architectural construction as the craft of making the buildings. One consequence of this division was that the knowledge of the principles and mechanisms of construction

could no longer be acquired through practice and had to be made available by means of descriptions with text and drawings. Implicitly, this results in the impression that we know nothing about those principles and mechanisms until we have followed specialised courses about them and thoroughly studied numerous books on the subject. This is particularly noticeable in architectural education, where students, lacking the ‘experience’ to complement architectural concepts with technological principles, often fail to make the connection between the two. This frequently leads to students either turning their backs on construction technology and/or limiting the construction-design part to the implementation of predefined solutions without any linkage to the spirit and design characteristics of the architectural project they have designed.

In view of the complexity of construction technology nowadays, we should not be too surprised about this. But on the other hand, we should be surprised – at least a little. We experience gravity in terms of our weight from the moment we are born, we know that a stone block is heavier to lift and carry than a pillow, we experience materials as being soft or hard. As children, we construct shelters to play in with wooden sticks and planks or cardboard. The drive to construct things is omnipresent in our childhood lives and the act of making generates implicit knowledge through the experiencing of physical principles, implementation methods and material properties. We pile things up, bridge gaps, attach things to one another; we experience heaviness, lightness, roughness, smoothness, wet, dry, sharp, blunt, ... Basically, the principles, mechanisms and properties we experience in our childhood are the same as those governing the construction of architecture, and in doing, we discover and experience possibilities and limitations. The same was true for the pre-renaissance architect-craftsman, for whom the knowledge was implicit and tacit, and not explicit. We do not translate the action-findings into manuals, nor do we try to describe and explain the laws of nature governing stability or material properties. We pile things up, bridge gaps, attach things to one another; we experience heaviness, lightness, roughness, smoothness, wet, dry, sharp, blunt, ...

In architectural education, new drawing, modelling and calculation software is creating opportunities for a more direct relationship with the real world of architecture and construction, and indeed, for the realisation of an architectural project to be transformed into a teaching tool. Moreover, the drive to construct things is omnipresent in our childhood lives and the act of making generates implicit knowledge through the experiencing of physical principles, implementation methods and material properties. We pile things up, bridge gaps, attach things to one another; we experience heaviness, lightness, roughness, smoothness, wet, dry, sharp, blunt, ... Basically, the principles, mechanisms and properties we experience in our childhood are the same as those governing the construction of architecture, and in doing, we discover and experience possibilities and limitations. The same was true for the pre-renaissance architect-craftsman, for whom the knowledge was implicit and tacit, and not explicit. We do not translate the action-findings into manuals, nor do we try to describe and explain the laws of nature governing stability or material properties. We pile things up, bridge gaps, attach things to one another; we experience heaviness, lightness, roughness, smoothness, wet, dry, sharp, blunt, ...

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In architectural education, and increasingly in architectural practice, we are confronted with the recurring demand to improve the relationship between architectural design and construction technology. In architectural education, a great number of different teaching curricula, exercises, workshops, etc. have been elaborated with the goal of achieving increased integration between the two. In architectural practice, new drawing, modelling and calculation software is creating extensive possibilities for the integrated and simultaneous development of the project by designers and constructors, and cad-cam is bringing design and manufacturing into a more direct relationship with one another. Though all these developments are probably very helpful and useful, nevertheless in most of these models the tension between the architectural design process and construction technology often remains present or unresolved.

After some years in architectural practice and architectural education, teaching both architectural design and construction technology, I gradually became convinced that it is necessary to reappraise the role and importance of the tacit knowledge of construction principles and mechanisms, in order to be able to improve their implementation within an architectural design context. I am also convinced that we should integrate ‘experience and interpretation’ as essential design factors within construction technology, similar to the way the pre-renaissance architect-craftsman did it, and to the way we did it when we were kids. We should create an experience-based approach to technology and increase the awareness that physical principles, construction mechanisms and material properties are fundamental design elements determining architectural experience, and not just tools for solving problems generated by the architectural concept. ‘The point is that we have known of different types of knowledge intended to fit different purposes for a long time, but recently we seem to have almost forgotten this. ... And for designers, the type of knowledge we seek is not knowledge of what is, but knowledge for action.’

It remains a fact that it takes years of study and practice to transfer and transform, step by step, the explicit knowledge available in the textbooks into tacit, embodied knowledge. Moreover, it must be noted that the knowledge to be found within the domain of (construction) technology is not structured in such a manner that it facilitates this transfer. ‘Knowledge of (the world as it is) is the province of, for instance science. Designers, in contrast, are interested in changing the world rather than in the world as found: they are interested in what might be and how to bring that about. In contrast to the scientist, they are interested in what is not (yet)... Thus the shape of knowledge (whether or for) is a matter of purpose... knowledge is neither fixed nor untouchable... I maintain that because it is ‘knowledge for’ which is the knowledge designers seek and use, and because so much of (design) research is interested in producing ‘knowledge of’, much of the knowledge that derives from research turns out to be so singularly... unfriendly towards architects.’

Creating a facilitator for the transformation of explicit knowledge into tacit knowledge might prove to be one of the key elements in improving the implementation of construction principles in architectural design.

1. Technology - positivism and reduction

1.1 Positivism

In order to explain the relationship between technology and form, a positivist model has often been constructed, according to which there exists a direct relationship of cause and effect between innovative technology and the generation of new formal paradigms... This is in keeping with a more general idea, the possibility of achieving constant and unlimited development thanks to the evolution of science and, in particular of its more pragmatic component: technology.5

In textbooks and research concerning construction methods and technology, but also in part of the architectural and engineering discourse, the action is more often than not explicitly oriented towards 'novelty': 'new' materials, 'new' construction techniques, 'new' architectural forms, 'new' forms of structure depending on 'new' sets of standards and constraints, 'new' methods, etc... Although this trend is based upon the continuity of a knowledge tradition, we have to be cautious about the fact that such a process or drive focused primarily on the 'new' also has the tendency to judge existing principles and solutions as being outdated or no longer relevant.

New technologies undoubtedly are (or can be) used to generate new architecture (space and form), as can be seen in parametric design and manufacturing or the integration of new materials and energy-technology in building skins. Both are examples of technological positivism. Hence, we have to be aware that new technology does not change the conditions (sun, wind, rain, hot, cold,...) in which architecture is materialised, nor does it necessarily alter the basic needs of the user, who is still looking for shelter, comfort and an agreeable space in which to live, work, etc. Technology only helps us to handle the situation better (or sometimes worse). The evolution of technological means and methods does not alter the basic principles (gravity remains gravity) and issues. It is only the solutions that evolve or change and the range of possibilities that (hopefully) gets larger.

5 Carlos Ferrater: 2003, Materiality, Ed. Torho S.A., p.7-8

1.2 Reduction

Construction technology is essentially instrumental, being oriented towards the practice of construction, towards the application. The final goal is the real-life act of building an architectural artefact. For this purpose, material properties, processes, methods, systems, solutions, etc. are researched and extensively documented and described in textbooks and manuals.

The underlying structure and logic of these publications is usually two-fold. On the one hand, the rational, scientific backbone (the theory) and, on the other hand, the guide to ‘good practice’, the ‘how to’ sections with descriptions of the practical solutions. Although construction technology is essential in the process of transforming ideas into matter, a conflict exists between the practical and physical constraints of construction technology and the conceptual, reflective and explorative nature of the design process. The problem in my view is due to an inherent characteristic of the technological methods based on scientific rationality and proof, and their subsequent translation into rules and regulations describing specific ways to handle problems. When implemented in an architectural design context, these methods and consequent rules and regulations often are very reductionistic, and this tendency usually manifests itself in three different ways.

The first reductive element is one in which a complex problem is decomposed or dissected into simpler sub-problems, which are easier to understand and to handle. Very popular in engineering and science, it is a method that is used to reduce the variables and it can be seen as a (design) strategy oriented towards enhancing the ability to achieve a solution. This type of reduction can be regarded as positive, because it creates a context and the ability for action.

The second one is problematic. The sets of rules and regulations have the tendency to close off the options, to reduce ‘the space of possibilities’5, and this happens in the following ways:

- The focus and the action are directed towards ‘problems’ to be solved, rather than towards ‘questions’ to be asked or possibilities to be explored.
- The possible answers to the problems are translated into specific solutions or solution sets that can be applied (with relatively minor formal variations) to all similar problems, i.e. projects, instead of general principles being taken into consideration and applied to generate particular solutions adapted to the specificities of the project.

The reference to 'good or correct' practice suggests that whatever is outside of the solution set is either not adequate, or not valuable enough to take into consideration. The 'how to' then evolves towards a 'have to'.

It is therefore imperative to find a format or framework in which the implementation of construction technology in the architectural design can be approached with 'the power of designerly thinking'. The strange capacity of designerly thinking is that it makes the future as a space of possibilities available for exploration and consideration. Possibilities appear that have not yet been recognised or discovered, as well as all the potential realities that are linked to them. This opens up ... not only the probable, but also the improbable and unexpected.7

In actual architectural practice this is situated on the personal level of the designer (architect and engineer) and is dependent on the individual qualities and insights of a designer or design team. It is particular and cannot be considered to be available and communicable for use by all.

The third reductive aspect, in my opinion, is related to the lack of critical reflection regarding 'the language, methodologies and value systems used within a field of knowledge'.8 To clarify this, I will use the following extract from a textbook on construction methods: '...semi-finished elements are industrially produced building elements manufactured of raw materials. They are system-neutral and can be utilised in a great range of different building systems.9'

Understood within the framework of the conventions of construction technology, the above-mentioned sentence is obvious. However, the formulation raises questions. When looked into with more attention, the content becomes intriguing with respect to the meanings of the terminology used. In construction technology, semi-finished elements are things like beams, plates and blocks, which can be used as basic components in making a more elaborate construction. A construction can then be considered as an assembly or combination of a series of these components. The components are in fact 'finished' products in the sense that they are ready for use and have specific properties regarding material, geometry, dimension, section, performance, etc., but they are 'semi-finished' products in the sense that they acquire their relevance or value by being used in a construction, and only thus do they become finished.

Although the terminology in my view is not exactly straightforward, it really gets confusing regarding the claimed property of system-neutrality. The versatility or ability to be used in different constellations can sometimes be claimed, but the so-called semi-finished elements are definitely not (system)-neutral. On the contrary, many of the available semi-finished elements are all but neutral, due to the fact that they have specific properties that dictate their use. For example, the geometry of semi-finished elements most often involves straight lines and right angles. Their use is therefore optimal for the creation of constructions with orthogonal geometries, but often inadequate or not ideal for other geometries. Building blocks such as bricks will almost automatically lead to a massive morphology and a stacking method, whereas linear elements like steel sections will mostly lead to a skeleton-like system with elements and nodes.

The above-cited definition implies a value judgement that is based on the internal logic of the knowledge field, and this value judgement has evolved into a convention that is never questioned. Many examples of this phenomenon exist, thus indicating that in construction technology – and other domains for that matter – we continuously reflect and act on the basis of hidden assumptions. '...The existing language and methods of a technical practice, like any disciplinary culture, runs deeper than we are aware... To function in the field you have to acquire a range of linguistic forms, habits of thought, established techniques, and virtualised work practices, ways of framing questions and answers... It is difficult to become aware of the full range of assumptions underlying existing practices, from technical methods to genre conventions to metaphors.90'

2. Classification

Every knowledge field or field of experience uses classification methods in one way or another to organise and structure its available knowledge. The available information is arranged in categories, using classification principles based on relations or attributes. Primarily, a classification is a facilitator, a means to access, use and communicate knowledge by revealing resemblance, differentiation, multiplicity, and diversity. It is a way to create links and increase understanding. The same applies to the knowledge field we are concerned with, i.e. architecture and construction technology as an integral part of architecture.

The use of classification principles as a powerful tool to support architectural and artistic discourse has already been shown, for example, by OMA / Rem Koolhaas (S M L XL), Foreign Office Architects (Phylogenesis - FOAs ark), Reiser + Umemoto (Atlas of Novel Tectonics), AA London (Typological formations, renewable building

To keep track of the technological information, or to keep it apprehensible and usable for the architect/designer in the architectural design process, the existing knowledge is organised in categories that create a sense of architectural relevance. These categories are reflected in the organisation of architectural practice and education, as well as in the literature, the industry, the building practice, etc., and they are organised by:

- **Discipline**: Architecture, Interior Architecture, Structural Engineering, Materials Engineering, Mechanical Engineering (Building Physics, Acoustics...), Urbanism, Landscape, ...
- **Material**: Natural stone, Brick, Earth/Adobe, Concrete, Ceramics, Steel, Wood, Glass, Plastics, Insulating materials, Textiles, Plasters, Paint, ... and related classifications by types and/or properties: Mineral/Vegetal/Synthetic, Organic/Inorganic, Structural/Non-structural, Rough/Smooth, ...
- **Element**: Façade, Roof, Wall, Floor, Window, Foundation, Stairs,...
- **Process**: Mostly following the (chronological) phases of the construction process from excavation, foundations, and primary structure,... up to finishings.
- **Typology**: - Functional typology: Housing, Office, Hotel, Shops & Retail, Museum, Industrial,... - Structural typology: Form-active, Vector-active, Surface-active, Section-active, ...
- **Morphology**: Solid, Filigree, ...
- **Performance**: Cost-effective, Energy-efficient, Sustainable, Simple, Sound...
- **Others** - These classifications have proven – and continue to prove – their usefulness, and it is certainly neither my ambition nor intent to replace them. Still, I am convinced that we should be aware of the fact that the manner in which the knowledge is organised is not free of consequences. Creating a classification implies choosing for specific groupings, representations and relationships. Some are integrated as being relevant or useful, and others are left out, which means that the story is told in a particular way based on the choices of the author(s). We are not naturally inclined to question the relevance or adequacy of the existing ways of organizing and representing the technological knowledge in architecture and construction technology. But I am convinced that we should, because it certainly has an influence on the ways we use the knowledge (methods) and on the outcome (results) we reach. Which influence, however, is yet unknown.

3. **From idea to action – from brief to experience**

A very important feature of architecture, and one with great consequences, is the architectural process in which the architect is not an autonomous actor. The architect responds with his architectural project to questions, needs and expectations. Without these, architecture would not exist in the first place. From brief to final design, architects, engineers, and other designing parties elaborate the project using different means of representation, from sketch on paper to complex 3D-models, using traditional and/or new tools ranging from pencil to cardboard to computers. The means may differ, but the goal stays the same, namely: turning architectural ideas and concepts into (virtual) representational models or images that illustrate and simulate the result to be achieved in order to be able to communicate about it – amongst themselves, of course, but also with the stakeholders.

In the following stage, in order for the architectural model thus created to be materialised, it has to be translated and transferred from the designers to the constructors, or in other words: *the project must be handed over from those who know what the project is (or has to be) to those who are going to make it.*

The first party has to indicate, based on what he knows (idea), what the other party has to do (action). To ensure that adequate action is undertaken, correct explanations need to be provided. Mostly, these explanations take on the form of an ‘exhaustive’ description of the project and its constituent elements, with a focus on the ‘result’ to be achieved.

In order to be interpreted correctly, the explanations need to be unequivocal and situated both on the level of the ‘technological’ description and on the level of the conceptual intentionality of the project.

11 Patrick Bouchain: 2006, Construire autrement, comment faire, L’impensé Actes Sud, Arles. 12 Construction technology as it is considered within actual practice, gets its relevance through the act of constructing, building, making the architectural artefact. This is its basic premise and fundamental goal. Within the context of architectural education, we have to be conscious of the fact that students never get into the project phase of construction. The fact that the architectural finality of the built construction is never reached makes the application of construction technology in the project highly theoretical and virtual. To put it bluntly, in the context of the elaboration of an architectural project in a design studio, a project can be very interesting regarding concept, idea, space, form, etc, and be nonsense from the viewpoint of construction technology. The irony lies in the fact that to a certain extent this does not matter, because the project is not intended to be built. It stays an image.
In this process we constantly need to bear in mind an essential quality of architecture, namely its ability to create an atmosphere, a transient experience, within a physical, tangible reality. ‘Materials lend their reality to our experience of an architectural idea, but only in so far as they give body to the cognitive model the architects offer up for consideration: what interests us in our projects and buildings… is modelling, creating an instrument for the perception of reality and our interaction with it.’

This essential quality is also a source of ambiguity, as architecture is not only governed by image and experience. Architecture is conceptual, approximate and arbitrary, but at the same time it is rational, exact and precise. Architecture is determined by will and control over measure, scale, position, orientation, material, etc., which implies working with quantifiable, repeatable, measurable, controllable data and information. It needs to be useful and utilitarian, but without conceptual meaning or ‘conceptual intelligence’ it tends to be meaningless. On the other hand, construction principles, methods and actions, whether technologically high-end or based on plain practical common sense, are as essential as concepts and ideas for shaping the appearance and experience of the architectural artefact. Architectural projects are sometimes artistic in intention, sometimes they focus on the technology or engineering, and sometimes they shift from the one to the other. In the end, they need to be and do all of it. The architectural design process is a continuous ‘wavering’ between formal and spatial concepts, on the one hand, and technical and engineering logic, on the other, at one moment using rational arguments and a moment later using intuition.

4. Exploring possibilities (and limitations)

‘I wish to investigate the confluence of technology and human experience’.

Staging architectural ideas and concepts in a materialised reality is essential to architecture, but existing models and methods for implementing material reality in the architectural design process often remain inadequate or at least imperfect. The application of predefined models and solutions using reason and argument rather than experience and intuition is not very challenging and too often generates predictable outcomes.

When making a construction with stone blocks, for example, we are confronted with the practical problem of manipulation. The blocks are usually delivered in compact stacks on pallets by a truck equipped with a crane. Consequently we have to get them off the stack and carry them to the place where we want to use them. Sometimes we make a new and smaller stack before using them in the actual construction. The handling of the blocks from pallet to construction can be regarded as a sequence of consecutive manipulations. The ease of manipulation – of lifting and carrying – is defined by format, weight, grip, etc.

Increasing the ease of manipulation can be translated into a design issue. Modifications in the massivity generate differences in weight. A hollow block is thus lighter and easier to carry around. If it is perforated and the perforations are big enough to put our hands into, then we can grab them. We can also generate other particular solutions, such as holes to be used as handles and a great variety of lifting tools. Other solutions can be found in altering the combination of the elements in the stack. The space generated by rotation of the elements allows us to put our hands in between and around them and to pick them up.

Different alternatives are available and we can formulate a multitude of divergent solutions to a single problem, and not just one or maybe two with certain variations, as is so often suggested in the technology manuals. The solutions can be found on different levels by modifying the element itself, by adding other elements to use as tools or by acting on the mutual relationship between the elements in their combinations. In addition to this, the generation of solutions for a functional problem can lead to the creation of new situations we might not have expected at the start. If we compare the initial ordering of the stack with the rotated alternative, we see a different form, another impression of mass, layering, depth, light and shadow, etc. The object has different qualities and characteristics, and can be interpreted/experienced differently.

14 Ibid.
‘Creating’ alternatives allows us to compare them, to judge their advantages and limitations and thus to find the most adequate and suitable solution for the given problem. This may all seem obvious, but within the context of construction technology and its implementation in architecture it unfortunately is not.

Starting off from here, it is my claim that the knowledge base of construction technology should be complemented and reoriented towards a model that:
- generates and increases the awareness of the existence of different possibilities;
- triggers the curiosity to explore these possibilities;
- leaves space for both rationality and subjective interpretation;
- expresses multiplicity, diversity and heterogeneity, both in terms of the subject areas and of the fields to be explored;
- facilitates selection:
  selection implies a choice and thus a value judgement to make;
- is open for modification and alternatives;
- facilitates the design and making of the architectural artefact.

5. Exploring possibilities (and limitations) – a preview

One of the tasks the architect is up against is to create buildings that fit the purpose they are designed for. Their structure must ensure their stability. A building’s envelope should be closed off to rain and cold, but opened up to light and fresh air and for the purpose of access. Its interior should be comfortable and everything should preferably look good. At the same time, we expect it to have some durability and ease of use. We could go on for some time enumerating these legitimate expectations regarding architecture. Construction technology enables us to get control over these aspects when materialising architecture. This undoubtedly is one of its main assets and consequently makes it indispensable. At the same time, construction technology creates its own expectations, requirements and rules, all of which condition our architectural action. The following elaboration of an example may help to get a better sense of what this means.

Within architectural practice and its construction technology complement, ‘water’ is often – or perhaps mostly – regarded as being a problem generator. As a consequence, attention is oriented towards avoiding the problems and damage caused, for example, by water infiltrations, vapour, leaks, etc. Water must be contained within strict boundaries by preventing condensation, by raising barriers, by integrating specific sealing layers into the construction, etc. Capable craftsmen must execute all these measures accurately and with the utmost precision. When looking at the matter from this point of view, we might get the impression that we are fighting a battle against a cunning and unpredictable adversary.

To overcome the possible problems, specific solutions have been developed. These solutions are described extensively and in great detail in specialised textbooks. The construction industry provides professionally developed systems containing series of components, which can be directly implemented in the construction. These systems are more or less direct translations of the solutions described in the textbooks, or vice-versa. Most of these systems have proven their effectiveness and adequacy many times over, and when applying them we can be confident they will do what they were designed to do.

If we take systems for evacuating rain as an example, we note that the most popular strategy used in constructions amounts to collecting, containing and evacuating the water as quickly and efficiently as possible. The materialisation of this strategy in an architectural context mostly results in a system of gutters and drainage pipes leading from the lower edges of the roof, over the facades and into the ground, where another drainage system leading to the public evacuation system takes over. It is a well thought through and integrated system, which is very common and predictable.

At this point I want to say very explicitly that I am not at all questioning the necessity to take appropriate action regarding water in architectural constructions, since water obviously can have a significant impact on our comfort and the soundness of the architectural environment we dwell in. A badly designed water system in and
around buildings can and will generate all kinds of minor to major problems, a fact which many architects, regrettably, will be able to confirm.

The effectiveness and predictability of such systems are positive qualities when considering ‘water’ as a problem. The problem is known and recognised and we have a solution at our disposal that can be implemented directly and without risk. However, when considering ‘water’ as an opportunity to generate architectural experience, the predictability of the fixed solution becomes a limitation or restriction that can make action and the implementation of alternatives difficult, if not impossible.

Within the model described above, it remains possible to be creative, whether intentionally or by chance. A shipload of fantastic examples can be found throughout architectural history.

In the first, the evacuation system draws an outline around the perimeter of the building and frames it. It may just be a practical solution, but somehow it adds graphic legibility to the image. The spatial setting mutates into a drawing.

The second example shows variations in material and treats the transition between the vertical water guide and the horizontal plane as a particular event that deserves its own expression.

One property of previous systems and their variations is that the water they are designed to get rid of is neither visible nor physically present. The only sensorial element at play is the possible sound of the water running through the system. The fact remains, nevertheless, that by experience we know that the system contains water when it rains, even if we cannot see it.

Within architecture, water is most often referred to as an environmental element specific to the location the architectural project is situated in. It is treated alongside other environmental or climatic elements such as the sun, temperature, wind and soil, which together define the external conditions. For obvious reasons, water is not considered to be a homogeneous category and a differentiation is made according to source or aggregation state. Water falls from the sky in solid or liquid state as rain, snow or hail, it comes up from the ground, and it can be suspended in the air as vapour, fog, mist or clouds. When the water is a pack of snow on a roof, it can be interpreted as a mechanical load and it becomes a design parameter for the structural engineer. When it is vapour, it is important to specialists in building physics due to the effects on thermal behaviour, air humidity, condensation and comfort in general. For other actors, the changing properties and the damage to or degradation of materials and assemblies due to contact with water is an item to consider.

Yet another feature of this so-called environmental element is also of particular interest to us, namely its very tangible physical presence. We can touch it, feel it, see it, hear it, smell it and taste it. We can fall, stand, sit and swim in it, we can follow its trajectory, and when it takes on the form of snow or ice we can pile it up, which means we can construct with it. We can certainly go on treating water as just another environmental element, to be addressed with technological means, but we can also use it as a versatile architectural material with an intrinsic potential to create a sensorial experience in an architectural setting.

If we go back to our water evacuation system, an additional variation is to expose the water, to make it physically present. We can do this in a very simple way by cutting off the drainage pipe before it reaches the ground so that the water splashes out just above it. Or we can change the tube completely and replace it by an element that the water runs over instead of through. The trajectory guide can be added as an autonomous element or it can be integrated into other parts of the construction.

Besides acting at ground level or on the trajectory of the downpipe, we can also act at the source (in this case the outlet at the lower edge of the roof) and create spouts. Besides being functional, the spouts can also add drama and symbolism, as do the grotesque monster gargoyles on cathedrals and other more or less abstract figures and forms. Simply doing nothing and letting the water run off freely is also an option. Depending on the geometry of the ridge, the water will run off evenly dispersed or
else gush out in one or more concentrated streams. When the water runs off evenly, it becomes a temporary and noisy partition between covered and uncovered space.

When the water falls off without guidance or is sprayed through spouts, it must be caught at the zone of touchdown. Either an evacuation facility must be provided in this zone or else the water must be allowed to permeate into the ground. In the latter case we are confronted with the interesting problem of permeability: namely, the permeability of materials and surfaces in and on the building (envelope), alongside of it (immediate surroundings) and in the vicinity (landscape and urban), at smaller and larger scales, and taking into account the associated fragmentation and patterning.

We can also keep the water on site for some time, instead of evacuating it immediately. In that case, we have to provide containers – whether as autonomous units or as part of an integrated system – that can be located on top of the building, at ground level, inside or outside, etc.

The various options have different technological consequences and as a result have to meet other technological requirements. In many cases, the typical solutions no longer fit and others have to be implemented in the material assembly. The difficulty, however, is that these necessary alternatives are often not documented in the textbooks. They have to be developed from scratch, based on the knowledge of fundamental principles and mechanisms. This is why the solution-based approach to construction technology is not satisfactory. We can only find it satisfactory if we are content with repeating the same solution – or a slight variation of it – over and over again.

All previous examples are related to the theme of coping with the water that falls from the sky in a liquid state by collecting, containing, guiding and evacuating it.
A further elaboration of this theme finally leads to a definition of the possible relationships between the trajectory followed by the water and the different possible building geometries. Different roof typologies find their roots in their effectiveness to force water to follow a certain path. Increasing the inclination of the planes makes the water run off more easily and faster. Ridges between planes can act as drainage canals. Concave geometries concentrate the water and potentially act as containers, just like a bowl. Convex geometries disperse the water towards the periphery and act as umbrellas. ‘…he would alter the bed of a stream to change the direction of the water, so that the water would render that different course visible and become a different body of water; the water would thus become clearer and more true to itself, while at the same time the direction, too, would become clearer and truer. So the building tells us something about the water passing over its roof and the water tells us about the building; and in this way both water and water-covered surfaces shape each other by telling us about the other and about themselves.’ 16

The relationship between trajectory and geometry can also be associated with small- and large-scale topography, for example puddle forming, water courses, urban irrigation systems, etc.


Treating water as a material in its own right is also one of the possibilities. There was the example above of water forming a partition wall, but in other aggregation states we have different possibilities. Snow and ice can be cut into modules and stacked just like stone or bricks. In its loose powdery variant, snow can berammed into a formwork like earth or clay. The implementation methods of stacking (modules) and forming/sculpting (monoliths, solids & cavities) are very similar to those we use with other materials, and the structural behaviour is also comparable, i.e. compressive forces, form-active geometries, etc.

The influence of water on other materials is a source of endless possibilities. Materials are darker when wet. A film of water on materials acts as a reflector, which gives the materials a more glossy and shiny appearance. The same principle transforms puddles into horizontal windows to the surroundings. Traces of material particles and dirt transform an equally coloured and homogenous surface into a dazzled, camouflaged or just dirty element, depending on the way we experience it. The water systematically wears off the materials and material assemblies. Material slowly disappears due to weathering, and the geometry of the construction is subjected to subtle but undeniable modifications.
The repetitive cycle of getting wet and drying, and the running of water along specific trajectories, leaves its traces and expresses time in the construction by making it visually legible. Water is a painter and a sculptor. It can potentially help us make our architecture more expressive and experiential.

And I could go on for some time still, due to the fact that a number of complementary themes remain unaddressed, such as, for example, water harvesting, fog and spatial experience, mechanisms for achieving water tightness, bio mimicry, etc.

This (very incomplete) overview of the actual and potential functioning of water in architectural design and construction technology is in fact an attempt to illustrate an attitude — a way of looking at what exists and perceiving what is possible. The goal of this undertaking (yet to be achieved) is to decipher it all, to uncover principles and mechanisms, to find relationships between problems, solutions and contexts.

The goal is not to copy literally, but rather to draw inspiration, to be challenged, to challenge others, and to challenge technology and force it towards architecture. "Architecture can say something about certain phenomena such as time or water, which in turn make a statement about the architecture: they become mutually explanatory. By showing how things work, and thus bringing them to the surface, the world around us can be read, can be decoded, as it were; architecture must explain, unveil." 17

6. Objectives

Essentially we should ‘explore’ the numerous mechanisms for constructing architecture, the various conditions created by the physical phenomena and the surrounding context, the multitude of methods and manipulations, the endless range of properties of materials and assemblies. We should be concerned with the wide scope of inspiring and inventive solutions, alternatives and variations and the scope of interpretations and meanings they give rise to. ‘Essentially this amounts to a battle against reduction and the alienation that goes with it... Regardless of whether the result is sheer simplicity or complexity, we must always strive after the form with the richest articulation of references, so that the maximum scope of possibilities and experiences is offered.... The more levels of experience – as aspects – are taken into account in our designs, the more associations can be made, and therefore the wider the range of experiences for different people in different situations, each with his or her own perceptions." 18

The fact remains, however, that it is difficult and somehow contradictory to deal with ‘architectural experience’ in a descriptive/narrative paper (such as this), since the bottom line of architectural experience is action and sensorial appreciation, not explanation. But I am convinced that it is possible to aid the reader and invoke the experience through the use of words, drawings, models and photographs to tell the story.

This text bears the title “(re)classify” because I consider classification to be a tool for elaborating the story. The aim here is not to achieve a fixed, rigid and final structure for information. In the first place, classification needs to be an action or a series of acts that are focused more on the performance and the process, rather than on the results obtained. By compiling and juxtaposing the most diverse of elements, by letting the material go through sequences of ordering and re-ordering using a variety of criteria, I hope to disclose and clarify latent homologies and discrepancies that are not legible in the conventional arrangements. This ought to bring things

18 Ibid.
together which in other organisation schemes are treated separately. The strategy to be used can be compared to the strategies used in Aby Warburg’s Mnemosys Atlas or, to lesser extent, Gerhard Richter’s Atlas. It is based upon my own personal pleasure in searching out and exploring innumerable architectural treasures and collecting images, ideas, material and constructional concepts, methods, solutions, etc. ‘Not in search of the best ... but of everything, the entire business of coming closer, along with all its errors.’

The final objective is to find a framework that enables the growth of awareness and comprehension of the mutual relationship between construction principles and the experience of architecture. It is to create a different knowledge base for the creative application of technology in the architectural design process based upon the continuity of the architectural knowledge tradition.

‘Despite all theories, we can say of colour, as of all other elements of architecture, that there are no definite rules, no directives which, if followed closely, guarantee good architecture. Colour can be a powerful means of expression for the architect who has something to say... When man has reached the stage where he uses colour not only to preserve building materials and emphasize structure and textural effects, but to make great architectural composition more clear, to articulate inter-relations between a series of rooms, then a great new field opens before him.’

‘It could not have been so very different in Ur 5000 years ago: the same laboriously fashioned bricks, the same spaces around a courtyard, the same sudden transition from light into darkness, the same coolness after heat, the same starry nights, the same fear, perhaps, the same sleep.’

Thierry Berlemont

I express my gratitude to Karel Deckers, Halina Dunin-Wyo seth, Arnaud Hendrickx, Nel Janssen, Jonas Lindeken, Laurens Luyten, Fredrik Nilsson, Dominique Pieters and Johan Verbeke for their critical and constructive support.

22 Arnaud Hendrickx, 2008, Interactive architectural design, extract from a paper in Reflections 7, ARC Sint-Lucas, p.283.
ARCHITECTURE is a mediated activity: while designing architects don’t construct buildings, they represent design ideas through other means – sketching, drawing, drafting, writing, modelling... The media designers use are not just neutral tools for expressing design ideas, they have a logic of their own. Some ideas are represented easily in a certain medium while others find resistance. Mediation acknowledges this idea of the guilty medium: media extend possibilities of a designer but also influence the design outcome.  

In the complex process of constructing a building, representations are used as a way to communicate architectural ideas to other stakeholders: contractors, clients, engineers, officials... But architectural representations are not limited to communicating ideas after the design has been formulated, they play a vital role in the design process itself. They form a way for a designer – or a group of designers – to communicate with themselves. This process is not linear: ideas don’t start as a pure thought, are then represented and finally build. A design process can be seen as an iterative cycle of representation, interpretation and reflection; a conversation between designer and designee.

MODELS AND ARCHITECTURE

The word model has a complex and multi-layered meaning. On the one hand it refers to the physical or digital artefact – distinct from other forms of representation by its three dimensional character. On the other hand it refers to the whole of design ideas that emanates from the diverse representations: the whole of a project, the shifting complex of diverse connotations, references, assumptions, materials, intentions...

Modelling as such can be seen as the act of making a physical or digital model, but also as the gradual shaping of a design project through multitude of representation, interpretation and reflection. In this perspective modelling is at the core of what architects do.

1 Marshal McLuhan was the first to coin this idea in ‘Understanding Media: The Extensions of Man’ (1964) and ‘The Medium is the Massage: An Inventory of Effects’ (1967).

2 At least that is how I experience my design process.

3 Karen Moon in Modelling Messages: the architect and the model, distinguishes between the different meanings of the model as verb, noun and adjective in architecture.

4 See Pia Edna Brown ‘SuperModels’ in Fibreculture 12: Meta Models

5 See Karen Moon: Modelling Messages, for a comprehensive classification of physical models.

* Keywords: media, architecture, model, physical, digital, hybrid
els, sketch models, or dog model, made during the design process, for no other reason then exploring a certain design concept. Paraphrasing Ranulph Glanville we could call this respectively models of and models for architecture.\(^6\) While models of can be seen as descriptive, models for can be seen as exploratory.\(^7\)

Models in architecture are not limited to the scale models — i.e. the assumingly unambiguous representation a physical/spatial reality by an artefact. A closer look at the scale model reveals that this representation is not so unambiguous, and it is not only the scale that is different. Representing something is a selective act, that represses certain aspects, to make others translatable.

The selective act of representing need not be seen as something problematic, it is often specifically why a model is made. Models can diagrammatically reveal otherwise hidden aspects of a reality, or can represent a pure idea, concept or even feeling. The model can be seen as a lens through which a certain reality is framed. Furthermore the role of the model in architecture can not be reduced to mere representation. A model is a reality in itself that can — just like architecture — organise space, crystallise social situations and facilitate discussions. Olafur Eliasson ads to this that architectural space itself is not model free: “Every model shows a different degree of representation, but all are real. We need to acknowledge that all spaces are steeped in political and individual intentions, power relations, and desires that function as models of engagement with the world. No space is model-free”\(^8\).

This view opens a potentially fruitful vision on architectural design in which the build artefact is not the final and fixed end result, but is another state of the model. It stresses the temporary character of the build environment, or at least the temporary character of the meaning that is projected onto it.

### PHYSICAL AND DIGITAL HYBRIDS

Digital technologies have had an increasing influence on architectural design practices in the last few decades. Today almost every architectural office uses digital media at some stage of the design. Digital modelling evolved from mimicking manual predecessors, especially drafting, to a design medium in its own right. The use of computers in architecture has been generally limited to either preparatory stages of design or in the production stage, after the design has taken place. Digital modelling has generally been limited to making models of, rather then models for architecture.

Contrary to the association of digital architecture and smooth surfaces, the space of the digital model is discrete: spatial concepts are defined in a coordinate system that works with discrete steps. Resolutions both in time and space determine the precision of a digital model, not only in terms of input and output devices but also in the conceptual digital space. Operations in this digital space are precise, controllable, reversible, transformable, scale-less and duplicate-able, the subject matter of these operations is geometrical.\(^9\) These characteristics allow for a design process in which variations are tested easily and complex architectural concepts become manageable.

Digital modelling has its limitations: it lacks directness and intuitiveness, notwithstanding the research that has been done in improving human-computer-interface. The lack of directness is strengthened by reduction of 3D geometry to a 2D screen. Most computer modelling software tries to counter this dimensional reduction through navigating the virtual camera through and around the model and providing multiple views at once. As such digital modelling reinstates the monocular reduction of linear perspective, but tries to overcome this by animating it and rendering multiple views at once.

The advantages of physical modelling lie in its materiality, its tactility, the way it is perceived visually, and can be manipulated directly. Physical models can vary in application, scale, materials and use. A physical model does not show a similar dimensional shift as drawings or models on a computer screen — i.e. a physical 3D artefact represents another 3D artefact. But this does not imply a direct translation from what is represented to the model. Perception of a physical model goes beyond the visual: texture, temperature, weight, balance, resistance of materials provide haptic feedback. Physical models are frequently used in a sketchy and exploratory way during the design process. Being unfinished ignoble objects they allow design concepts to be tested while modelling. Manual sketch modelling allows a non-deterministic exploration of design concepts. The materiality of the physical model implies skills in making and a logic of construction — even in a conceptual model a piece of cardboard will not hover in thin air. The material nature of a physical model makes it hard to reproduce. It takes time to build, so variations are more difficult to explore. Mark Burry sees this slowness as positive, and states that this reflective moment is missing in digital modelling.\(^10\)

Recently developments in prototyping and digital fabrication have made it possible to output digitally modelled complex geometries not only as two dimensional images but as physical three dimensional models. This file-to-factory paradigm drastically alters the relation between designer, model and building. While it shows great potential to redefine the relation between architecture and construction, it also stresses the importance of a better understanding of, and even altering, the process of digital modelling itself. While digital modelling reaches out in the physical realm, material constraints, tolerances, fabrication specifications enter the digital world.\(^11\) This results in a hybrid modelling process that is incorporates both physical and digital.

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6 See Corneel Cannaerts Models of/ models for architecture — physical and digital modelling in early design stages’ ecaade27
7 Tom Kvan extends this models for/models of with the notion of models with which we design.
9 While this seems evident architecture is not geometrical.
This research will be developed within the mmlab an experimental lab which is being set up within the Sint-Lucas Department of Architecture, and will open early 2010. It explores relations between architecture and media on three levels: (1) architecture as a medium for experimental research, (2) the friction between architecture and other design media/artforms, (3) the media architects use to design. On the last level mmlab sees media as a crucial element of architectural design and wants to develop a media perspective into design research, recognising media not just as neutral tools, but as active participants in a design dialogue.

A physical/digital modelling and fabrication lab will be set up as part of the mmlab. The knowledge involved is technical and explicit, while the making sense of it, the use of modelling is much more vague, implicit and ill defined. The mmlab will be a platform for making these processes explicit and sharing both explicit technical and implicit knowledge with students and fellow researchers. On the one hand the mmlab stresses the necessity of a deep understanding of design media, on the other its a plea for the messy and fuzzy (ab)use of them.

The mmlab wants to be a place for research and experiment and from this research specific workshops and electives will be organised. Both tracks are present in my practice: On the one hand a series of exploratory design experiments in which aspects of model making in architecture are investigated, on the other hand designing learning environments in the form of electives and workshops. These two tracks are not separate, results from the workshops feedback into the experiments. And the design environments are used to explicate knowledge gained through the experiments and get input from students and collaborators.

I will illustrate the two tracks in my practice mentioned above with brief descriptions of projects. While these differ in scale and duration and intent and where not formulated with a specific research agenda in mind, I will conclude with trying to find some common ideas and interests.

digital design & fabrication
(with Kristof Crolla, Jeroen van Ameijde & Tiemen Schotsaert)

We organised a four day competitive, intensive, workshop within Sint-Lucas in collaboration with Kristof Crolla (Zaha Hadid Architects, London) & Jeroen van Ameijde (Digital Fabrication Lab at AA school of Architecture, London). Students from all five years of architecture collaborated in teams completing three component-based structure within the school building, from sketch design to full scale construction. Since we had about 60 students in a four day workshop we noted early on that digital fabrication tools such as a laser cutter or cnc mill would be a bottleneck in the construction process. We decided to focus on manual production and encourage a design process that included digital and physical from–finding.

Through sponsoring we provided approximately 2000m² cardboard in sheets of 2m40 by 1m60 and a thickness of 3mm and 1,5 mm. The plentifulness of material allowed students to explore a large range of ideas on a large enough scale to experiment with material properties of corrugated fibreboard and different joining techniques - tacking, clicking, sliding, using slots, glueing, stapling etc. This provided insight not only in material characteristics such as mass, anisotropic stiffness, elasticity, but also allowed for an exploration of boundaries and tolerances, or even non proper use of the material. From the very first sketchy experiments it provided insight in the logistics of production and the feasibility of the project.

The workshop was structured as a design competition in three phases: from 16 groups of 3-4 students, over 7 groups of 7-8 students till the final three groups of about 20 students. After each phase a jury was organised, in which after a very short presentation the students and tutors selected the projects to continue to the next phase. Students where redistributed over the selected teams, where the original team members took role as lead designer. Groups where preferably consisted of people from all five years in architecture (bachelor and master).

13 The mmlab will be developed in close collaboration with Messing With Media (MWM) research project by Robin Schaeverbeke.
The first phase dealt with the experimentation with the cardboard itself, and the design of a component. Particular attention was paid to the inherent parametrised variation of the component and the possibilities it provides for the structure on the large scale. Only in the second phase a specific location for the structure was chosen, and this context – light, passage, views, possible fixtures - was to be considered as an input for the design of the structure. The last phase focussed on the actual construction of structure, and the adaptations this required.

The workshop generated a lot of energy and enthusiasm with students for both physical and digital modelling. The way the workshop was organised helped this:

* vertical: by letting students of different years work together, they learned from each other. Especially for digital modelling techniques, a lot of knowledge, tips & tricks where distributed.
* context sensitive: by working in situ, certain aspects of design can be directly tested
* collaborative / competitive: letting students themselves decide which projects continued, and which team they joined, provided a stimulating atmosphere.
* agile: the short amount of time provided for each phase triggered students in to doing, rather the conceptualising, into actualising rather than theorising.

The three final structures, but also the sixteen preliminary designs, show a great variety and potential in linking digital and physical designing. It takes digital modelling beyond fascinating imagery into the realm of logistics, realisation and construction, without losing the exploratory, experimental. In other words it links the homo faber with homo ludens.

undistort

Undistort, presented at the By Design For Design Symposium is a proto-architectural design experiment, which exploits a specific character of digital 3D modelling. A series of similar but different distorted cubes are presented on a reflective table. While being physical artefacts, the presented models hint at a logic and organisation that is explicitly digital. Although the table they are presented upon has finite dimensions, endless variants are suggested. Notwithstanding the gradient of parametric variance, each of the models clearly has a same core, algorithm or script.

The core of this series finds itself in a reductive element encountered while making digital models: three dimensional artefacts are represented in a two dimensional plane, using the principle of linear perspective. The script transforms this reduction into an exploratory device. Using simple linear transformations emitting from the virtual camera, all models are different. In the digital perspective space of the virtual camera all models look exactly the same: an undistorted cube. Projected into physical, material space, be it doubled by the reflective surface of the table, reveals the hidden variance.
99h99m³ (with Michiel Helbig & Tiemen Schotsaert)

A workshop for students of the (media)³ studio (3rd Bachelor Interior Architecture) situated in a specific time-space (99h and 99m³). The aim was designing and building on 1/1 scale of spatial and temporal augmented structure/installation, that was both physical and digital. Cardboard was used as material, beamers to project a mapped digital animation on the structures. After two days of sketch design, resulting in a “working model” - five structures/installations were built on 1/1 scale. Both in the logistics of making and the projection mapping, digital media were used extensively. Parametric models were used to output construction data, beamers where used as an animation and production tool, but also as an exploratory and inspirational device.

dook

Dook is a first result of an ongoing investigation in modelling physical processes in digital environment. Based on a particle-spring physics library – traer.physics, using Runge-Kutta physics integrator – it simulates a catenary cloth. A process similar to the hanging models of Gaudi – hanging ropes are only subject to tension, the reversed model only to compression. Every vertex of a mesh represents a particle with a certain mass, while every edge represents a spring. The resulting forces in each spring determine the section of each member.

The aim of this experiment is not so much on the calculation of forces or even form finding, it is much more about the status of the model itself. It is written in processing.org – an open source programming language specifically aimed at artists, designers and students – and released as a web-applet. In contrast to heavy, desktop based, static, general purpose procedural and parametric modellers, it investigates the design potential of project-specific, web enabled, programmed, physically grounded and dynamic models.
autopoiesis

Autopoiesis is an ongoing exploration of the specificities and potentials of computation for design. This series of images is derived from a recursive growth algorithm. It is an investigation in the poetics of algorithms, or rather in the poetic human interpretation of graphics resulting from algorithms. If we see the design process as an iterative conversation with a design medium, how can we give both computation and human interpretation a valuable role in this conversation? It explores recursion and (pseudo) randomness, and the computer’s ability to not get bored as a generator in a (graphical) design process. On the other hand it deals with the designers interpretation of and control over this process, by means of setting up rules and constraints. The graphical result of this process is not the main goal of this experiment, but finding possible new roles of digital medium and designer in the design process.

analogue / digital modelling (with Tiemen Schoutsaert)

An eight week elective studio in the second bachelor in Architecture & Interior Architecture focusing on the similarities and differences between physical and digital model making and form finding. Crucial for this studio was the notion of the model as an exploratory medium. The question behind this workshop was whether digital and analogue models could be used as working models, playing an active role in the design process, rather than presentation models. Students were asked to design an exhibition pavilion within the school’s courtyard by modelling directly in 3D (both physical and digital). We limited the programmatic scope of the design, so students could freely explore physical / digital modelling as a design tool, and be conscious of their design decisions. Each workshop started with a theoretical introduction followed by an exercise that needed to be completed within a short time span. The first four weeks were focused on individual experiment with both physical and digital modelling techniques, the last four to integrating different techniques and finalizing the design, in groups of four students. Students kept a weblog, in which the different techniques used and crucial steps in the design process were documented. In the first four weeks of this course, through individual hands on experiment, the students where both maker and designer, where models could really become part of an introspective process. While in the last four weeks the model was part of the collaborative design process. From the weblog, the final design outcomes, and a questionnaire filled out by the students after the workshop, we saw that both digital and physical have the potential of becoming models for, rather than models of architecture. Gradually building complexity in both physical and digital modelling, proved to be a good introduction into more complex digital modelling techniques. It enriched the physical awareness when modelling digitally and provided an insight into the potential digital modelling has as a design tool rather than a representation tool.
PROJECTIVE MODELLING

As can be seen from the context and two tracks of practice mentioned above, this research interest is arises from a practice of intense engagement with digital design media and model making in architecture.

The text can be read as a delimitation of a research area: after acknowledging the importance of media in a design process, and the complex notion of the model in architecture, I have tried to take a closer look at the specificities and differences between physical and digital model making. From this base I propose a hybrid physical digital modelling process named projective modelling. This must be seen as a working title, a first attempt to give a name to a possible process of model making that aims at giving the digital a proper position in a design conversation.

Projective modelling acknowledges the mediated nature of the design process and the idea of the model as a layered, hybrid construct, which incorporates both mental, material and digital realities. It explores deliberate and sequential medial shifts, transgressions between media, as crucial steps in a design process. It considers the simultaneous multitude of representation media, as a field of action and reflection.

The word projective has rich connotations in diverse fields related to architecture: from mathematics, geometry, optics, representation techniques, photography and cinema, to psychology and philosophy... While these fields do not form the subject of this research, it is important to situate design in reference to them. I choose the verb modelling since I want to stress the dynamic process of modelling and remodelling rather than the final product, the working model rather than the presentation model.

Every medium implies its own space – the monocular space of linear perspective, the embodied tactile space of physical model-making, the discrete, mathematical space of parametric modelling. In each media-space the model takes on a slightly different form, highlighting certain elements while repressing others. Media shifts project these media-spaces into each other: through transgression between different media, hitherto new perspectives on the design are developed.

Design deals by definition with the non-existing, the new, or at least a reconfiguration of this existing. Projective modelling hints at the role of the model as a vehicle for exploring the new. The model can be seen as a projection of a future reality, and giving the digital a proper position in a design conversation while hopefully bringing media-awareness to students.

The workshops and electives themselves works as a media shift: taking themes, questions and findings from the experimental research into a earring environment limited in space and time, opens up new perspectives allows for fresh ideas to enter the research while hopefully bringing media-awareness to students.

Corneel Cannaerts

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My Creative Method
in a deconstructed design field

"Oui, ce sont des monuments utilitaires, comme le Pont du Gard" (Ponge)
The avant-gardist experimentations of the XXth century deconstructed occidental architecture and architecture practices.

cfr Renato Poggioli The Theory of the Avant-Garde, 1962
Deconstruction implies the impossibility of a univoque significance of texts. Consider architecture as a language, and architecture projects as texts

As a result, architects referred back to history through citational or ironical principles, and/or by seeking ambiguity and paradoxical situations.

This attitude is often called postmodernism.

The result is a realm of relativism, fuzziness and arbitrariness.

This in return, could be considered “the postmodern condition”, of which Koolhaas has been a main architectural practitioner and theorist, with claims such as “The certainty of failure has to be our laughing gas/oxygen”

In this balkanized situation, I wonder if architects do lose their historical responsibility, beyond pragmatically problem-solving, cathartic aesthetic freedom and consensual sustainability? In other words, has architectural history reached its end? Or on the contrary, is it possible to renew the idea of relevance in regard of architecture history? How can architects make sense today?

cfr Weick, Dervin, Klein, etc. Sensemaking refers to the process of creating situational awareness and understanding in situations of high complexity or uncertainty in order to make decisions. I would like to understand sensemaking in a broader way, referring to the construction of a thought framework instead of “making decisions” on a pragmatical level.

The situation of architecture in the XXIst century has to face relativism and impotence. Stylistic arbitrariness, structural (in)dependence and programmatic determinism are some of its symptoms. Are we condemned to silence or gesticulation?

cfr Ponge, Camus or Sartre and the famous “Better to die on ones feet than to live on ones knees.”

Touring Lanaken (extract)
Agwa 2009

The tower designed for Lanaken (be) is touring around the world. Adapted or inadapted to any situation, context, scale and time, it questions the relevance, the necessity of architecture today.
At the end of the 16th century, there has been a similar point in history, a breaking apart of the European consciousness (C.-G. Dubois, 1993). During the following century, according to Deleuze, Leibniz attempted to define a unifying attitude in response to the crisis (Deleuze, 1988).

He proposes a very specific philosophical system, understanding the seemingly arbitrary infinite diversity of the material world inside a unitary whole - God. This system is constructed around the « monades », which are irreducible souls - atomic principles or concepts- containing and reflecting the whole world’s potential, but conserving individuality through the specificity of their « lightened zone » or « point of view ». Each monade is an actualisation of a possibility, but only exists through its realization in materiality. There is a fusion of the concrete and the immaterial, of the corporal and the spiritual.

We can translate this in visual terms. God is the dark background -fuscum subnicrum-, containing all colors, all potentials, all principles, but of which none is visible. The souls -monades- are the partial illumination of this background: one color appears, one specific potential, one principle.

Stage one: the temptation of the laughing gas.

Stage two: the temptation of binar thinking servant / served spaces

Stage three: towards unicity and programmatic potential.

Philippeville
AguA - Artgineering 2008

Progressively, as the formal arbitrariness and the binar differentiation of spaces are pushed aside, all spaces acquire the same level of quality. All redundancy is also removed. Mathematicians define a figure as perfect if it is composed entirely of squares of different sides. We considered the plan perfect only when each space was self-sufficient, necessary and unique. Significantly, colors disappeared from the sketches together with the programmatic differentiation. (Harold Fallon, 2009)
« A square ‘neutral, shapeless’ canvas, five feet wide, five feet high, as high as a man, as wide as a man’s outstretched arms ‘not large, not small, sizeless’, trisected ‘no composition’, one horizontal form negating one vertical form ‘formless, no top, no bottom, directionless’, three ‘more or less’ dark ‘lightless’ no-contrasting ‘colourless’ colours, brushwork brushed out to remove brushwork, a matte, flat, freehand painted surface ‘glossless, textureless, non-linear, no hard edge, no soft edge’, which does not reflect its surroundings — a pure, abstract, non-objective, timeless, spaceless, changeless relationless, disinterested painting — an object that is self-conscious ‘no unconsciousness’ ideal, transcendent, aware of no thing but art ‘absolutely no anti-art’.»

(Ad Reinhardt, 1963)

The black squares of Ad Rheinhardt could be inspired by the baroque spirit of the absolute interiority of the soul, of the undisturbed dark underlayer. They are no subjected to anything beyond themselves, but do contain all colors, all textures, all tonalities, that merge into a dark and uniform whole. It looks like he attempts to reach the “fuscum subnicrum”, that is independent from all light source. He does not seek the expression of one thing, but of the Whole that englobes and is contained by all things. This way of doing has no way out: Ad Rheinhardt is doomed to repeat endlessly his black squares. Indeed, the One only exists through its actualizations in monades, and the monades themselves can only exist through their realization, their embodiment in reality. That is why his paintings can be considered contradictory: the obviously have one definite size (not all sizes at the same time), they are trisected, they are embodied in one concrete canvas, in a concrete place, etc.

Carré des Arts,
AgwA - Ney & partners 2009

A grid of thin steel beams is placed right upon the rooftops, above the protected historical edifice. This new sky does not disturb the courtyard. It only induces a new, immaterial skin of shadow and light on the ancient courtyard.

The openings are provided with mass produced, automated domestic rooftents.

The geometry of the structure is defined exclusively by forces and by the technological requirements (geometry of the tents, water evacuation) The structure is all-solving and merely utilitarian.
The Baroque is concomitant to Foucault’s Classic era of representation (Michel Foucault, 1966), in what he calls the “Classic” era, reality was subjected to representation through unrelated signs and words, so as to be able to order, to tabulate, manipulate, quantify and understand it (taxonomy and mathesis). Representation is central: it implies to accept the arbitrariness of the link between signifiant and signified.

As a consequence, baroque architecture could not be something else than a symbolic representation of the framework of understanding developed by Leibniz. Or better yet, a personnification, an allegory of Monadism. The “perfect baroque building” is a chapel existing of two levels. The superior level shows an absolute interiority, as are the souls, the monades. The lower part on the contrary presents an horizontal enlargement and is opened by windows: this is the material, bodily level. Both are intrinsically linked by the spatiality and by the overall monadistic folding of the matter.

Francesco Borromini
Chiesa di Sant'Agnese in Agone
Rome, c.1655

Vertigo
AgWA 2007

AgWA realized the theming for a new ride of the Walibi Belgium theme park in collaboration with structural engineer Greisch. The ride’s machinery as developed by Doppelmayr is very impressive and unusual in theme parks. It was decided to invert the park’s usual theming strategies and to make use of the expressivity of this industrial roughness. A brutal structure made of galvanized steel bears a translucent polycarbonate skin. The structure was undesigned by AgWA: as the project was about the enclosing/onopening, and about (un)veilingness, all other design topics were left as-is. The let-go attitude regarding the structure, the machinery, or even the colors required by the theme park, became a condition of the success of the materiality and expressivity of the skin.
Three centuries later, an architectural echo of Leibniz, or at least, of Deleuze’s analysis of Leibniz, can be found in the introverted, sacral, sensuous and tactile buildings of Zumthor.

But here, Monadism is not represented in a symbolic way outside itself. It is embodied: each building is almost exclusively the realization of its small, irreducible material or technological principles, in which all parts are necessary.

This in fact can be linked with Foucault’s episteme of modernity. Classical taxinomist representation (language, natural history, richness) gives way to the understanding of embodied mechanisms (grammar, biology, work).

The thermal baths in Vals are a striking example of this approach.

The materiality is monadistic: the piles are the result of the fusion of concrete and stone (blue), which is used as technological casing and as finishing together with the internal bath tank (red). The extensive use of this principle conditions the formal aspect, the structure and the appearance of the building. The spatiality is uttermost baroque: a predilection for dark, indirectly lit spaces. This results in the baroque idea of fusion of soul and body in a sensuous spirituality.

A former tyre workshop, built in the late 1950s in a modernist style, is reaffected in a multiple-use complex. The building, which has preserved the qualities of space and light of the period of its construction, now houses a sports hall, an after-school homework programme, and three moderate-rent apartments.

Three structural strategies:

1. conservation of existing structures, eventually coated with bituminous paint.
2. legible interventions in black concrete
3. extension of structural principles, as the bridge-like structural facade of the complementary housing volume.

A polycarbonate and glass skin covers the whole without spatial enclosure or structural camouflage. New elements are kept neutral and white, while existing structures keep their full materiality. The structure stays open to appropriation.
But nowadays, we can roughly define two variables that were inherent to the Leibnizian system, and that can be assumed to have changed over the centuries.

Deleuze points out “selection” and “closing”, which are inherent to monadism. On the one hand, the monade includes the whole world and all potentials, which presupposes a first selection between compossible (not contradictory) events to avoid impossible situations. On the other hand, the monade implies the selection of a clear, legible, lightened zone. It is a world of harmonies.

Still according to Deleuze, this kind of selection is tending to disappear: dissonances do not need to be solved: nor on the level of the monade inside one world, nor between incompossible worlds. The monade and the world seem to be kept “open” by pincers. (*cfr Deleuze, Le Pli, p188*)

We can open up monadism: from materiality to identity; from disciplinarity to transdisciplinarity; from enclosure to openness; from necessariness to contingency; from architecture to “a way of thinking about anything – a discipline that represents relationships, proportions, connections, effects, the diagram of everything”. (*Koolhaas, 2004*)

But still, strive to identify the monade and embody it in an open, real, world. Formulate hypotheses on the project, that are strong enough to permit the avoidance of non necessary choices, and to absorb non critical contingencies.

Flagey, Call for Ideas
*AgwA 2003*

The project can be resumed to a simple hypotese. The square is pure flexibility: a slight slope and the possibility to fill it partially or completely with water. Weekmarket, concert, usual days all get a specific expression thanks to this urban barometer.

The project implies its own changing state, its capacity to absorb unpredictable events. Though, the identity of the place is ensured, as it tells what it does and does what it tells: permissiveness and openness.
Francis Ponge, a French writer, stating the impossibility of expression, decided “to make descriptions, or at least accounts of attempts of descriptions”.

His texts are at the same time
- depictions subjected to their object,
- texts seeking an irreducible expression
- a discourse about language and literature.

As a result, a search for irreducible, perfect formulations, the exhaustion of imprecision of language, a respectful carelessness towards poetry and language, an inextricable multiple nature of his texts (text - embodiment of the subject - literary pamphlet)

In all his work, Ponge explores his own writing attitude. More specifically, at one point, he does it through an analysis of Malherbe (1555-1628), a French classical writer, which appears to be almost a contemporary of Leibniz.

“Le Classique, ce n’est que la corde la plus tendue du Baroque” (Henry Maldiney)

“Tout plein, comme je le suis, d’un monde à révéler (ou plutôt du monde, car ce n’est pas le mien, c’est le monde lui-même, à ce qu’il me semble, dont si peu de chose à été dit),

Je me sens aussi une autre mission, qui est la trouvaille de formes verbales, de formulations expresses originales. Une façon de marquer le langage de mon style, de faire faire des pas à l’esprit de la langue française, d’être dans le laboratoire verbal, de donner des exemples, des modèles.... Avec le détachement, le manque d’illusions que cela exige (?).

Je me regarde écrire. Des textes comme la Creative Method ou le Verre d’eau sont significatifs à cet égard.


Tout cela est compliqué encore par le fait de mon esclavage économique. Certains jours, je suis tenté (positivement) de me donner la figure d’un écrivain professionnel et de faire ce qu’il faut pour en vivre, – puisque aucune autre profession ne veut de moi.”

Francis Ponge, 1965

Freely translated from Francis Ponge to English and to architectural terms.

The fragmentation of critical attitudes in architecture forms a strong obstacle in the definition of a relevant design attitude. A possible way out could be to stick to what a project is by naming it: not more, not less. And see what happens.

Our projects are at the same time:
- factual, constructed, useful, subjected to their programmatic content,
- reduced to the expression of their central hypothesis,
- an ex-plication of our faith in a possible meaning of architecture.

As a result, perhaps, a search for the definition of a project-bound hypothesis, the avoidance of non-necessary designerly choices, an intricate understanding of construction, technical, structural principles, an inextricable nature multiple of the construction (construction - embodiment of an hypothesis - architectural pamphlet)

Full as I am with a world to be revealed (or rather the world, because it is not mine, it is the world itself, I believe, of which so little has been said),

I also feel another mission, which is the discovering of architectural forms, of original expressive constructions. A way of marking architecture with my style, to have the spirit of occidental architecture make a step forward, to be in the architectural laboratory, to give examples, models...

With the needed disenvolvement, the necessary lacking of illusions (!).

I look at my designing self. Texts as My Creative Method are significant in this aspect.

Besides, I have always swung between the desire to subject architecture to plots (cf. Vertigo, Flagey...), and the will to find architectural equivalents to them (?). Shall I ever be able to get out of this? It is certain that my distinctiveness lies herein: to attempt to come to “short architectures” (simple, raw, suitable) and at the same time to make them become long studies, methodological, moral or whatever reflections, interesting by themselves.

All this is complicated furthermore by my economic slavery. Sometimes, I am tempted (positively) to play the role of a “professional” architect and to do what is necessary to earn a living, - since no other profession wants me.”

Freely translated from Francis Ponge to architectural terms.
- AgwA, Touring Lanaken, 2009
- Gilles Deleuze, "Le Pli, Leibniz et le Baroque", Editions de Minuit, 1988
- Robert Fludd', Utriusque cosmi maioris scilicet et minoris metaphysica, physica atque technica historia, Oppenheim, 1617
- AgwA - Artgineering, Philippeville, 2008
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- AgwA - Ferrière architectes, Mélèze, 2009
- Rem Koolhaas, "Content", Taschen, 2004
- AgwA, Flagey, 2003
- Francis Ponge, "Pour un Malherbe", Gallimard, 1965, p70
- Henri Maldiney, cited by Ponge, "Pour un Malherbe", Gallimard, 1965
Synopsis: In a new art school in A a person, called Protagonist (part for Mezzo Soprano) is told by letter (part for Female Voices) that his/her (research) proposal was rejected. In the communication that follows they try to figure out what to do next.

Location: KASKA DKO, Blindestraat Antwerpen, Belgium
Design and Photography by Tomas Ooms for Arch-I RDBM

Reference: All reference and likeliness to people, living or deceased is intentionally.
All possible autobiographical elements are indeed autobiographical.

Research: The artefact is made for an exhibition By Design For Design in Brussel, 09/2009 10/2009. The general theme of the exhibition is the position of design in research. The artefact has nothing to do with the research project although since it was made, the author is impelled to consider it as a core contribution to his disquisition.
RESEARCH!
REJECTION
SADNESS
DRAMA
OPERA
FRACTUS///RE
FRACTION
OPERA
OPUS
CYCLE OF WORK
RESEARCH?

Scene: Communication.
Scene: Maybe your mood will change?

Scene: A cycle of work (opus // opera)
Scene: Do you want to get out?

Scene: I remember

Scene: What happened?
Epilogue

The opera was written as an emotional reaction to a specific event, the same event that is the central theme of the opera: rejection. It is through writing the libretto, making the model, the installation, the exhibition and the reaction on this, that I felt the power and the potential of the opera as a medium for communicating practice based research.

The opera is not just a metaphor, but also a true act of designing. It can tell something on its creation, on its design and on design practice. Like an exhibition, the opera has the power to generate a position of empathy and communicates to the audience. In preparing for the GRC-EUR the following idea came to mind: what would happen if I introduced characters like Practice, Office, A Project, Art, Research etc… in the libretto? This could lead to a ‘true’ Baroque allegory like Handels: Il Trionfo del Tempo e del Disinganno (The Triumph of Time and Truth)…(note: this is an oratorio not an opera) dealing with the concept of practice based research.

To be continued.

Tomas Ooms

Creating you,

Am I creating you?

What are you? Do I deliberately and consciously guide my actions towards you? And if I reach, even if it’s just a small part of you, will I bare, the thought that, however part of me, I’ll have to share?

Is what I do today related to what I did yesterday? Will it induce, contain and foreshadow what I will do near? Or am I just playing th’ Arts?

Like step stones define a pool, what I do misses the beat of a steady pace...

Tell me, Knowledge dear.

Yours truly,

Practice
Grey murmuring

“Three heartbeats abreast,” she can still hear him whisper. As she recollects the moment, she feels not only his nose buried in her hair and his soft beard against her cheek, but above all the warmth of his breath against her temple. This sensual feeling forms a fierce contrast with the coolness of the floor on which she lies. Flat on her back, arms spread, legs drawn up. A brief shivering brings her back to the actual space around her. She opens her eyes and tries – as always when she lies here – to grope for the ceiling. Though all the cabinets around her rise to this horizontal plane and give the impression of bringing the ceiling into her range, all the seemingly caressable irregularities remain at a disappointing distance. This used to be her favorite spot. Just below the point where the two longest ceiling cracks, the lifelines of her living space, meet. The most loved square meters of her dream apartment on one of the highest floors of this 1970s-era high-rise. Most friends and visitors were impressed by the panoramic view that the fully glazed outer walls offered of the often swarming, sometimes somber center of Brussels.

But she adored the light. Especially at this time of the year, when the Belgian capital no longer disappears in the black puddle of its own shadow, but lies hidden under an idyllic carpet of snow. In the place of swirling sun rays, the reflected winter light gives the impression that the apartment with the white oak floors and the white cabinets, walls and ceilings has been swallowed up and merged into its surroundings. Nothing disturbs the colorless composition. And yet… just like the surrounding high-rise blocks, the cabinets equally offer hints of a surprising new life at each level and behind each panel. Whether it’s a lamp, a workplace, a photo collage or a kitchen. The only difference with the motionless high-rise blocks is the mobility of the cabinets on wheels. That was Matt’s brilliant idea, and that’s where it all started.

She bought the apartment on an impulse for next to nothing. After her suffocating relationship with that know-it-all Jonathan, she yearned for the breathing space that the excessively glazed apartment offered her. Here she felt free as a bird. Only the narrow hallways gave her the shivers. Due to a traumatic experience in her youth, she needed them like she needed a hole in her head. Matt had sensed this immediately and, in one fell swoop, had crossed off all the partition walls on the floor plan. With each line, each gesture and each choice of material, it became clear how intensely he had come to know her. Instead of fixed, claustrophobic walls, the movable cabinets flowed effortlessly out of his pencil. With these movable volumes on wheels all rolled together, the flexible working, living, sleeping and eating spaces changed into one grand dance hall. Now she no longer needed to be running off to rented spaces to work out or to try out her new choreographies. The virtuosity with which Matt himself then went to work tearing out the existing walls and installing the new concept, all with his own hands, showed that he, too, would easily feel at home in this space.
It didn’t take long before natural attraction and mutual understanding coalesced into a deep love. No one approved, however, of the brother-sister relationship. Its incestuous character was said to be “not part of this culture”. But they were happy and they isolated themselves in their ivory tower from all misunderstanding. Wonderful moments they lived. Just like on that special day, as they lay on the floor, trying to reach for the ceiling together. Because both wanted to experience this favorite spot intensely, Matt had positioned the volumes around them in a way that this cluster created another house… in an apartment in a tower in the city. A few gaps not only let the light penetrate at crucial places, but also framed new panoramas of the city. They watched a dance performance on DVD created by a choreographer and an architect. Nowhere else had they ever seen the human body capable of ‘dancing space’ instead of simply dancing ‘in’ or ‘around’ a space. Just as if the cabinets around them were dancing a totally new spatial composition. This recorded performance illustrated their situation: a choreographer and an architect dropped into a dream scenario. Their favorite performance at their favorite site. And while the space dance unfolded on the screen, she realized that this was the perfect and exquisite moment to reveal to Matt her vague sense of the new life inside her. His eyes spoke volumes. Suddenly, the screen lost all importance. At first he reacted laughing: “Probably his or her skin and hair will be as white as our nest and our town.” After that remark, he drew her into his arms and mused about three heartbeats, about three personalities hidden behind blinds. Together, they slipped away into a blissful afternoon nap.

When she woke, she still felt the arms around her, but instantly she also noticed how Matt’s warmth was gone. She kept lying there motionless. She wanted to capture everything and never forget this moment and this space. She saw how the light had turned grey, how the sound of the television had become a murmuring, the image, a blur.

The following period had delineated itself as dark and lonely. Now that life has to continue, now that Matt is buried beneath the white snow carpet and the white of white has disappeared. Now only grey murmuring remains.

*With: Karel Vandenbende • Apartment in Brussels*

*Dominique Pieters*

Dominique Pieters

Grey murmuring

bouw en rechtspagina boven: Verschillende verborgen gebruiksmogelijkheden dienen zich aan bij het openen van de kasten.

In detail met betrekking tot de mogelijkheden.
Participants ‘batch 2009’
Mute Discourses is one part of a mapping project on contemporary urban public space located at the Center for Public Space Research, Royal Danish Academy, School of Architecture, Copenhagen, Denmark (2009-2010. Supervisor: Jonna Majgaard Krarup). As to the other part, researcher Shelley Smith drew up a mapping of the theoretical territory (i.e. methods and theories) related to contemporary concepts of Public Space. "Mute Discourses" arises from the myopic act of perceiving and experiencing urban public space as: a set of conceptual frame(s) and the outside of the frame of the observer. The inexhaustible tension between those frames is seen as the propelling-force. Through practice based, experimental and inductive search "Mute Discourses" intends to map ways and potentials of the experiential sense in the spatial context of urban public space. "Mute Tracks" should only be thought of as a draft on crossing, travelling and connecting paths, traces and songs of the project "Mute Discourses".

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"Mute Tracks" Fragments of the current walking-project "Mute Discourses".

'Sometimes you fall into a story but sometimes you have to take steps to unravel it.'
Lines of distinction and conjunction:

01: The act of walking

A cycle of walking journeys through Copenhagen (DK) and Brussels (BE) focuses on the in-between, on the experience of the “between” the points of departure and destination of each journey. The journeys in themselves are the core actions of research. They pursue questions as: what happens to me physically and mentally here and now? What do I sense when I’m moving through time and space? How do I sense, and how many senses do I have? Which impressions are kept as memories? And, how can I communicate and represent the experienced time and space?

As a vulnerable walker and explorer I draw goalless journeys to deviate the linear, self-evident and current tracks. This open and unexpected way of approaching the city introduces different layers and frameworks, called ‘continents’, in the project.
All the images (each map, each continent, each landscape and each view) are sections. Each section is a cut, an insight and restricted view on a limited set of aspects. The whole sphere is unformed, unclear and caleidoscopic. The whole sphere is an enlargement of differences.

I. Continents are: big parts, basic elements and frames of the project. The extent of a continent allows me to zoom in on sub parts as: surfaces, sub-elements and sub-layers in each landscape. The landscape is the smallest entity because it is: an image, a spatial site, a system, a pattern and a metaphor.

II. The different continents are:

# The City and the Order/Disorder of the Day
Is it not the very nature of the environment that let us experience and that subjects us, whether we like it or not? Let’s wander through the ordinary, let’s be, bemused?

# Nebulae of Interests
Are very narrowly related to the continent of ‘Interests and inspirations’. It is an ongoing conceptual cloud that is constantly in transition. With abstract notions as: the in-between, contingency, and bemusement, I’ll try to touch its coincide contour.

# The Impossible Outsider
Is an exercise in shifting positions (see: the theatre) and viewer directions (outward and inward). It is an exercise and search for underlying self-evident aspects in my own work. (Questions ‘about? for? through?’ are used as tools)

# Interests and Inspirations
Is about building up a subject-matter landscape, a documentation library for the project of ‘Mute Discourses’. The three lines of this paper form the starting points for a rootless search: 01. the walker, 02. to be immersed and bemused 03. deconstruction(s).

# Approach
The method of registration and representation is mainly based on the use and the confrontation – sometimes friction – between different media. To diverse:

- Walker and walking: explorative and goalless movements through the city.
- Multilanguage is to write, to note, to imagine, to catch pictures, to shoot video, to steal sounds, to model...
- Mapping is unfolding, naming, diagramming positions, creating overview, zoom and stretch.

5 At the end of drawing, I would like to add: ‘Drawings have a featherlike quality. Sometimes you think of something and it is so light, so light, that you don’t have time to make a note in your diary. Everything is fleeting, but your drawing will serve as a reminder; otherwise it is forgotten.’ Louise Bourgeois, quoted in: T. Kovats, The Drawing Book: a survey of drawing: the primary means of expression, Black Dog Publishing, London 2007, p. 63
# Meta
Contains the search of: possible structures for the project; the key-concepts and key-experiences. Three Meta fields can be outlined.

-Meta Landscape: this is the exploration of the different layers and fragments of the project. By this, the landscape gathers and collects all the pieces in 'big topics'6:
1. ways of walking and exploration
2. ways of registration impressions and experiences
3. ways of experiential sensing
4. ways of representation and communication of experiences
5. questions and themes made out of: 1 + 2 + 3 + 4
6. reflection on 1, 2, 3, 4.

-Meta Construct: what will, or can be made out of the landscape as a total project. The construct, as final product is the junction between: the landscape, the constructor, and the chosen structure (i.e. basic element + the connection).

-Meta Meta: The never-ending but distanced view. (In the context of a research project, this could mean the movement towards epistemology)

Continental drifts are imagined and visualised. Their movement or development (of one element into another) creates scenarios.

Its intention is to ‘catch the sight’. What does it mean to be ‘dipped into’?

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6 From ‘topos’, a place
02: “To be immersed and bemused”

By charting brief details, small interruptions and anecdotes, rather than describing the dominant and impressive structures of space and architecture this project loops around. Metaphors such as palimpsest, mist and the clown envision the undecidable, the indefinite, the incomplete and the ambiguous.

Compagnons de route (CdR)

“A space similar to us from our everyday excursions and walks 'shapes itself' around us. It acquires a personal and emotional geography that functions as an affective framework for memories and expectations to take on quasi-spatial qualities. That space develops an invisible inner architecture, an extremely personal and unique network of thoughts and emotions. Those feelings and ideas are associated with the place where they were experienced. The myriad links within the network of one's personal history can connect the smallest details to remote feelings and bring them back when they are seen again.”

My plan for the walking project was (and is) not more ambitious than to use a considerable amount of time and distance to cover parts of Copenhagen and Brussels. Initially the idea to have 'compagnons de route' did not cross my mind, but the fact that 'something' is joining me emerged out of one single drawing.

This description is the very first attempt to shine a light on my 'compagnons de route'.

Not knowing what their relevance, task or identity is, I sense that:

1. all of them have a situational or intentional genesis;
2. there is a mobile relationship in between them;
3. they shift position constantly during a walk.

In the end they might turn out to be associates, partners, assistants, handbooks or guides or obstacles that could drive one up the wall.

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7 The Oxford Dictionary of American Language (Mac OS X) defines 'bemuse' as follows: To puzzle, confuse, or bewilder (someone). ORIGIN mid 18th cent.: from be- (as an intensifier) + muse. 'Immerse' is defined as: 1. Dip or submerge in a liquid; 2. (figurative) involve oneself deeply in a particular activity or interest. ORIGIN early 17th cent.: from Latin immer- 'dipped into,' from the verb immergere, from in-'in' + mergere 'to dip.' For me both notions are about a physical and mental disappearance; about moving in the shadow or behind another 'something'; about being im-pressed (with that what is meaningful for one). This rough description needs to be developed further on.

A gutter sighs. A wave of unsettled snow stretches itself into the void of the height. Thick, winged masses of flesh make signs. Free fall.

CdR 1/ the will to look beyond
It is about mapping beyond the horizon of the conventional perspectives. Convergence lines do not meet in one vanishing point, but vanish and appear in innumerable spots. Each point: a dimensionless piece of space becomes an interface. Each line becomes a track, an outline of hesitation since each concept considered as clear-cut or well defined is entangled in its antithesis.

CdR 2/ atmospheric insomnia
The inability to sleep quickly turns out to being in a state neither awake nor asleep. It is a manifestation of being there, by being in absentia. Atmospheric insomnia is an identical sensation. Only small streams of air, flavour, tone and mood are able to recall the states of big abstractions as day, night, summer, and winter. It is the finesse of the recall in itself to question if the change was coming upon me or upon the surroundings. Above all, atmospheric insomnia is about being subjected to a continuous changing mass of various particles, and the constant hunger to sleep it off.

12 the will 'to look beyond' is an ode to Marguerite Duras’ ‘L’Homme Atlantique’. Where the figure, and the reader are asked to look beyond the horizon and, beyond the view:

13 'Continuous changing mass of various particles’ is a shade that comes ahead of me and that reminds me in a strange way to the description of the ‘event’ by Jacques Derrida as: ‘the turnout of multiple and various things’.

CdR 3/ hardship-room
Is an elbowroom of 24/24 hours and 7/7 business. Emptiness and organic self-fabrication trans-act one another. The hardship-room accommodates the sound, smell, taste, touch, heat, sweat, urine, excrement, force, weight, temperature, hormones, lust, energy... as well as fears, dreams, drives and understandings.

It is the place of contradictions, of organic defence and an implicit threat, a place of loneliness and intimate interweaving, of vulnerability and potency, of life and mortality. It is on its Sunday's best a good place to hang your hat and to dream away.

CdR 4/ hooks
Are impressions with a big impact – without a specific reason – and kept as memories. It is the particularity of these impressions that is striking, as if a doughy layer separates them from bulky bites. Each dough shell is hard to digest and similar to the silence that becomes vast in a cheerleader's spell.

The idiosyncratic hooks can be put in a chain of time, one after another, but there main skill is to make their own chain. Hooks give birth to series of ephemeral and disappeared memories in a tangible and detailed form as if all were adhesive. The hook recollects.

Until now I have no clear view on the common mould of my hooks. They are im-pressed to me, and often they leave me behind in an ambiguous state of the unknown and the undecided.

14 'In my room; the world is beyond my understanding, but when I walk I see that it consists of three or four hills and a cloud’. Wallace Stevens, ‘Of the surface of Things’ in The Collected Poems. Quoted in: M. Schaub & J. Cardiff, Janet Cardiff, The Walk Book, Thyssen-Bornemisza Art Contemporary, Vienna, 2005, p. 76


16 'The hook’ is related in its capacity, and disrelated in its formal type (typology) to Perec’s concept of ‘the room’. I wonder if there is such a ting as an (arche-) type for specific experiences kept as memories.
G. Perec, Dutch translation by Rokus Hofstede, Ruimten Rondom (original title: Espèces d’espace), AP, 2008, p. 40
CdR 5/ invisible playmates are visible. They often break the ice by uttering non-frightening and friendly words. Although, it is possible that a conversation starts grimly and turns into something slightly amusing and interesting in the end. It is common that invisible playmates call each other's names, new- or old ones, for conveniences and familiarity sake. Familiarity and recognition is an important aspect in their friendship. And, they become closer, and genuine friends by imaginative and associative playing. Often an 'out of place logic' (also called foolish or absurd logic) is used as a strategy to build up a boundless mutual playground.

Slimy mudded ground. Bricks of a small pathway find their way out of the connection. Each of them thinks to know better. The result: an undulatory motion of individuality. Only the hedge seems to keep pace with the linearity of being. Or is that to keep up the appearances? Suddenly a smoked and rusty voice, coming from my left side asks: "Hey, you. Where is that eyeball staring at?" "What eyeball?", I wanted to ask. But instead my tongue slipped over the ball. "Mine? I have a pair. Most likely both follow each other side by side. Did they become one?" I smiled to the lamppost and said friendly before I left: more luck to your light.

CdR 6/ sense of transit

Everything you need to see is in the ocean [...]17

Walking is about passing through different spaces and ambiances. Walking is about fleeting time. Walking is about re-drawing, re-writing and re-interpreting in many dimensions. Walking is about absence18 as a method. Walking is about opening all the pores, to transport 'things' under the skin. Walking is about friction19. Friction between: the pace of walking and the pace of capturing, between collecting and leaving behind, between grasping and forgetting, between the expected and the unforeseen, between yourself and the world.

"To walk" poses questions to ‘trans’ as in transition and transformation. How do we know how things change, and are different?

There seems to be a similarity in the character of time and the character of transition. Both disappear in order to make appearance.20

Kebabkistan a new empire of dripping oil.

CdR, 2009.10.27, on my bike

17 [...] but it takes you twenty more years to see it". Polynesian Voyage Society, http://pvs.kcc.hawaii.edu/L2wayfind.html

Before the invention of the compass, or other instrumental positioning systems, all the observed signs were natural and navigating (as a sense of transit) was narrow related with the sense of: orientation, direction and balance. Most of these navigating practices are very particular about: 1. the careful observation of signs; 2. the creation of basic mental constructs; 3. naming. All in order to be able to memorize that what is required to position oneself and the direction of the destination. Above all these practices underline the importance of the practical skill. Master navigators are able to feel the movement of different swell patterns under their canoe, and to tell the direction of the canoe by lying down inside the hull.

19 ‘Friction’ is a reference to the ‘point of friction’ in the text of M. Schaub on the work of Janet Cardiff. It is to be understood as vital force, as the producer of energy when two objects encounter. It is precisely in this slow dynamism that oppositions reveal simultaneous and parallel worlds.

CdR 7/ sense of self-awareness (and the sense of self-reflection)

My own voice points out a random direction. She associates and recalls something. She narrates. My own indefatigable and imperturbable voice induces to continue. My own voice: a quiet but restless handhold.

Every step becomes louder, every movement slower, every atom heavier. Every step colonizes my total being with the 'here and now'. Every step elaborates an immersive mass into a darkening abyss.

Every step allows entry to the confrontation with the self. More precise: every step becomes the physical resonation of passing through mental and emotional landscapes.

CdR 8/ blind angle

I cannot make a clear point here, because I am – and my perception is - in the dark. I can only try to grasp beyond my grasp. My doubtful immune system contains a certain blindness for what is obvious to the own eye and mind.

While walking I’m absentminded of purpose, intention and the conceptual set-up of spaces (i.e. in relation to design or planning). Furthermore, I lack historical, social, economical and geographical context as backgrounds to refer to.

Daydreaming on commonness befuddles definitions of all kind. ‘The’ street, ‘the’ city, ‘the’ planning, ‘the’ nature, ‘the’ culture, ‘the’ public, ‘the’ private, ‘the’ experience, ‘the’ sense, ‘the’ meaning circle together on a blistering carrousel.

The becoming is neither absent nor present. The worse thing that can happen while walking – except for losing balance in a radical way – is when the mind gets adhesive. If one thought or notion dominates, and overshadows all further steps.

An additional illness lies in the translation of the blistering carrousel (into image or words), when types hit back as archetypes.

What fascinates me, and is a kind of torpor in relation to the intention of the project, is: what if one does not read, not interprete, and does not subsequently make sense? What if we could slowly, without reason, without anecdote face the fragments of the day-to-day-ness?

03: Deconstruction(s)

The emphasis of the project is on the relationship of the content, the experience, and the representation of the experience. I am going to de- and reconstruct the layered experience as I’m challenged by the multiplicity, complexity, and simultaneity of it.

Deconstructive mapping therefore is a visual, auditive and sensorial reading of urban public space behind the borders of ‘speech’.

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20 “Time is one of the assumed yet irreducible terms of all discourse, knowledge, and social practice. Yet it is rarely analyzed our self-consciously discussed in its own terms. [...] Time has a quality of intangibility, emitting its duration-particles only in the passing or transformation of objects and events, thus erasing itself as such while it opens itself to movement and change. It has an evanesence, highly precarious ‘identity’ that resists concretization, indication or direct representation. Time is more intangible than any other ‘thing’, less able to be grasped, conceptually or physically.”


21 It is this ‘obviousness’, this ‘every-day-perception’ that I want to look-in.
Teaching ‘research by design(ing)’ and Global Education: mutual muses?

00.
Two educational approaches – one coming from the sector of international development cooperation, the other coming from the sector of architectural design – are compared with one another in this paper.

Why? Perhaps because the comparison may serve to inspire someone.

The results of this comparison originate from my master’s thesis research in Adult Education Studies, “Global education in the Sint-Lucas Interior Architecture (IA) curriculum” (2009), at the Vrije Universiteit Brussel. This research comprised a comparative analysis between the pedagogical characteristics of Global Education and the pedagogical characteristics of the IA curriculum and IA curriculum-related topics such as teaching Research by Design(ing). The data were collected through document analysis and interviews (16) with Sint-Lucas teaching and administrative staff.

I will start this paper with a quick overview of current interpretations of Global Education. Then I will attempt to define how “teaching research by design(ing)” at Sint-Lucas occurred to me, as a result of my previously mentioned thesis research. Finally, I will summarize the aspects that, from my point of view, are so similar between the two educational approaches.

01.
What is Global Education?

Global is the world view

Recently, enormous numbers of publications and research projects have been dedicated to the topic of Global Education. Most of these activities come from within the sector of international development cooperation and sustainable development. The generally accepted assumption in these sectors is that international development cooperation and sustainable development can only be effective if there is intervention

1 For this paper, I choose “design(ing)” in stead of “design”, as Jacimowicz en Verbeke (2009) state: “Research by designing. To stress the central place of the activity of designing in the process of producing knowledge (other uses: research through design, by, into, ...).” (Jacimowicz & Verbeke, 2009, p. 19)
not only "in the world's South", but also "in the world's North". Therefore, "in the North", large-scale awareness raising on 'global topics' is thought to be the first course of action (CONCORD, 2007; De Bock, Dereymaeker, Servaes & Dekeyser, 2003; EC, 2001; EC, EP & EC, 2005; European Conference, 2005; Michielsen, 2009).

Now, what are these 'global topics'? Governmental and non-governmental institutions concerned with education, youth, social work and/or development cooperation define Global Education as an education that focuses on the interdependent relationship between North and South in the world, taking into account the sociological, economic, ecological, cultural, political and other dimensions (De Bock et al., 2003; Vlaams Parlement, 2004; VAIS, 2008; VAS CWJV, 2009; Lambrechts, Van den Haute & Vanhoren, 2009). Holvoet (2007, 2009) and UCOS (2007) call the acknowledgement of this interdependent relationship an “inclusive worldview”. It is a perspective on the world in which local, regional and global phenomena are seen in the light of the mutual correlation of the world's North and South and in the light of different disciplinary fields. The inclusive worldview is a cognitive basis for an attitude and behaviour that all together, ideally, lead to "active world citizenship". In this citizenship a harmonious and consequent thinking and acting is recognized, based on the assumption of interdependency and multi-, inter- and transdisciplinarity. Active world citizenship is normative too. It implies values such as solidarity, equality, responsibility and action. It focuses on research skills and on attitudes such as critical (self) reflection, empathy, process-thinking, self-regulated learning, life long learning, participation and interdisciplinarity (Bocken et al., 2006; CONCORD, 2007b; DEEEP, 2007; Kleur Bekennen, 2005; Lambrechts et al. 2009).

Now what does global education look like in practice?

**Global is the experience environment**

Global Education in practice uses combinations of both theoretical and experiential approaches (changing learning processes), depending on its target group and the spread or depth it wants to attain (Hennekam, 2008). The pedagogical tool for the practice of Global Education created by De Bock et al. (2003) is called the **educational continuum for development education**. This continuum is a trajectory consisting of four functions that, iteratively, should turn Global Education into a life-long learning process. These four functions are: basic awareness, understanding involvement, activation and consolidation (of the attitudinal change) (De Bock et al., 2003). As Michielsen (2009) states, "The designer of a development education initiative should always keep in mind the four functions on the educational continuum in order for the design to be effective". Although theory is an important aspect of global education, action and experience are equally important. A constructivist vision of learning is the basis here: knowledge is created through resolving mental conflicts caused by the confrontation between one's own knowledge and one’s environment (Valcke, 2005). It is a certain activating and experiential approach that we are interested in for this paper, and this approach is characterized by the term "exposure".

**Global is the exposure setting (for an exercise in attentiveness, presence, caring)**

World citizenship, as Gibson, Rimmington and Landwehr-Brown (2008) argue, is to be considered in levels. They call this the four 'levels of cultural awareness': "Global education facilitates progress toward Level IV through virtual immersion and firsthand interactions that bring the learner closer to seeing issues from the viewpoint of a person in another culture. (...) By participating in global education, learners are exposed to different perspectives; and they not only improve awareness of their own culture, but also improve their understanding of other cultures, and the state of the planet" (Gibson et al. 2008: 18). Thus, the higher one's cultural awareness, the higher one's global awareness.

Now, how can one increase one’s cultural awareness (and thus, one’s global awareness)?

**Intercultural exposure**

In global education, intercultural exposure has the purpose of "enhancing the impact of awareness raising. It involves the students more closely in the process and makes for an altogether more intense experience, as they are exposed to the reality and day-to-day life in a developing country. This way, they learn to approach and frame situations from a Southern perspective, which cannot be achieved as effectively through a process merely involving cognitive information transfer" (Michielsen, 2009). The intercultural exposure experiences organized by USOS (the University Foundation for Development Cooperation of the University of Antwerp), for example, focus on observation: "Students fill up their days with doing nothing, which can be very fatiguing: observing, wondering, questioning, visiting, accompanying, being a guest, mistaking, partying, searching for words and expressions, drawing, walking, etc. The term 'exposure' comes from photography, meaning 'to expose'. Whoever exposes himself to what comes towards him, will be marked after such an experience. For many people, an 'exposure' experience is a 'point of no return'. One's worldview and assumptions concerning the world's South will never be the same again as before the exposure" (USOS, 2009).

These experiences of intercultural exposure are usually "framed" in a larger trajectory, preceded by a preparation period and followed by an evaluation and carry-over...
period (i.e. activation, consolidation). The whole of this framing trajectory is intended to support the process of development towards active world citizenship.

**World exposure**

Another approach to the exposure experience in Global Education comes from Jan Masschelein and Maarten Simons, who go beyond the previously described approach (Masschelein & Simons, 2006; Masschelein, 2008a, 2008b; Simons & Masschelein, 2009). It is a philosophical, questioning vision of education, of how education could be conceived such that it really would become a “working on the self”. In this sense, the exposure experience is not in the first place considered to be a form of education intended to lead to the particular goal of “active world citizenship”, which implies the values of solidarity, equality, responsibility and action, along with the inclusive worldview that recognizes the interdependency between “North and South” in the world. Though this is not to say that it could not lead to these ends. Nevertheless, it is primarily seen as *e*-ducation, as an activity connected to this journey, in which one transcends what one is.

Idem. 7

"E-*ducere*, as an activity connected to this journey, in which one transcends what one is primarily seen as *e*-ducation world. Though this is not to say that it could not lead to these ends. Nevertheless, it is primarily seen as *e*-ducation, as an activity connected to this journey, in which one transcends what one is connected to- or undertakes another relationship to it" (Masschelein & Simons, 2006: 16). Therefore, this approach requires a willingness to expose oneself to the world that is of everyone and no one, to spaces and places that have no predetermined use or function; to expose oneself to the space where one is a stranger, without a given or known position, but rather ex-positioned. Along with this exposure of the self, goes the attitude of being present in the present, of attentiveness, and of caring for what is happening to the self in its environment. To attain this attitude, Masschelein and Simons consider the importance of study. Study as in reading, copying a text, observing, walking, mapping, etc. Because study presupposes an exposure: you are open to receive what is coming to you. You put your position under investigation, you are testing your own position, assumptions, knowledge, experience; as in a “limit attitude”, as in an experimental attitude, you are investigating, exploring the limits of (y)our thinking. (Masschelein & Simons, 2006, 2008; Masschelein, 2008a; Simons & Masschelein, 2009)

In accordance with his theory, Masschelein developed a course called “Global Education” for students at the Catholic University of Leuven. Instead of teaching in the classroom, he takes his students full time into the outside world to experience, for instance, “mega-developing zones” or “non-touristic post-cities”. These places in the world show the contemporary conditions that we share globally (Masschelein, 2008a). These places (which can be anywhere) in the world constitute the setting that makes experience possible. “They are the “experience space” that we expose ourselves to and that we map from our concern about our present, about who we are today and about what our conditions are” (Masschelein, 2008a). This Global Education is not about educating, but rather about un-educating experiences; it is not about becoming one’s self, but rather about becoming different; it is not about an empowerment of the inner side, but rather about an exposure to the outside (Masschelein & Simons, 2006). It is not about gaining knowledge (gaining experience), but about making experience possible (Masschelein & Simons, 2006:17). Global education, thus, is the “bringing into a situation of attentiveness” (Simons, 2006: 169).

This is how Masschelein and Simons see education8 and how it can lead to a questioning of our present situation, of the way we are living and thinking in the present, and of our global conditions. Their approach is aimed at making experiences possible that lead to a fundamental questioning (of how we experience our present today, of how we experience the conditions we share globally) and, as a consequence, to the creation of openings for our thinking and being.

**02. How is Research by design(ing) (thought to be) taught at SL?**

The underlying enthusiasm that inspires the Research by Design(ing) community at Sint-Lucas is rooted in the vision of education that has grown historically in the Sint-Lucas Institute of Architecture. This vision has three existential characteristics: ‘border attitude’,9 integrative approach to the study domain, and the combination of art and science.

The ‘*border attitude*’ focuses on the dynamism that exists along the borders of the discipline of architecture. It is a questioning, explorative, innovating, border-trespassing attitude towards the patterns of our thinking. Operating on the border also implies an openness towards other domains than architecture. This is essential, for these other domains or disciplines can deliver complementary information and/or inspiration, raise questions or confront us with different points of view and different ways of thinking.

The *integrative approach to the study domains* reveals the conviction at Sint-Lucas that architecture is connected to a great variety of domains within society as a whole (such as economics, religion, culture, history, human ecology, etc.) and thus architectural design implies a transdisciplinary point of view and an interdisciplinary approach. An important skill (attitude?) for designers is, therefore, the interlinking of these different domains to architecture and to each other, the making of associations, and the ability to think associatively, syncretically (cf. Janssens, 2009).

The third characteristic of the Sint-Lucas view of education is the *rela*-tionship between art and science. The two are considered to be equally important in education, because they are dialectic approaches: art can be a catalyst for creation and

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8 Or rather, how I understand they see education.

9 Again, this question is answered with a description of how I conceive of Research by Design(ing) after having done my (previously mentioned) thesis research last year.

10 Translation of the author; originally: “grensattdade”. 

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7 Idem.
innovation; it subjectivates, radicalises, dislocates. Science offers knowledge, methodology and language to test, repeat and construct in a validated way new knowledge, methodology and language. (Sint-Lucas, 2009)

These characteristics are also to be found in the attitude that constitutes the Sint-Lucas Research by Design(ing) community. Hendrickx and Janssens (2008) characterize Research by Design(ing) as a basic attitude of permanent and fundamental questioning of (the essence(s) of) architecture; as an attitude that considers architecture as a state of mind instead of as a profession or product; as an attitude that reconciles academic research with non-conformism in order to develop critical and experimental thinking and acting in a rigorous manner; as the making of things to generate experiences and new possibilities; as the reflection of the design process in the research process; as an attitude that keeps the (architectural) design foundations open and alive (Hendrickx & Janssens, 2008).

This, they argue, has educational consequences: “In addition to the pure teaching (instruction) of design skills (methodologies), students are encouraged to actively and continuously question the subject matter (architecture), the manner in which one engages with it and every supposedly self-evident aspect throughout the design process” (Hendrickx & Janssens, 2008: 22).

Examples of the teaching of this characteristic ‘permanent and fundamental questioning attitude’ can be found in different sections of the curricula of the Sint-Lucas Institute (Urban Planning, Architecture, Interior Architecture and Interior Design). We would like to focus on two in particular: the optional trajectories ‘explorative Architectural Design’ (eAD) in the Architecture curriculum and “Explicit Studio” in the Interior Architecture curriculum.

Marc Godts, one of the main inspirators of the eAD trajectory, argues there are three important aspects of the explorative design studio that are aimed at stimulating a research by designing attitude: ‘experience prototype’, ‘model’ and the ‘design environment’ (Godts, 2009b). Experience prototype is the experience that is gained through making and doing, and that eventually can lead to new information, new knowledge. “The making of/doing process is a way to discover a new sort of information that you can integrate into your design” (Godts, 2009b). Model is the formal way in which the designer passes on this new information; it is the knowledge that he has developed and that is to be continued, the knowledge that can serve as a statement that others can question, radicalise or discuss further (cf. Godts, 2009a). Design environment, Godts argues, “is the environment you need to make your project. (...) As a designer, what do you need around you, regarding infrastructure, references, expertise, ways of communication, etc. to develop your project” (Godts, 2009b). Students of the explorative studio become thus, ideally, conscious of what constitutes for themselves their design environment when they have discover(ed) through experience some new information that they can transpose to a model or statement. In this way, architecture becomes both a medium to be explored and an instrument to be used to question (situations) and to discover possibilities.

In the same way, the Explicit Studio of the Interior Architecture curriculum strives to develop the research by design(ing) attitude. Students in the 2nd semester of their 3rd bachelor year can choose either the Implicit Studio or the Explicit Studio. The difference between the two options, according to Jo Liekens, one of the main inspirators, is that the former takes a problem solving approach and the latter takes a problem posing approach to dealing with a central theme concerning public interiors. Accordingly, he states: “Architecture should not be focused as much on its own formal appearance and on its problem-solving nature, influenced by functionality. Architecture as a discipline and as a prospective design practice should build in more potentiality at its edges. It should facilitate, even provoke multiple and essentially different readings, uses, events, thoughts. To do so, architecture should generate another account of the notion function and of its own functioning, rather becoming the instrument setting and seeking potentials, questions and negotiations than remaining the instrument to postulate determined answers” (Liekens, 2009: 611). In the Explicit Studio, as in the “ThinkStudio11”, the architectural design(ing) shall be put at stake to raise fundamental questions. Liekens argues: “It is my opinion that the architectural installation is the ultimate instrument to install questions and provoke negotiations, to resuscitate the somewhat fixed existing fabric of our cities into spaces of potentials, of unpredicted experience and thought, provoking its inhabitants” (Liekens, 2009: 612).

In general, in the design studios (and other courses) of the Sint-Lucas curricula, the world outside the classroom is a very important ‘learning environment’, often used by teachers to stimulate students to “go and see” and experience. Museums, expositions, theatre, lectures, certain places, ‘unimportant’ cities, public spaces in other countries, ... are all regarded as sources of inspiration, as input for their creativity, as places to study, to stand still and to observe, as places where one can learn to see or discover (other) possibilities, where one can be confronted with one’s own pattern of thinking, etc. As one respondent said: “This going out, going out of one’s familiar interior, is something you have to get familiar with. It means giving up oneself in the familiar environment, consciously searching for fear... These are moments that feed you spiritually, almost religiously. You get confronted with your familiar pattern, and you don’t know what is happening to you. These are moments that are essential for the designer, between the inside and the outside world, to experience the unfamiliar” (Respondent n°10, in Hennekam, 2009, p.43).

The importance of exposing the self for the sake of the architectural designer’s creativity has been studied by Karel Deckers, when he focused on the subject ‘fear’ in architecture (cf. Deckers, 2008). Deckers does not start with the classical ‘positive’ set of architectural instruments (light, easy circulation, etc.), but rather he starts by excluding notions such as fear or feelings of uncanniness.

11 “ThinkStudio” or, in its Dutch original name “Denk!Studio”, is one of the four approaches to designing in the pedagogical model of the Bachelor of Interior Architecture at Sint-Lucas.
03. Teaching research by design(ing) and Global Education: mutual muses?

Now, what am I talking about when I say that I want to discuss the similarities between a certain approach of Global Education (i.e. ‘exposure’) and the Sint-Lucas way of teaching the research by design(ing) attitude?

In teaching research by design(ing), it is clearly not the aim to impart insights into the interdependent relationships between rich and poor regions in the world, nor to turn one’s students into active world citizens who demonstrate their solidarity with contemporary international and intercultural society through their thinking and acting, nor to cultivate people who are concerned with the social, economic and ecological dimensions of a situation. Naturally, all of this could reasonably be a consequence of such teaching. In my view, teaching research by design(ing) is all about educators, both in Global Education and in teaching research by design(ing), stimulating and developing a certain student attitude: the explorative attitude that goes beyond the edges, the limit attitude, the attitude that puts itself at stake, that dares to challenge its own obvious conditions by design(ing) ‘architectural installations’ that raise questions (for the designer, for the user, for the reader, etc.). This is the limit attitude that first exposes and experiences itself, that first opens up itself to what is different in the global setting – through being attentive to its own environment, through being present in its own present, through paying attention and noticing things and giving them existence, but also through the action of doing, making, studying, walking, mapping, designing exploratively, etc. Secondly, this exposing /ex-positioning attitude can lead to discovering one’s own new information or knowledge. The designer-researcher then communicates the experiences of this attitude, of this attentiveness, of this concern about the present, towards the outside world by means of an architectural design. The global setting (places in the world) in global education or in teaching research by design(ing) makes the exposure experience possible. It provides the opportunity to practice or develop this limit attitude because it offers the possibility to be used as a confronting, and perhaps even uncanny, environment (cf. Deckers, 2008) in which one’s own pattern of thinking or acting can be investigated. It offers the possibility to be used as a moment to observe and stand still, as a source of inspiration and creativity, as a space in which possibilities can be discovered...

In drawing my own conclusions, as a novice practitioner of Adult Education Studies who instigates and guides processes aimed at “empowering people”, I see that the architectural design programme at Sint-Lucas is aimed very specifically at the development of such teaching. In my view, teaching research by design(ing) is all about educators, both in Global Education and in teaching research by design(ing), stimulating and developing a certain student attitude: the explorative attitude that goes beyond the edges, the limit attitude, the attitude that puts itself at stake, that dares to challenge its own obvious conditions by design(ing) ‘architectural installations’ that raise questions (for the designer, for the user, for the reader, etc.). This is the limit attitude that first exposes and experiences itself, that first opens up itself to what is different in the global setting – through being attentive to its own environment, through being present in its own present, through paying attention and noticing things and giving them existence, but also through the action of doing, making, studying, walking, mapping, designing exploratively, etc. Secondly, this exposing /ex-positioning attitude can lead to discovering one’s own new information or knowledge. The designer-researcher then communicates the experiences of this attitude, of this attentiveness, of this concern about the present, towards the outside world by means of an architectural design. The global setting (places in the world) in global education or in teaching research by design(ing) makes the exposure experience possible. It provides the opportunity to practice or develop this limit attitude because it offers the possibility to be used as a confronting, and perhaps even uncanny, environment (cf. Deckers, 2008) in which one’s own pattern of thinking or acting can be investigated. It offers the possibility to be used as a moment to observe and stand still, as a source of inspiration and creativity, as a space in which possibilities can be discovered...

In drawing my own conclusions, as a novice practitioner of Adult Education Studies who instigates and guides processes aimed at “empowering people”, I see that the architectural design programme at Sint-Lucas is aimed very specifically at the de-immunization and exposure of the self, for the ultimate purpose of empowering the self. I think this education model can be taken as an example to be studied, experienced and used by applied social scientists, educators and social workers in their own training and in their working environment, because it opens up minds to that which is different (uncanny).

The rather short comparison carried out in this paper impels me to carry out a more rigorous study and analysis of the (possible) contribution of design thinking for the practice of Global Education. And maybe also: the other way around.

Acknowledgments

Many thanks to the authors of the theories and opinions (extensively) cited above, and to Richard Sundahl for the magnificent language editing of this text.

Ashley Hennekam

Ashley Hennekam studied Interior Architecture at Sint-Lucas (2005) and Adult Education Studies at the Vrije Universiteit Brussel (2009), and is now participating in the RTS 2008-2010. Still navigating in between the world of architecture and the world of Global Education, she will be working on capacity building in a water supply and sanitation project in Vietnam beginning in February 2010.

Bibliography


THE JOURNEY

An essay about the journey
A written image of perceptions
A notebook
A sketchbook
(nothing)
Image
Imagine

By means of the metaphor ‘The Journey’, used as a working title for my research and as a possible working method, I propose an exploration of the ways of perceiving and representing the site and its actors. You approach a site and its signs with your senses (seeing and hearing). You discover traces and you enquire in the Archive (collective memory). You develop a problem and a solution-focused strategy (recognition system). The walk is the motor, and the drawing, the word, photography and video are the media for recording and visualizing (mapping) the site. You travel into time and space and you encounter the Other. My research topic is close to my artistic practice, ‘le journal d’un usager de l’espace’ (1). I would not undertake a research project without choosing issues that interest me and that I want to learn more about.

‘The journey’ as a term is a metaphor. The aim is not only to travel abroad. Because journeying, can also mean, journeying in your own working studio. It is a construction which ways of perceiving and representing the world (reality) are questioned and studied. For example, nowadays we are used to taking instant quickly pictures with our digital cameras, thus capturing images of a building or a city with the mere click of a finger. Because of this ability, we tend to think that we ‘know’ the building or the city. But did we look closely at it? Strategies and/or experiments that involve recording the site by the means of drawing, require us to sit down, to look and look deeper and maybe learn more about the specific site. Naturally, each medium has its own capacities and ways of representing the world.

This article is an initial attempt to present my research in words and images, but it is definitely not a final version. Rather, it is a start of a never-ending story. I start the journey connected to a certain mooring point in time, which has meant something in this research project. I’m letting a wandering appear in a parallel italic writing. It is sometimes situated and dated, and results from specific projects in my artwork. In other respects it stems from dovetailed fragments of journeys, thoughts, and readings, joined together to form a ‘transcript of journeys’, in an attempt to outline my approach to reality.

Our fine arts drawing teacher told us systematically at the beginning of the class to draw things we don’t know. He used the example of comparing yourself with a Martian landing on earth,
Beautiful and at the same time sad. Masses of empty spaces, ready for reconstruction. I like these empty spaces. They destroy a lot (houses and neighborhoods).

In the guise of getting to know one another, we were asked at the beginning of the first Research Training Sessions (2008-2009), to use imagery and words to give a short introduction to our work in general. Instead of presenting a whole range of projects, I chose a specific project that was dear to me and which had been very significant for me in my artistic career, namely the Silent China project (2007). I produced it during a two-and-a-half-month residency in China, in the cities of Shanghai, Beijing, and Xiamen, in 2006 and 2007. This project was dear to me because of the experience of life and work I got out of it. For the first time, I was traveling far from home, alone and with no expectations. It was also a period in my life that involved a lot of changes and new directions. Each new opportunity opened up onto new adventures. Undertaking this travel gave me the opportunity to question my own cultural conditioning and to reconsider my way of looking at reality. Because for once I was taking the time to wander, to look, to listen and to surrender myself to time and space. The experience of space was a step beyond my previous limits, and every day of my journey in China I came to realize more and more that I did not know.

Silent China represents a way of writing, sounding, and drawing. It is a transcript of my travel experience and the time I spent strolling around those cities and places. A discussion followed each presentation, and Gerard De Zeeuw once asked me: “What do you mean by saying that Shanghai resembles a western city?” I was flabbergasted by that question, because throughout my presentation I had been talking precisely about the condition of the ‘neutral’ observer – a kind of tabula rasa – looking at a totally new and unknown world. I, with dusty western glasses on my nose, realized that my culture-conditioned way of looking had not changed at all. I had simply kept on moving within a western framework without characterizing the observer (me) and the observable (them, places, China). And there I was, caught in a trap. I realized that even if the intention is there, that you cross a boundary of first recognition. The eye wants first love that blinds you. Moving about in a place and staying there for a while means, if the intention is there, that you cross a boundary of first recognition. The eye wants to stray further. Be it by bike or on foot, I really took a liking to strolling and riding through the streets. Day in day out, and night after night, the city sucked me in. To a point where I no longer wanted to leave it, for fear of missing out on something. I was intoxicated (3) by its different neighbourhoods and its inhabitants. Then I sat down and started to draw the city and her activities. Sometimes I spent whole days on a bench or low wall drawing the cityscape before my eyes. Inquisitive people would come and sit beside me, silently following the lines I was making on my sheet of paper, wondering why I was doing that. Through drawing I thought I would go beyond my eye, and beyond my senses. Drawing is very different from photography. With photos, you frame, you play with the light, you capture a split second in history… with drawing you peer, you cut, you scan (4). You also listen.

Different drawings resulted, and were almost like ‘scans’ of different places in the city. Going from top to bottom of the page with my black felt tip pen, examining every detail, an acoustic recording (4), a line for a line, a form for a form. In the end, an image.

They transport piles of things on their bikes. They destroy a lot (houses and neighborhoods). Masses of empty spaces, ready for reconstruction. I like these empty spaces. Beautiful and at the same time sad.

Reading a place (2) requires not only a focusing of the eye and the senses, but also the spending of a certain amount of time in the place. At the beginning of my stay in China, I was overwhelmed by a whole host of stimuli in the city, and I didn’t know where to look or how to start. It was as if a filter had been laid over my eyes. Like a first love that blinds you. Moving about in a place and staying there for a while means, if the intention is there, that you cross a boundary of first recognition. The eye wants to stray further.

Be it by bike or on foot, I really took a liking to strolling and riding through the streets. Day in day out, and night after night, the city sucked me in. To a point where I no longer wanted to leave it, for fear of missing out on something. I was intoxicated (3) by its different neighbourhoods and its inhabitants. Then I sat down and started to draw the city and her activities. Sometimes I spent whole days on a bench or low wall drawing the cityscape before my eyes. Inquisitive people would come and sit beside me, silently following the lines I was making on my sheet of paper, wondering why I was doing that. Through drawing I thought I would go beyond my eye, and beyond my senses. Drawing is very different from photography. With photos, you frame, you play with the light, you capture a split second in history… with drawing you peer, you cut, you scan (4). You also listen.

Different drawings resulted, and were almost like ‘scans’ of different places in the city. Going from top to bottom of the page with my black felt tip pen, examining every detail, an acoustic recording (4), a line for a line, a form for a form. In the end, an image.

The street busker plays the saxophone in Huahai Lu. A breeze of fresh air in the hubbub of the city. I stop my bike and listen. For a few minutes, the rhythms of life are peaceful.

By night, the city is a real spectacle of lights.
Each building has its own light arrangement.
The truth is that you forget about the stars.
Apart from those who sleep in the streets.

Fragments from notes, Silent China, Shanghai – 07.09.2006. M.S.

"Travel as the means to knowledge." (5)

This quotation refers to the travelogue, a sort of film documentary ahead of its time. This genre came into being in the early 20th century, with the aim of giving the public a view of things foreign. Thanks to this medium, the World came within easy reach of the public, and people could travel in a virtual way to numerous countries and places. Photographs and views of places illustrated these travelogues and were commented on by a presenter. You can also compare travelogues with trailers attracting tourists to come and visit the places being introduced.

On producing a travelogue, the person making the journey assembled a body of knowledge during his or her stay. It was the same for the audience, whom the traveler enabled to learn about still unknown places and the people living in them. Even if all that was just a projected image, the public could project itself into landscapes and history. The maker, on the other hand, also benefited from knowing about the experience gained in those foreign parts.

For want of not being able to take photos, I draw.
I draw in order to know. Through the line and the in-depth way of looking, I reveal.
Permeated by the eyes, each detail and trace, each scar is perceptible.
I draw situations, people, places... over there and here. I wander around this line. I'm like a
dog straying here and there, from there to here.

There are guards at certain points on the line. They're armed. They look serious. No question
of making fun, or light.

They don't like you observing. Or in any event, that's the impression you get.

Children play with a ball in the street. They have a whole lot of fun.

I sit down, I take my pencil and my white sheet of paper.
The line is drawn on my white sheet of paper. It's futile and clumsy. Will anyone be able to
read what it means or describes?

The children look over my shoulder. I hear them whispering and then laughter. They stay
there a long time, and so do I. The eye focused on the city. Today it will be this particular
street, these particular people, this particular building, tomorrow something else.

Or... should I go back and start all over again?

Wandering around the Green Line, Nicosia – January 2009. M.S.
“Pour savoir, il faut s’imaginer.” (6)

In the Didi-Huberman quote, I read two meanings. To know something, you need not only to imagine, but also to produce the image. So it’s not a matter of merely collecting images. As Hillier & Leaman wrote (1976) (cf. Designerly Ways of Knowledge), it’s like learning an ‘artificial’ language, a kind of code that transforms thinking into words. I’d like to add: a kind of code that transforms a line of thinking into images.

*From the top of my tower of Babel, I hear people below. In front of me, the city skyline and the horizon, in easy reach.*

I keep on the lookout, like those guards. Maybe they’re also looking at the horizon. Maybe they too are dreaming of going to it and walking along it until the end of time. From the top of this tower, I don’t think I can see any danger, but rather peace. But nobody should trust appearances, they say…

I can’t really see any difference, between here and there. Except in habits and customs, aesthetics, wealth, activity, and sounds… per se, these are two similar worlds. People inhabit them and live in them. One nature and one city. A sea and a desert. A mountain and a valley.

Why talk of a here and a there? Or of one side and another side?

I get back on the road.

*Wandering around the Green Line, Nicosia – January 2009. M.S.*

In January 2009 I was invited to take up a short residency in Cyprus, and I spent a while in the capital, Nicosia. This residency is part of the Suspended Spaces project, introduced by an art collective in France. This project started out at Famagusta in Cyprus, a ghost town since 1974 because of the various political and diplomatic problems in the country. Suspended Spaces invited a number of personalities to take part and then contribute something of their work and/or ideas in different forms over the next four years: lectures, catalogue raisonné, exhibitions, residencies…

The purpose of this first period of residence was to provide an opportunity for encounter. I’d never been to Cyprus, so for me it was again a new experience. I was taken aback by the issues in that country. I couldn’t believe that day-in, day-out, such a tense and precarious situation could exist in a country that’s part of Europe. It’s all very well seeing problems having to do with wars and borders in the world on TV, but this is no longer a television program, the thing loomed up in front of us as it really is.

All the residents tended to focus on the ghost town of Famagusta. During my stay in Cyprus, I lived on my own and I could organize my days the way that suited me. I was personally quite drawn to the capital, Nicosia. Even though it’s quite a small city, you can spend whole days wandering about in it. I wanted to go and encounter that unknown factor, that scar that split the city and the country in two. I had lodgings in the
southern part of the city, the most prosperous part, as they said. But that didn't stop me criss-crossing the city from south to north and north to south. I was keen to encounter the two worlds and not just go about my shopping in the north, the way lots of tourists do, because in the north you can find bargains. The history, partly obliterated, yet still deeply engraved in the land, can still be read in the streets and buildings, and in peoples' eyes and the way they look, the barricade... But very few speak about it. They live with the border without knowing whether one day a solution may be found. Whether, one day, the scars can be healed.

A person shows me into one of the empty houses. The windows are blocked, and it's only here and there that the sun finds a crack to shine through, drawing a line of light which seems to pierce the wall. You don't use the doors, but the holes in the walls, they are wide enough to let you move from one space to another. You move from one house to another. It's damp and cold. Outside, though, it's warm and pleasant. Only traces of the past can be seen. It's all an allegory for a home and a life that long ago fled into exile and you'll never know where to start looking to find them again. A long succession of spaces, and empty places. In this place, a hole towards the outside. You take a look. I can see a cat washing itself and enjoying the sun's warmth. It's possible that cats are the most skilful of creatures. They always find a way to get to where they want to be. From one tree to the next, one wall to another, they criss-cross the city, endlessly. If only to find something to eat or a little warmth, so for love.

We carry on. A shrub in a nook. How did it manage to take root in this place? How did this seed manage to get this far, inside this blocked hole. I'm always amazed by these shrubs that you can see growing in part of a house's roof. How do they get that far and, above all, how do they manage to survive? There's no earth on the roof, as far as I know. Or perhaps they don't need any.

There are no more holes, no more doors, just one wall with a part of it covered by a black cape. The person in front of me lifts up the cape and passes through. I also pass through. The sun dazzles me, we're outside. We can only carry on to the left; to the right, the access is closed.

Wandering around the Green Line, Nicosia - January 2009. M.S.

The register of the image in motion (the camera's eye) introduces experience into a time and a space. It may be the instrument that marries the eye, and the way it sees, and the writing. It may also merely marry the black image with the noise (sound). A sound is an image, and a piece of writing, too. The camera's eye may be a prosthesis for seeing our world and giving us a chance to see it from another angle. Exploration (by way of the senses) can give rise to a complete deconstruction of the place, right down to its cartilage. Reconstruction (through instruments) may or may not come full circle. This whole process involves not only a movement of the body, but also a stopping of the body. The body is the motor that goes and meets the Other. The different instruments (media) are tools to be used in the endeavor reveal the unknown and, if possible, to discover traces of it. This traveler's map has various frames, but its scale is limitless.
I walk along the walls. Not to avoid the passers-by, but so as not to get wet in the rain. The water forms into miniature river systems at my feet, the clouds, in the form of rain, fall on the roofs and umbrellas, they find its way into the streets and end up in the gutters, passing underground through conduits, filtering through gravel and emerging into rivulets, streams and then the river, which finishes in the sea, from which it once again becomes vapor, haze and cloud … an image. At the seaside you can better see the clouds moving, and the horizon, as well that flat line, beyond which lies the unknown. Some days I’d like to run out and catch it. But every time I try to get close to it, it runs off and lies there, far from my gaze. I can only admire it from my viewpoint.

A little girl asks me to play hopscotch with her. Starting at the “START” box. Throwing a pebble, onto another box. Hopping, without touching the lines, in all the boxes except in the one with the pebble. Then picking up the pebble and starting all over again. It’s the other person’s turn to play. To succeed, you have to get to the “BETWEEN” box first.

Wandering around the Green Line, Nicosia – January 2009. M.S.

Translated by Simon Pleasance & Fronza Woods.

Thanks to Annelies De Smet for the peer review of this article.

Images - reproductions of sketchbooks (excerpts) 2006 - 2009, M.S.

1. *le journal d’un usager de l’espace* (some notes on my work)

   Trying to define your work in words is maybe the most difficult thing to do. Although trying to define what you see, is maybe even harder. *le journal d’un usager de l’espace* is a phrase that stuck in my mind when I was reading the book *Espèce d’Espace* from the French author George Perec. Perec’s book deals with our perception of our everyday life, ranging from our microcosm to our macrocosm. Facing our culture, questioning our cultural conditioning, our way of perception, and realizing that maybe you are victim of your own cultural conditioning. Because a ‘usager de l’espace’ is most certainly living in a house, a building, a neighborhood, a city, a country, … I am a user of the space and touch the limits of it. Through the walk, the trip, the ‘going through’, the user has to face up different issues. Are we more living in our speed of life instead of our house? What is the meaning of our architecture today? Humans are continually building their own theatre, their own world, around them. May I define my neighborhood as a kind of decor? Do we organize our lives the way we organize our gardens?

   We believe in images, because we were taught to believe in them. But is an image a proof for believing in it or is it just something we either like or not like to see? The image bank is growing every day, at a rate of more than 24 images/sec. And the artist, is helping to produce just more and more of them… From *le journal d’un usager de l’espace*, Mira Sanders, http://users.skynet.be/mimirage

2. ‘On reading’

   Approaching a place through the senses and trying to transcribe it in terms of its signs and features. Going further than merely recording a place. If not through drawing, then through writing, or the camera’s eye. The style of the writing maybe reminiscent of the style of Charles Baudelaire, well-known as a flâneur promenading about 19th century cities. Through strolling about, trying to understand our world and its gestures.

3. With ‘intoxicated’ I refer again to the notion of the flâneur and of being intoxicated by the city, which was introduced by Walter Benjamin relating to the writings of Charles Baudelaire. “Benjamin maps his discovery of the figure of the flâneur as a figure of perception residing in Paris on the model of Charles Baudelaire, who represented for him the ‘lyric poet in the era of high capitalism’ … As Benjamin suggests, the flâneur is addicted to the perception of exterior reality and visual experience. He’s intoxicated by this very experience of this process, by the way he abandons himself to the topography of the city… An intoxication overcomes the one who walks for a long time aimlessly through the streets.”, In *The Art of Taking a Walk: Flanerie, Literature, and Film in Weimar culture*, Anke Gleber, p.50, Princeton University Press, 1999

4. ‘scan’, ‘recording’ (see drawing)


7. ‘produce the image’ (see drawing)

8. ‘a flâneur’ (see drawing)