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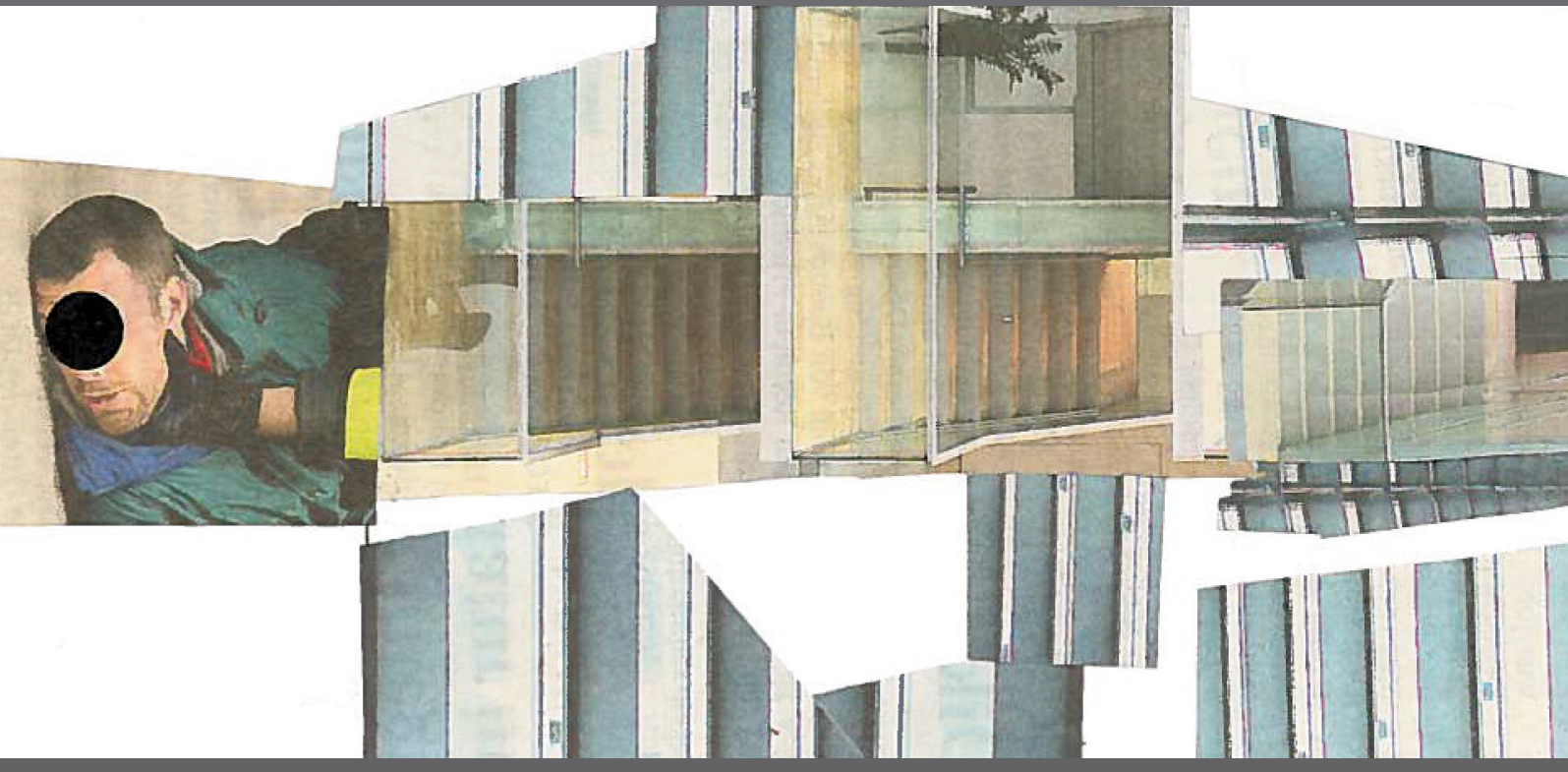

- Second homes - another life in another Suburbia
- Det urbanas syntax
- Building a culture of doctoral scholarship in architecture and design
- Bokanmeldelser

NORDISK ARKITEKTURFORSKNING
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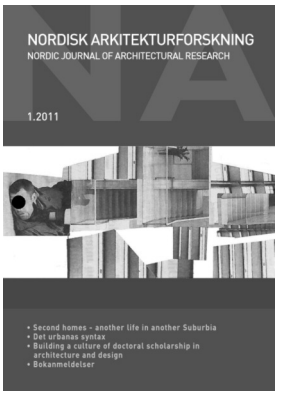

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INTRODUCTION

The objective of this paper is to present how a strongly practice-oriented institution of higher education in Belgium, the Sint-Lucas School of Architecture, tackled the challenges of the European policies for establishing a doctoral level programme of study and how a new culture of research gradually developed within that institution in the years 2006-2009, when the authors of this paper were visiting professors on the Sint-Lucas teaching staff. A culture of doctoral scholarship was strengthened in the years 2009-2011, witnessed by the authors as tutors in a series of research training sessions. In the context of this paper, the term 'culture of doctoral scholarship' is understood to refer to the building of a critical mass of researchers involved in doctoral studies at an institution and to the recognition of these kinds of studies as a means to enable these researchers to develop field-specific research in their own particular fields of endeavour.

During the period in question, there were some top-down formal research education activities undertaken by other guest professors, and there were also some bottom-up initiatives undertaken by the PhD students on their own. These developments may be an indication that a new practice-based scholarship, initiated by the doctoral studies programme, is emerging at this institution. This paper, however, will focus on the initiatives taken by its authors in collaboration with their PhD students, rather than on the top-down and/or bottom-up initiatives mentioned above, which will be discussed elsewhere.

The Sint-Lucas School of Architecture was established in Ghent in 1862 and in Brussels in 1887. Its traditions are strongly embedded in the arts and humanities. The school has always been at the forefront of developments in the fields of design and architecture. Over the years, the insights of this community of architectural expertise have been communicated to the general public by texts as well as through projects, design, exhibitions and plans (Verbeke,2006:5).

In September 2003, the Bologna-Berlin policies recognized doctoral studies as the third cycle in European higher education. For the Sint-Lucas School of Architecture, this meant developing a new culture, a culture of research and doctoral scholarship. The intentions of the school were to develop experimental, practice-based concepts for this research, rather than to attempt to emulate the discipline-based research that is characteristic of the academic fields. The process had begun some 10 years earlier, when a research forum was established (Verbeke, 2006:9).

The process of building a fertile research environment started in the spring of 2006. The intention of this process was primarily to support younger teachers without any research experience in defining their research interests on the basis of their double practice as professionals and as teachers of architecture. Furthermore, it was expected that their doctoral studies would be commenced based on a research proposal defined during the early stages of the doctoral education. The challenge was the time constraint, as almost all these young professionals were actively involved on a 50/50 basis in teaching at the school and in architectural practice.

The authors, both with extensive experience in Scandinavian research education in architecture, spatial planning and design, and in research in the professional fields, were requested to develop one of the four Research Training Sessions (later on dubbed 'RTS') that were to constitute the first Research Education Programme at the Sint-Lucas School of Architecture. The school's leadership encouraged the development of a multiplicity of approaches to research education by their guest teachers, and later on it was possible for the authors to develop not only "their own" RTS, but also an autonomous research education unit within the overall curriculum. This paper will present and discuss this autonomous research education unit within the emerging doctoral curriculum of the Sint-Lucas School of Architecture. It will study how this unit may have contributed to building a culture of doctoral scholarship in architecture and design at the school.

In describing the autonomous research education unit, the theoretical framework of Goodlad and his co-authors will be applied (Goodlad et al, 1979). In the chapter "The Domains of Curriculum" of their book, five levels are defined and addressed: the ideological, the formal, the perceived, the operational and the experiential curricula (Goodlad,1979:60-64). These levels make it possible to constitute a certain distance between the intentions of the teachers, the teaching activities them-

selves, and the output of the teaching. These levels will hopefully facilitate the conceptualisation of this paper. For each level, a different kind of description will be used in order to better express the different characters within the whole of the "curriculum ladder".

The authors assume that the value of this paper can be in presenting 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 in order to pursue practice-oriented research, and there are research educational programmes that aim to "avoid verbal theorising or credential-seeking through reference to texts from other disciplines".[1] The authors' 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.

2. EXAMINING THE FIVE LEVELS OF RESEARCH EDUCATION AT THE SINT-LUCAS SCHOOL OF ARCHITECTURE

2.1. 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 more traditional academic research, and there is still a lot of confusion about it, both in the milieus of the practitioners and of the architectural researchers themselves.

There is a long tradition of studying architecture "from the outside" by researchers from other disciplines. One example of such studies is the well-established discipline of art history. But even art historians themselves have recognized that a perspective "from within" has been missing in their studies of artefacts and the production of these artefacts (Gombrich, 1991:68; Gombrich, 1993:177; also Abrams, 1989). In the Scandinavian context in particular, architectural research has been criticised for having taken over theories and methods from other disciplines without reflecting on the specific character of the architectural field (Lundeqvist, 1999:7).

During the last forty years there have been ongoing debates on the importance of the "craft aspect", or the "making aspect", as a core focus of the design-related research. Already in 1969, Herbert A. Simon introduced the concept of "the science of design" in his seminal book *The Sciences of the Artificial*. To the science disciplines, the exploration of natural things, he opposed the science of design, which deals with "...artificial things, how to make artefacts, which have desired properties, and how to design" (Simon, 1969:55). In 2001 Piotrowski and Robinson edited the seminal publication *The Discipline of Architecture* (Piotrowski & Robinson, 2001), and in the Scandinavian context, two works that followed upon these ideas can be mentioned: *Artifacts and Artificial Science* (Dahlbom, Beckman & Nilsson, 2002) and *Towards a Disciplinary Identity of the Making Professions* (Dunin-Woyseth & Michl, 2001).

It seems that it is necessary to support the development of architecture and design as disciplines of their own and to be equipped for a qualified dialogue within academia, while at the same time searching for new forms of architectural research that could more strongly engage the practitioners who have the strongest potential to develop their own field of expertise. While the first strategy would depend on developing a discourse on the premises of academia in order to make the object of studies "academically researchable", the other strategy 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, including those from more traditional academic fields, as well as from other realms of endeavour.

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 this within the context of a dialogue with other knowledge producers. This is because when we try to grasp, explain and legitimise in a scientific context the way architectural practice generates knowledge, it becomes clear how immature our field is in relation to more traditional forms of research and other scientific disciplines. But during the last decade

new means and tools have been developed to conceptualise and use the potential of design in knowledge production.

Several concepts are now being used in the effort to delineate this specific kind of 'in practice model' of research, and especially in the field of architecture and design there are several concepts related to the notion of 'research by design'. In the seminal report *Practice-Based Doctorates in the Creative and Performing Arts and Design*, Christopher Frayling defines 'practice-based doctorates' as follows: "The practice-based doctorate advances knowledge partly by means of practice". The relevance of this way of doing research is also argued for by saying that it is no longer possible to polarise research efforts as either conforming or not conforming to the 'scientific method', which previously was the guarantor of 'real research'. "There is already a continuum from scientific research to creative practice" (Frayling et al., 1997:15). Chris Rust et al. talk about 'practice-led research', which they define as "research in which the professional and/or creative practices of art, design or architecture play an instrumental part in an inquiry" (Rust et al., 2007:11). Michael Biggs defines the meaning of the term practice-based research as research that "prioritises some property of experience arising through practice, over cognitive content arising from reflection on practice" (Biggs, 2004:7).

The increasing number of doctoral projects within this research field also leads to conceptual development in which notions like 'projective research' are used. 'Projective research' is design research that emphasises "the notion of project understood as 'throwing ahead', as a reflexive conceptual action". This conceptual action is made "by means of spatial projections", that make prospective alternatives subject to anticipative reflection." Hence, "the capacity of pre-figuration, which is native to design thinking, is central to projective research" (Janssens, 2009:48-49, 64). These concepts, put in the context of the discussion on "post-academic science" and Mode-2 research, have opened up new developments in research in the professional fields of architecture and design. Knowledge production in transdisciplinary and creative practice areas was earlier seen as completely outside the realm of research and scholarship. A new conceptualisation of the knowledge field of design and architecture, together with a more inclusive model of research, is developing, in which a more practice-based approach is possible. This new model is on the way to achieving academic recognition, as well as gaining the significant interest among practitioners (Dunin-Woyseth & Nilsson, 2008).

Within the context of these discussions, the Sint-Lucas School of Architecture, together with the Network for Theory, History and Criticism of Architecture (NETHCA), organized an international conference in 2005: 'The Unthinkable Doctorate'. This conference was a step forward in the process of formulating the school's vision of research and setting up the Research Education Programme. Important aspects of this vision were formulated by the former Director of the School in 2006 as follows:
"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 development of social standpoints and design proposals for the present and for the future are of essential importance in this. ... The research in the Sint-Lucas School of Architecture is developing as a reflection of this integrated approach, without excluding rigorously defined research within the specialist fields of the staff involved. The emphasis in the School is currently on strengthening design-based research. This research direction has not been sufficiently developed in an explicit way in the past and it fits in perfectly with the history and vision of the School" (Verbeke, 2008:12-13).

2.2. The Research Training Sessions (RTS). ***The formal curriculum.***
The formal scheme for the Research Education Programme at the Sint-Lucas School of Architecture was first implemented in 2006 as four Research Training Session (RTS) modules, which were adjusted and supplemented by another four modules in 2007 as a continuation in the second year for the group of those attending the first RTS series (Verbeke, 2008a; Janssens, 2006). The Research Training Sessions are now described as a two-year programme, in which each year consists of four sessions lead by various tutors with international academic experience or with an extensive design practice and experience in doing research on design practice. The tutors operate in

pairs. The curriculum for the first year is organized around four sessions dealing with the topics Communication, Knowledge, Reflection and Design Cognition. The second year is intended to develop and deepen an understanding of the themes introduced in the first year. It involves discussing the issues of why and how to do design research, how to use artefacts, action, observation, etc.

The focus on research by and through design is emphasized in the curriculum. The programme is intended for architects and designers in the initial phase of their research (by design). The participants are mainly architects, but the program is also open to researchers with fine arts and design backgrounds.[2] The programme 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 programme are formulated in six points: 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 programme 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 programme at the start, but was subsequently integrated into the programme and formalized through part-time positions offered to several international guest professors.

Each module session is two full days of work, starting on a Thursday afternoon and ending on a Saturday afternoon. The choice was made for this relatively short period of time because of the limited time the participants have available, since they work full-time both as teachers and practitioners, and for the sake of the participants coming from abroad. The modules have been adjusted, both in terms of content and in terms of positioning within the program, and at the time of writing they are organised as follows:

Module 1: Research Methodologies and Communication
This session is constructed around two assignments: 1: Exploring concepts & language. 2: Working towards a preliminary account of the research topic.

Module 2: Knowledge
Different forms of knowledge and modes of knowledge production are discussed, with a focus on the domain of architecture and design as it relates to other kinds of knowledge.

Module 3: Reflection
The focus is on reflection as a way of generating research.

Module 4: Design Cognition
The session on design cognition and the 'design process' is intended to help participants develop a better understanding of how they design and the factors that influence their approach to design.

Module 5: Why/How Design Research?
The relevance of design research is discussed, along with how design research can be conducted, for whom it is done, and whether there are paradigmatic models of design research.

Module 6: Artefact, Action and Observation
Examples of practice-led, practice–based research (also from other disciplines) are introduced, and the interaction between research work and work in practice is discussed.

Module 7: PhD by Practice
The participants are introduced to the underlying principles of the PhD programme at the RMIT (Royal Melbourne Institute of Technology).

Module 8: By Design for Design
The focus here is on design and designing, and each participant is asked to produce an artefact that embodies the role design will play in his or her research project.

The intention of the session programme is to discuss fundamental issues of research by design in such a way that each participant can develop his/her own research ideas and research questions. The aim is that when the two-year RTS programme is finished, the participant should have developed a research project proposal that is mature enough to be formally started under the supervision of one of the RTS tutors.

2.3. The missing "mezzo-level". ***The perceived curriculum.***
After the authors had carried out their Research Training Session on Knowledge two times (in 2006 and 2007), they 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 involved extended educational responsibilities, including regular mentoring of the PhD students and the prospective PhD students. This close and frequent contact with the different groups of previous participants in the RTS led to discussions about how the students perceived their own learning situation. At that time, two publications appeared: one was a joint endeavour by the young researchers at the school, and the other was produced by the international tutors (Janssens et al., 2006; Hendrickx et al., 2009). These two kinds of publications, together with conversations with the PhD novices and joint reports from the teaching staff involved in the Research Education Programmes, supplied the authors with information that enabled them to 'map out' the Research Education Programme in a broader perspective and to determine how it was actually working.

During the RTS on Knowledge, the authors attempted to introduce various "landscapes of knowledge" and certain developments concerning the emerging modes of knowledge production. Among other forms of post-academic science (Ziman,2000:67), they discussed Mode 1 and Mode 2 of knowledge production and how design research could relate to the two modes. They agreed with the protagonists of Mode 2, who maintain that, in spite of its growing importance and extent, Mode 2 does not replace the traditional forms of research, such as disciplinary research. Even if competing, Mode 2 is still an additional form of research involving partners from outside academia (Häberli et al., 2008:8). The founders of the Mode 1 / Mode 2 movement maintain that in order to master the tasks of Mode 2, one first has to go through an apprenticeship in Mode 1 research. One must first develop a kind of intellectual identity in Mode 1 in order to be able to acquire multiple cognitive and social identities for practising research in Mode 2 (Gibbons et al., 1996:149). The authors regard research by design as a form of post-academic science, and as such its prospective "scholars by design", the PhD students should be introduced to the principles of traditional (Mode 1) research. They should, consequently, be trained in some transferable and generic research skills that constitute Mode 1 "craft" before they explore new possibilities of field specific research opened up by research by design.

The authors agreed with the leadership of the school that the Research Training Sessions offered a kind of **meta-level** in research education. The sessions inspired the participants, and many of them decided to continue their involvement with research towards a doctoral degree. The RTS were research-educationally successful in building bridges between the participants' everyday experiences from their professional practice and the search for possibilities to make these experiences the basis of their prospective field-specific research, i.e. their research by design. The two internal publications (Janssens et al., 2006; Hendrickx et al., 2009) witnessed to the fact that the RTS were opening up new horizons and interests, and that they were building the foundations for a new culture at the Sint-Lucas School of Architecture.

While "mapping" the Research Education Programme on offer, the authors found that the individual tutoring of the prospective and the newly-fledged PhD students by the numerous guest teachers constituted the **micro-level** in this program. Frequent contact with teachers coming from various intellectual "schools" of research provided many opportunities for the participants to discuss their research interests from various angles. This propitious situation helped the various individuals to "find" their own ways of thinking. Yet some students seemed to not quite perceive the relations

between the macro-level sessions and the micro-level tutorials 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 approaches to research, and that they should master its generic and transferable skills, the authors recognized that a **mezzo-level** was missing in the Research Education Programme. The authors addressed this missing link between the meta-level and the micro-level by filling the perceived gap with an independent Research Education Unit consisting of four seminars. This unit consisted of two types of seminars, the first two of which were called "Scholarly Criticism", and the other two "Scholarly Craft".

Certain notions from a colloquium organised by the UK Council for Graduate Education in 2007, provided good support in conceptualising this level.[3] Andreas Frijdal, the Research Director of the European University Institute in Florence (EUIF), maintained in his lecture, "...a School is a School is a School...(Gertrude Stein). Doctoral Education in the Context of the Graduate School entails that key generic skills are those which enable the holders of a PhD degree ...to teach, to mentor, to serve the university, to publish, to tell the truth, to reach beyond the walls, to change". The transferable skills are those 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, and to defend one's findings".

Through the seminars in the Research Education Unit, the authors attempted to address most of the transferable and generic research skills, as introduced by Andreas Frijdal.

2.4. The autonomous Research Education Unit: the macro-, mezzo- and micro-levels of *the operational curriculum*

THE MACRO LEVEL
The Research Training Session on Knowledge, for which the authors were responsible from 2006 till 2009 as visiting professors (and the following years as invited tutors), was focused on different forms of knowledge and how these forms originated. One specific area of focus was on the forms of knowledge present in the domain of architecture and design, and how they relate to other kinds of knowledge. Established modes and notions of scientific knowledge were discussed, together with other ways of knowledge production. The so-called "Roskilde Model" was applied as a framework for the pedagogical structure of the training. In the early 1990s, Roskilde University in Denmark pioneered a doctoral studies programme based on network cooperation. The model consisted of short periods of concentrated ex cathedra teaching by international lecturers, preceded by intense literature studies, and followed by practical exercises such as the writing of essays. The whole educational module was concluded by publicly discussing the papers submitted. The "Roskilde model" was based on the pedagogical principle of learning by doing, which has relevance for both architectural design and architectural research.

In accordance with the "Roskilde Model", the required reading for the RTS on Knowledge served as the basis for a pre-start assignment.[4] The participants were strongly advised to work in groups of two, since both teachers had long and successful experience tapping the potential of peer-learning as a strong educational vehicle. The participants were requested to prepare a concise paper whose aims were: (i) to discuss various kinds of knowledge and the ways they are produced; and (ii) on the basis of the students' own experience and the texts they have read, to discuss what kinds of knowledge are central in their everyday architectural design work. 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 session participants were requested to answer the questions: 'Why?' 'What?' and 'How'? with regard to their ideas about a prospective PhD project. This assignment, however, was to be carried out both in an academic way and in the designerly ways of architects. The participants were asked first to formulate their project in a short written paper that was submitted to the

teachers. The next day they were asked to draw or paint an image of their proposed research project or of aspects of it on a poster. They were also told to prepare and formulate questions to their fellow participants which should provide a better understanding of the content of the posters submitted. Again, the students were asked to work in groups of two to be more actively involved in the matters at hand. The assignment was called "Between an associative and an argumentative mode of thinking", where the associative mode of thinking is characteristic for the design professions and the argumentative mode of thinking is how researchers act in their work.

The results of the session assignments consistently turned out to be fruitful for the students' progression in developing their ideas into research proposals. Trained to grasp and visually present complex matters and relations by images, to draw up a serious interpretation, and then to formulate questions about and discuss each other's work, the participants once again made clear the potential of consciously using design thinking, design knowledge and design skills in research. Their ideas, expressed in both written and visual form, demonstrated that the participants had been familiarized with various types of knowledge and were willing to discuss their design-based knowledge within a broad "landscape of knowledges" (Dunin-Woyseth & Nilsson, 2007:171-172; 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 doctoral thesis chosen by the participants that had already been defended with a successful result. The different groups of two participants in this seminar were first to present the chosen thesis, and thereafter to present and discuss the following issues: the academic background of the author of the thesis, a description of the academic milieu in which this doctoral work was conducted, the content of the thesis and its evaluation. The evaluation included: the research problem, the knowledge status in the field, the approach taken, the scholarly craftsmanship of the author, the importance of the thesis topic for knowledge building in the author's professional field, its value outside the scholarly community, and, finally, the potential for further development of the findings of the thesis.

The second of the seminars, *Scholarly Criticism II*, had two objectives: (i) the first was to introduce the PhD students to constructive criticism and to train them in it; (ii) the second was, through peer feedback, to provide concrete support to the research projects to be discussed. This time the PhD students were to study and give criticism of their colleagues' research proposals. The criticism was to be prepared in writing by teams of two. Furthermore, these teams were to discuss the individual colleagues' research proposals on the basis of the written criticism.

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 that are required when producing a dissertation. A textbook on the matter was chosen by the teachers to serve as the basis for this seminar (Borden & Rüedi Ray, 2006), prior to which all participants were to read the first part of the textbook, which describes the work of writing a dissertation. In preparation, teams of two PhD students were also asked to prepare a presentation of a part of the book covering one or two chapters.

The second seminar, *Scholarly Craft II*, held under the title "Navigating in various knowledge landscapes", was an attempt to develop the issues presented and discussed during the RTS on Knowledge, with emphasis on academic research. A textbook was chosen to give a concise and somewhat rudimentary overview of: Philosophy of Science, the relation between architecture and the natural and social sciences, as well as Humanistic Studies (Mo, 2001). In this textbook, a special emphasis was put on the role of architectural theory for architectural research in light of the fact that architecture is a professional field and not an academic discipline in the narrow sense of the word. The participants of the seminar were to deliver a short summary of one chapter and present it to the others during the seminar. A discussion after the presentation was intended to give the audience a perspective on the potential of architectural and design research with regard to the disciplinary knowledge of academia.

THE MICRO-LEVEL

During the years of the authors' engagement as senior professors at the Sint-Lucas School of Architecture, they met on numerous occasions with the Sint-Lucas doctoral students in traditional one-to-one tutorials focused on each student's own research project, but they also practised what could be called "tandem tutorials". These tandem tutorials, involving both authors and one or more students, were designed to function as small seminar discussions aimed at building an academic culture and strengthening the PhD students' scholarly awareness. In order to achieve this goal, the PhD students were asked to look retrospectively at the process of developing their projects, beginning from the RTS phase of their research education and continuing up to the present time. They were expected to reflect on which components of this education had influenced their thinking.

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

This part of the article contains some written responses from a group of doctoral students at the Sint-Lucas School of Architecture. They were delivered to the authors in September 2009. The students agreed to their comments being quoted in this part of the examination of the five levels of the research education curriculum.

RESEARCH TRAINING SESSION: *KNOWLEDGE*

"This session on 'Knowledge' took place more than two years ago. My recollection of this event is as follows. I reread the articles we had read and the little paper we had made for this session: almost everything was very new and overwhelming to me then. This knowledge of 'Knowledge' now seems quite familiar to me, but then it was the first time I had ever heard about Modes 1 and 2, tacit knowledge, explicit knowledge, transdisciplinarity and so on. I remember reading the articles and having a hard time comprehending them. Back then, it seemed more sensible to develop our own idea about what 'Knowledge' is before reading these texts. For me, it might have been easier thus to understand how the scholarly world explained 'Knowledge'. This would have meant that we would have had a group session (preferably with tutors), discussing and developing our own comprehension of 'Knowledge', then read the texts and then have the RTS only afterwards. Our own understanding of 'Knowledge' would make the scholarly understanding more tangible. But looking back at it now, this does not seem to be of such importance. 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 Luytens).

"The RTS session in which the concepts of Mode 1 and Mode 2 were introduced was very clarifying, not only for me but for the whole research community at Sint-Lucas. The required readings (..)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, a country where we are welcome...? This input also cleared the way to a first scheme of my approach, which still holds good today: it is still 'there' in my current scheme and my current lines of thought. Although the preparation for the session was very intensive and not easy to combine with my other work, the profound reading process proved to be very fruitful, not only for the session itself, in which the preparation appeared to be indispensable, but also in the period after the session, because it enabled me to reach another level of awareness and to develop a discourse in the new domain I was entering. But above all, it was an excellent exercise in self-positioning, like racing to the top of a hill, which enables the wanderer to reward himself with an overview of the whole situation. And this was more than necessary" (Jo Van Den Berghe).

SCHOLARLY CRITICISM I: *STUDYING A PHD THESIS IN DEPTH* (APRIL 2008)

"For this workshop I had chosen to read 'Ramble, Linger, and Gaze' by Katja Grillner. This whole new concept for a PhD thesis opened up my eyes again: the concept of a PhD appeared to be 'designeable'! Could it also be a 'thing' like this? Could it be a designed writing, or a written design, or a designed combination of both? The awareness of the possibilities concerning this matter began to emerge. The meeting between three people who had never met one another in their real lives and a concept that *enabled* the researcher to zoom in on themes otherwise not attainable apparently opened up new doors for my own research, in that – as a consequence – I developed a concept for an exhibition later on that year at Westminster School of Architecture in London. There, I construct-

ed a scale model in which I brought together three of my own designs in a new imaginary city and, by doing so, I intensified the visible traces of their correlation. Altogether, this gave me an overview of my own practice and was an excellent exercise in self-positioning, or, in other words: in positioning my work within the wider landscape of knowledge" (Jo Van Den Berghe).

"While discussing at the workshop (...), it became obvious that there are 'schools of research'. (...). Research in my opinion cannot be (only) an introspection into one's own design (processes). It has to have a purpose beyond the self" (Johan Liekens).

SCHOLARLY CRITICISM II: *RESEARCH BY DESIGN, THEORIES, METHODS, PROJECTS* (AUGUST 2008)
"This was a workshop that I really liked doing. This was in large part due to my colleague, Jo Van Den Berghe, with whom I teamed up: he is a very good (almost poetic) writer and he shares the same passion about architecture and structure. The success of this workshop depends very much on its participants. I can imagine that teaming up with a different partner would give a different outcome of the workshop for me. Crucial elements in this cross-criticism are that the subjects of the paper to be discussed must be of some interest to the reader, and that the quality level of the paper should meet certain standards. I have found it difficult on other occasions to criticize a poor paper because of the social element: it is hard to tell someone that you think there should be much more rewriting. (Of course this is largely a matter of being used to receiving and giving criticism). For this workshop, there was not such a problem, a fact which made it possible to have in-depth discussion."

"I remember that we discussed how certain people critiqued the presentation papers made available 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 one another. This made it more clear to me what I could 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. And the more we deliver and receive critique, the more it will come as second nature and be less threatening" (Laurens Luytens).

"Participation in the workshop 'Research by Design, Theories, Methods and Projects' and some informal conversations with the leaders of this workshop about negotiation and architecture opened up clearer perspectives on my research project" (Johan Liekens).

"The 'How' question... The 'three-in-one-concept' of 1) esoteric language, 2) skills and 3) ethics was very clarifying to me. Also, certain notions like 'fiduciary trust' (Peter Rowe) all of a sudden threw a clear light on things I had been doing in the past, more in particular on things I had been doing in my own practice, and this generated information for the 'forensics' I am going through now. 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; that can be mastered by ourselves through the method and not vice versa" (Jo Van Den Berghe).

SCHOLARLY CRAFT I: *PRODUCING A DISSERTATION* (AUGUST 2008)
"This workshop came at the right time for me. I had already written, with great difficulty, my first article for Reflections (...). (This was my first decent writing in probably 20 years.) And some of my research activities were becoming clear to me. 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 doing the research (e.g. what to bear in mind when doing an interview). Last year I was a promoter for the dissertation of a last year student: I was happy to be able to give her this book as a guide."

"Our preparations for the workshop went smoothly. The book is well written and easy to follow. I found *'The Research Techniques'* very practical to use in my own research. Most of the book helped

me a lot in starting up my research activities as a novice. For me, just reading the first part of the book made the workshop a success already. And it got better when people (...) showed me how they were conducting their own research or writing their articles. (...) I can conclude that this workshop was very interesting for me because I was a novice in writing and in doing research. It was helpful to team up in doing the preparation because we could exchange practical information" (Laurens Luytens).

"This session had the same characteristics and qualities as the Scholarly Criticism sessions. It proved to be a very important input for me in terms of the academic skills. I also appreciate the good advice I received from the tutors with regard to writing my research proposal text, which was a very hard task to fulfil, but which provided in-depth training in the academic skills, and served as a very extended version of the Scholarly Craft I session" (Jo Van Den Berghe).

SCHOLARLY CRAFT II: *NAVIGATING IN VARIOUS KNOWLEDGE LANDSCAPES* (NOVEMBER 2008)
"The book by Linn Mo (...) is more difficult to comprehend than the previous book by Borden and Rüedi Ray. In this case, dividing the 'reading load' (or better, 'comprehension load') by giving individual reading assignments and having each participant present a different chapter to the other participants is a very effective method. It seems to me that the knowledge presented in this book is important for being able to operate on the Mode 1 scene. Of course this book is a dense presentation of a very broad field. I presented a chapter on Natural Science, which I was very familiar with since I had followed some courses on the philosophy of science when I was still a (young) student. So it was not too difficult for me to understand the text and present it. But I can imagine that someone with no previous knowledge of this matter would have had a hard time with it. (...) The workshop itself depended very much on the effort and quality of the participants. I think it was the right choice to make individual reading assignments from the book and to let each participant 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 for me, that was maybe the most important outcome of this workshop."

"The workshop could have lasted longer: more time could have made some discussions possible that might have clarified some elements. I found the presentations very interesting and would have liked to discuss the content some more. I believe there was enough material for an extra session. In conclusion, I believe that the knowledge covered in the workshop is an important part of any PhD education, and I am glad that I participated in this workshop" (Laurens Luytens).

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 and in dialogues, to provide insights beyond what we think we see. Therefore we need joint moments of working on topics that are not our own research topics but are related to them. In this way we can see structures instead of (poetic) content. In my opinion, the workshops (scholarly criticism - scholarly craft) provided a setup for a strategic framework of learning and established strong connections between some of the participants in that respect. For me, these workshops 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 can they not show the respect for academia that they are expecting to receive from academia in return? Why do architects want to communicate only through media that they understand, while they keep proclaiming that they are in search of new universal ways of communication?" (Johan Liekens).

"The whole education package that was presented is very consistent and has helped me in general to have a broader overview of 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" (Johan Liekens).

3. TOWARDS A NEW RESEARCH CULTURE OF DOCTORAL SCHOLARSHIP AT SINT-LUCAS SCHOOL OF ARCHITECTURE

This paper introduced the Sint-Lucas School of Architecture in Brussels and Ghent as an institution, which over a long period of time has been educating successful practitioners in the field of architecture. Even though different individuals on the staff conducted academic research over the years, these persons never built up sufficient 'critical mass' to develop a traditional academic milieu within the institution. Some 10 years ago, the leadership of the school launched a process for building such a proactive milieu for research. It was in this context that the authors were contacted by the leaders of the School, who asked them to contribute to this process.

Early in this process it became clear that a narrow academic perspective on studying architecture would not fit within the broad vision of research that the leadership intended to promote. There was a consensus that various research perspectives should be promoted side by side. While the academic perspective would still be welcome, a new research approach based in practice, namely 'research by design', would be given priority in future developments. This kind of research would more strongly engage the practitioners who have the strongest potential to develop their own field of expertise. While academic research on architecture up to then had most often been based on using the methodological tools borrowed from other academic disciplines, this new mode of research would necessitate the exploration of new tools based on designerly thinking. The challenge within this mode was how to engage in dialogue with other knowledge producers, whether from academia or elsewhere. This view coincided with the statement made by Gibbons and his co-authors that in order to be a qualified researcher in the expanding realm of post-academic research, one must be familiar with the world of the traditional academic principles. A certain apprenticeship in academic research provides various useful generic and transferable skills, all the while addressing the new issues of post-academic research.

The Research Training Sessions that the authors organized and led inspired the prospective PhD students to engage in research by design. Many of those who attended the RTS have also begun to formulate research proposals that will serve as the basis for their future doctoral studies. Some of them have already proved successful in their endeavours and have been awarded research grants from various Belgian national research agencies for pursuing their PhD studies. This group has been involved in peer learning and self-organisation of research educational activities, even after the formal courses ended.

With the support of some of these students, the authors were able to set up a programme of mezzo-level doctoral studies. This mezzo-level programme was devoted to training in scholarly craft and skills for the purpose of engaging in dialogue with other knowledge producers, both inside and outside of academia.

Relying on the feedback from this group of doctoral students, as expressed in the excerpts from their written reports and elsewhere in this text, the authors assume that the autonomous research education unit that they organised in cooperation with the PhD students helped this group to develop some generic and transferable skills, and prepared them in some ways to engage in dialogue on research issues, both in academic contexts and in their professional practice. This group seems to have initiated a new culture of doctoral scholarship at Sint-Lucas. This propitious development has most certainly flourished in response to the visions of "big design" so wisely laid 10 years ago.

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Notes

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[4] The required reading was approximately 120 pages and included articles and chapters of books by, for example, Helga Nowotny, Michael Gibbons, Peter Downton, Bo Dahlbom, Nigel Cross, Linda Groat and David Wang.

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