The Imaginative Process of Thinking

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Abstract. The paper[1] is positioned within an ongoing Ph.D through designing. The process through which 'to dream' (architectural invention) connects with 'to make' (construction practice) is the research subject of this Ph.D. The description of consecutive steps that lead to the appropriate research paradigm introduces the paper and situates the research method of the case. The described case focuses on 'to dream' as one component of the Ph.D subject, in which the designing researcher aims for a deeper understanding of the mechanisms of 'to dream', in order to apply it with more accuracy in design processes. Images of eidetic moments that built the spatial intelligence (Van Schaïk, 2008) of the architectural designer are *one* channel to trigger 'to dream'. Drawing spaces and spatial sequences of the *past* in 'My Grandmother's House' generates these eidetic images, which can subsequently be applied in new/future design processes.

Keywords: mode of knowledge, design research, designing, memory, imagination, conceptualization.

1 The Metamorphosis of a Sedentary Dweller into a conscious Nomad

Up till that day, he had been a sedentary practitioner, dwelling in 'the one and only' Mode 1 knowledge (Gibbons et.al., 1994) of classical (natural) science, which can be distinguished as 'knowledge of' (what is) (Glanville, 2007). Then, the Research Training Sessions (RTS)[2] –a doctoral program at Sint-Lucas School of Architecture– focused on the possible existence of more than one mode of knowledge. Gradually, the legitimate existence of Mode 2 Knowledge (Gibbons et.al., 1994) became clear, opening up a wide range of design research positions. This can also be distinguished as 'knowledge for' (action) (Glanville, 2007).

A 'liberal Ph.D'[3] was becoming obvious, standing tall and equivalent to a 'classical' Ph.D ('research is research' in the fields of Theory, History and Criticism = 'thinkable') (Verbeke, Belderbos, 2005).

The sedentary practitioner mutated gradually through 'his' personal reflective practice (Schön, 1983), subsequently becoming a researcher, finally finding his specific nomadic design research path.

In the meantime, some RTS participants returned to the classic Mode 1, while others fully engaged into a Mode 2 doctoral research, embarking on a liberal doctorate with a strong focus on 'research through/by designing', wherein design processes are acknowledged as the core of (empirical) research in and into designing.

Finally, the metamorphosis had taken place: the sedentary dweller, once unconscious about knowledge landscapes, had become a conscious nomad who now commutes between paradigms according to circumstance and context in order to understand and

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[1] The title refers to a quote in Ungers' essay (see references).

[2] Sint-Lucas School of Architecture, Brussels/Ghent, Belgium, has created a fertile research climate for practitioners over the past ten years. By organizing the Research Training Sessions (RTS), the school prepares designers and 'produces' researchers in architectural design (although the programme is also open to artists and other creative disciplines). This program is a research competence development course and offers insights into different paradigms present in the field, enabling participants (architects, designers, artists) to make a suitable decision in connection to their own research topic and to its position in the field.

[3] Gillies M, a professor of music at The University of Queensland, Australia, President of City University London, described three types of doctorates, based on the attitude in the relationship between research and creative practice: the *conservative* ,research is research' as adopted by classical science, the *pragmatic* reflection and comment on practice, and the *liberal* doctorate, „based on the stance that creative practice and its products are recognized per se as research and they should be appropriately recognized as such". Dunin-Woyseth, H.: 2005, The ,thinkable' and the ,unthinkable' Doctorates, The Unthinkable Doctorate, School of Architecture Sint-Lucas, Network for Theory, History and Criticism of Architecture, Brussels, Belgium.

inform design creativity in the best possible way and discuss it with his fellow practitioners, fellow researchers and peers.

2 The Nomad as Dweller on a Vaster Territory

Nomadism involves the ability to migrate, driven by necessity and desire,[4] enabling the shepherd to explore and cover a vaster territory to the profit of the cattle, which here is: design creativity in architecture.

The concept of 'critical and creative writing' as a scholarly adopted (accepted?) method, introduced by/in the University of Sussex and the University of East Anglia, and treated on a doctoral level by –among others– Rolf Hughes, explores the potential of combining modes of research and communication/representation. Creative writing, accompanied by critical 'scholar' assessment, has become a hybrid concept of design research. In 'Room within a View: a conversation on writing and architecture', Rolf Hughes and Katja Grillner demonstrate this hybrid method in a most convincing manner (Hughes, Grillner, 2006). In 'The Hybrid Muse: Creative and Critical Writing in/as Practice-Based Research', Rolf Hughes investigates the concepts of prose poem and philosophical dialogue as hybrid genres in comparison to Wittgenstein's pursuit of form: "With reference to 'Air Trance 16' by Ben Marcus, the paper argues that the 'hybrid' text is concerned less with resolving problems on the basis of a theory, than with setting the terms by which the problem can be addressed through calculated linguistic performances and gestures. Hybrid literary genres, which fuse strategies from creative and critical practices, can thus help us frame the practice-based investigation, refine its methods, and give voice(s) to its research results, thereby equiping designers as well as researchers with important conceptual and representational tools" (Hughes, 2005).

This paradigm is comparable with the doctoral program, developed previously by the Royal Melbourne Institute of Technology University (RMIT), Australia, pioneered by Leon van Schaïk in close collaboration with Ranulph Glanville. Here,

'designing' is adopted/adapted as the core of research processes (Glanville, Van Schaïk, 2003). Unlike Mode 1 (Gibbons et.al., 1993) 'classical science' processes, where the researcher is standing *outside* at a distance, here the designing researcher is looking from *within* the process, starting from his/her own body of work, being aware of his/her own mental space (Van Schaïk, 2008), and by so doing, being the most nearby and so possibly the most reliable observer of the process. In these processes 'rigour and honesty' are of essential value as Ranulph Glanville states it. This cannot but start with the intellectual integrity of the researcher him/herself, as is to be assumed in every kind of doctoral research. Furthermore, it is permanently being checked and balanced by informal as well as structured processes of reviewing, particularly peer reviews, and periodically pinpointed, adjusted and commented on by doctoral panel sessions with supervisors and opponents. To avoid narrowness and conservatism, these peers, mentors and challengers provide the designing researcher with an overview on the inner household of the research process.

3 Trespassing the New

The author is conducting a Ph.D by project at RMIT University Melbourne, based on the body of experience from his own architectural practice.

"The Ph.D topic arises from a reflection on a body of work that has been deemed to demonstrate mastery in the field, commencing with a reflection upon the nature of that mastery within a selection of critical frameworks. It continues with the examination of one or more specific propositions about the work, pursued in depth, and it is expected to conclude with a speculation through design on the consequent nature of a future practice and on what this can mean for architectural practice as a whole in its role as a servant to society." (Van Den Berghe, 2010)

In this Ph.D with the title: "Techné = Poiesis?: to cradle the architectural Embryo in the Landscape", the central theme is described as: " … an architectural design is a process that starts with 'to dream' a poetic image (Pérez-Gomez, 2006) (the Embryo of the design) in the landscape, subsequently becoming 'to make' (techné) in the real matter of the world. In the landscape, techné invigorates / contaminates the poetic image of *an* architecture. The intention of the maker is to reach poiesis in its classical Greek connotation,

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[4] Sir Henry Wotton, who made the first English translation of Vitruvius' writings in 1624, translated Vitruvius', Firmitas, Utilitas, Venustas' into, Firmesse, Comodotie, Delight', wherein part of the delight is for the architect in doing it. The making of it is for the delight of the maker.

which is: to *make*[5], in the first place, and by so doing, possibly reaching poetics."

Out of this central theme emerges the research field: how and to what extent is 'to make' the invigorator / contaminator of 'to dream' in the act of making architecture in the landscape?

In a first phase, this researcher looks 'inwards' to the central themes of the own body of work (Rossi , 1981). Soon, this process is interwoven with a research 'outwards', looking into adjacent architectural practices and theories, constituting contextualization comparable to a 'classic' literature review, providing the doctoral process with thick foundations of written, designed, drawn and built bibliography.

In a second phase, the research focus is drawn upon 'to dream' as the first essential component of the central theme (see above): how does the poetic image come into being and how does it trigger a design process in architecture? In this phase –which is ongoing– designing becomes the core of the research process. This 'chapter' of the research starts from the stance that every human being, and especially every architect, has been gifted with *spatial intelligence* (van Schaïk, 2008)(Bachelard, 1958-64), gradually built up through subsequent spatial experiences that start in early childhood. 'My Grandmother's House: a Journey into Memory and Imagination' is one research case in which the constitutive role of the mental space of the architectural designer is being interrogated through two series of sketches, drawings and scale models.

In a third phase, the research will focus on the connection between 'to dream' and 'to make', in a final Ph.D design that spans the theme of this Ph.D.

3.1 The first series of sketches and drawings

The nomadic attitude of the designing researcher, as described methodologically above, is being fully applied in the design research case at issue here. The designing researcher commutes back into Mode 1 and forth into Mode 2 whenever appropriate to inform and understand design creativity and to optimize the ongoing design process.

In a Mode 1 classic literature review thoughts and quotes are being collected and interrelated, and they are placed next to strong and haunting (spatial) images from early childhood (memory). Then these thoughts and quotes, together with the images, build a 'state of

mind' for the designing researcher, who introduces them in drawing processes: a first series of sketches emerges. This sketching and drawing is a non linear (re)discovery and understanding of spatial sequences in 'My Grandmother's House', experienced in the childhood of the author.

Because this house has been demolished some twenty years ago, it is firstly a journey into memory, trying to build a reconstruction. Very soon, this becomes a design process in its own right, for this reconstruction will fail if it remains limited to a journey into memory only, if the researcher forgets his journey to move into imagination in order to come up with a vivid reconstruction based on empathy, producing coherence of facts and decisions imaginatively filling in the 'blanks', permanently operating in a meticulously constructed framework of checks and balances. And after all: is this application of imagination in a design process comparable with a well considered hypothesis in classical science? Like – for instance– archaeologists do? 'Mere' drawing mutates into designing, which is in the core of this case and brings this Ph.D in a Mode 2 state of being.

As Oswald Mathias Ungers argues (Ungers, 1964-65), "… In every human being there is a strong metaphysical desire to create a reality which is structured through images in which objects become meaningful through visions and which is not–as Max Planck believed–existing because it is measurable[6] … It is obvious, however, that what we generally call thinking is nothing else but the application of imagination and ideas to a given set of facts and not just an abstract process but a visual and sensuous event. … There are three basic levels of comprehending physical phenomena. First, the exploration of pure physical facts[7] , second, the psychological effect they are causing in our inner self, and third, the desire to discover and to reconstruct the

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[5] Here, to make' has to be taken literally: this is about real matter and gravity and pouring rain, an activity situated in construction practice.

[6] The notion 'measurable' in Ungers' argument can be understood as a reduction of reality, based upon one's possible point of view that if a phenomenon is not quantifiable, it is not a true fact, whereas the central question of the architectural designer could/should be: is this reduction of reality desireable as a state of mind in design processes?
[7] Using 'physical facts' as terminology does not exclude memory as a physical fact: a physical fact of the past that has been stored in my brain as part of the body is called 'something I remember', as a substantial and traceable part of my memory, possibly becoming part of the collective memory of mankind. Phenomena that once have been physical facts but that no longer exist as such are not reduced to mere 'lies' only because they do no longer exist as physical facts. All knowledge, produced on the basis of (past) physical facts through 'rigour and honesty' (see above) is part of the collective memory of mankind, so it has to be taken seriously.

phenomena imaginatively in order to *conceptualize* them. … If, however, the physical reality is understood and conceptualized as an analogy to our imagination of that reality then we pursue a morphological design concept turning it into phenomena which like all real concepts can be expanded or condensed. … Therefore we might say if we look at physical phenomena in a morphological sense, like Gestalten in their metamorphosis, in their transformation, we can manage to develop our knowledge without machines and apparati."
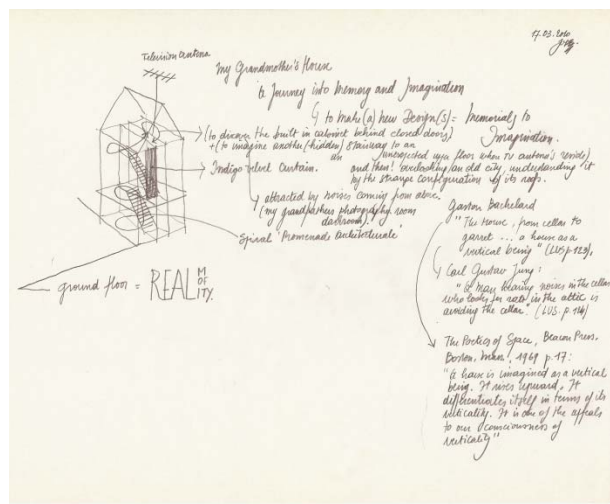

Fig. 1. 'My Grandmother's House'

3.2 The second series of sketches and drawings

In the case at issue, imagination goes through sketching, drawing and designing: (re)creating as knowledge production, unveiling how past (spatial) experiences can consciously be conceptualized through design processes that flow into new architectural designs.[8] (Yates, 1966).

These newly achieved insights in how this 'chain reaction' works feed a second series of sketches, drawings and scale models of/for a design of a 'The New House: Stairwell and Staircase' that shelters two series of spatial stairways that go from nowhere to nowhere. The first series has been a reconstruction of

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[8] This design method also refers to the Method of Loci, also called the memory palace. It is an imaginal technique known to the ancient Greeks and Romans, and a general designation for mnemonic techniques that rely on memorised spatial relationships to recollect memorial content. According to Cicero's ‚De Oratore', the Greek poet Simonides invented it. (Wikipedia, retrieved 19 Aug 2010).

an unconscious past, an indispensable step to inform a second series that unveils a future reality (in architecture), "imaginatively conceptualized as an analogy to our imagination of that reality" (Ungers, 1964-65, see above). The slipstream of 'My Grandmother's House' triggers the 'New House'. Then, the first and second series of designs can be placed next to each other to finalize this case in the form of a legible installation that demonstrates the production of new knowledge through designing.
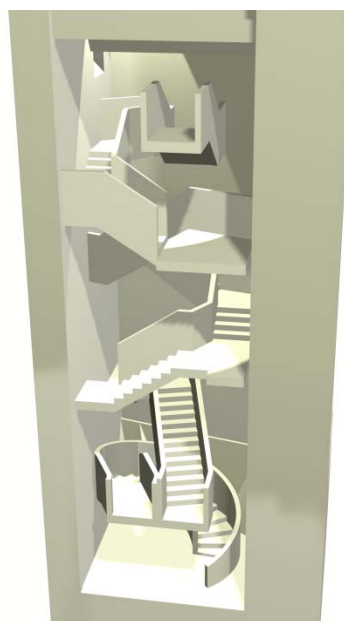

Fig. 2. 'The New House'

4 Concluding Remarks

Design processes in the past practice of the author have –as is the case in so many architectural practices– been trusting heavily on an implicit and latent awareness of a coincidental conjunction of memory and imagination, mostly unconsciously underrating the first one, while overrating the latter one.

Through the design research case at issue, this implicit awareness mutates into explicit insights (knowledge) both on the level of content as on the level of the design research method. The case demonstrates that in design processes in architecture it takes imagination to 'recall' past spatial experiences from memory vividly enough as to trigger the invention of new but meaningfull spaces. For meaning arises when creation of the new is embedded in a spatial and temporal context, a chain of places and moments accumulated in the mental space of the creating subject. This is the place from 'where' the desire to give meaning through creation starts.

These explicit insights can now be applied in design processes of the author and in other architectural practices, wherein the status of the architectural drawing shifts from 'mere' representation to an active instrument, as the propeller of the imaginative process of thinking.

The full adoption of creative practice as research, with imagination as an accepted and adjustable interface between the ineffable (Antoniades, 1992) and the real unveils new territories of knowledge.

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