

The European Quarter of Brussels: From District to Neighbourhood

The difference between Study and Research by Design

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ABSTRACT: Two kinds of investigations are usually carried out in the discipline of architecture: research by design and study. They are often mistaken for one another and the current trend is to call the latter research by design even though it does not technically qualify for it.

In order to illustrate the differences between the two kinds of investigations, a similar question is addressed by means of the two notions. This question relates to the issue of the residential attractiveness of the European District of Brussels for which a genuine study was carried out in 2015.

This analysis demonstrates major discrepancies between study and research by design in terms of framework, generalization, reproducibility and falsification. Yet, beyond those differences, both investigations could be valuable for one another if they were recognized for what they are.

1 INTRODUCTION

Research by design is a new phenomenon in the scientific field of many architecture schools. Evidence of this can be seen in the large number of conferences, publications on research by design but also in the general use of the concept in public and private commissions (e.g. investigations commissioned by various Belgian Bouwmeesters). Yet, if the concept is very popular, it is often used very loosely, as if all assumptions around its meaning and its methods were commonly shared.

There tend to be two main confusions regarding the definition of research by design. On one hand, many scholars are prone to declare that ordinary architectural design is research in itself. Yet, there are major differences between a regular architectural project and research by design in terms of produced knowledge, method, systematics, validation by peer-reviewing, or reproducibility (Archer, 1979). On the other hand, studies commissioned by public or private sponsors are also often stamped under the label research by design. Yet again, most of the time, those studies do not qualify for such a definition for the reasons stated above in the case of architectural projects.

In order to clarify matters, this paper tries to shed light on the major differences between study and research by design. To this end, a recent study on the European Quarter of Brussels will be used as a pretext for questioning the relationship between the two concepts.

This paper is organized into four sub-sections. Firstly, the scope of a study carried out in the European Quarter of Brussels is exposed in terms of mission statement, stakeholders and findings. Secondly, the general definition of the concepts of research by design and study are considered. Thirdly, the differences between the concepts are brought to light through the example of the European Quarter study. Finally, the differences, as well as the commonalities, are summarized in a general conclusion.

2 PRETEXT: A REGULAR STUDY

2.1 Mission statement

The work that serves as a pretext for bringing to light the differences between research by design and study is a regular study that was carried out in Brussels. The aim of this investigation was to apprehend the residential attractiveness of a particular district, the European Quarter, and its possible levers for improvement. This ambition could be summarized as an attempt to transform the district into a neighbourhood.

2.2 Stakeholders

The investigation was commissioned in 2015 by a semi-public organization, the King Baudouin Foundation. The goal of this independent foundation is to improve living conditions for the population in Belgium.

In order to meet the mission statement, a multidisciplinary team was formed. The team comprised experts in architecture and sociologists. It brings together university researchers in architecture (UCL) and an urban studies office (CityTools).

2.3 Findings

The study was divided in three major parts (De Visscher et al., 2015). The first part is a sociological survey of the European Quarter. This work demonstrates a great disparity in the assessment of the neighbourhood between its users and the resident population. Moreover, the quarter is commonly perceived as a Eurocrat ghetto with little social life. This stigmatization attached to the neighbourhood is demonstrated to be largely a question of perception rather than a matter of real data.

The second part is a spatial study. Carried out by a team of architects, this investigation analyses the physical constituents of the area. It explores the strengths and weaknesses of the European Quarter in terms of built and unbuilt spaces. In addition, it brings to light the possible levers for potential action to transform the district.

Finally, through the pooling of the sociological and architectural diagnoses, a series of intervention scenarios are developed. Due to the scope of the study as well as the nature of the commissioner, those scenarios are mainly “soft interventions” oriented.

3 DEFINITIONS

The comprehensive framework of the case study is thereby established. Yet, the purpose of this paper is not to expose the results of this particular study about the European Quarter but rather to use this investigation as an opportunity to highlight the differences between research by design and study.

In order to achieve this, it is important from the outset to define precisely both of the concepts that guide this paper.

3.1 Research by design

According to the Charter of the European Association for Architectural Education (EAAE), architectural research can be defined as an “*original investigation undertaken in order to generate knowledge, insights and understanding based on competences, methods and tools proper to the discipline of architecture. It has its own particular knowledge base, mode, scope, tactics and strategies.*” (Ellefsen et al., 2015)

In the same charter the EAAE stresses the essential role of design for the architectural discipline. Hence, in turn, research by design is defined as “*any kind of inquiry in which design is the substantial constituent*

of the research process. In research by design, the architectural design process forms the pathway through which new insights, knowledge, practices or products come into being. It generates critical inquiry through design work.” (Ellefsen et al., 2015)

On this basis, there are three different ways to comprehend research by design. In an attempt to understand practice-based research in The Humanities, Bruce Archer lists those categories as: research about design, for design or through design (Archer, 1995).

In the first case - research about design -, the inquiries are carried out about the work of a practitioner or a specific architecture office. As such, it can be considered as a monographic investigation. Hence, design is considered in this case as a subject matter rather than a means. The investigation works carried out by the designed based research Royal Melbourne Institute of Technology (RMIT) reside essentially in this category.

In the second case - research for design -, the investigation can be considered as a preliminary work prior to the implementation of a project. It is the analysis phase of the process. Here again, design is regarded as a goal rather than a means.

Finally, research through design exploits architectural design as a means to an end. In some circumstances, knowledge can be unveiled through the *medium of practical action* (Archer, 1995). In this last case, knowledge is produced through the use of methods specific to the architectural discipline.

The latter approach has been elected by the Laboratoire d’Architectures Potentielles (LAPs) to conduct research by design. This research unit seeks to ground the foundations of research by design but also to develop its own methods (Pleixinx, 2012). The LAPs operates in an academic framework, ensuring the critical distance required to formulate scientific evidence.

The LAPs promotes research by design through a combination of two complementary operations. On the one hand, it makes use of the architectural project, whose role is to reveal potential habitats. In this context, habitat is understood as any *artefact* devoted to dwelling, including notions such as territory, city, building, means of transportation and furniture. On the other hand, once those potential habitats are revealed, the method suggested by the LAPs focuses on a classification of those habitats according to their characteristics as well as the conditions in which they can occur. In terms of outcome, this method offers an objective overall picture of the possible habitats in a given context.

3.2 Study

On the other hand, a study can be understood as a “*detailed investigation and analysis of a subject or situation*” (Stevenson, 2010). Hence, a study is defined

as a substantial amount of work accomplished for a specific purpose within a precise framework.

Based on this definition, an analogy can be drawn between the notion of study and architectural design. In addition to a similar *modus operandi*, both develop singular investigations based on personal methods in order to work on a specific assignment. Those methods are largely tacit since their communication is not relevant to the findings of the project or the study.

3.3 Comparison

The process of an architectural project could be summarized in four iterative stages: analysis, proposition, spatial implementation and communication. On the basis of the above, a study process could be summed up according to the exact same scheme.

Firstly, the role of the analysis is to understand thoroughly the question and the aim of the study and its various implications. On the basis of this analysis, a series of hypotheses or propositions can be set forth. This suggests a particular direction - or logic - for the study. Thirdly, this logic is implemented, giving consistency to the study. Yet, it is quite clear that this process is far from being linear. On the contrary, in this process, some investigations will lead nowhere and steps backwards are often necessary. Hence, the role of the last phase - communication - is to trace back a linear and coherent path to communicate the study from its original question to its ultimate findings.

Therefore, the result of a study, similarly to that of an architectural project, is a vertical development where steps follow each other in a coherent order from initial question to the outcomes.

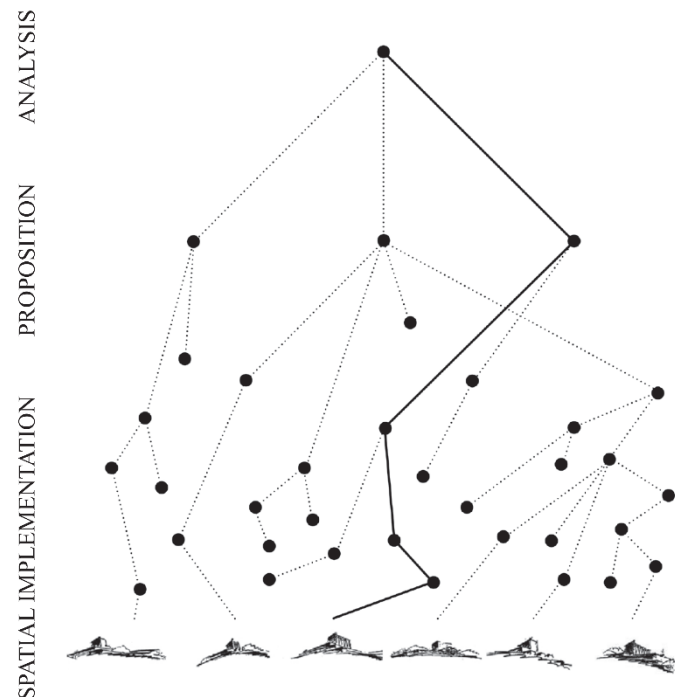


Figure 1. The result of a study

Inversely, research by design yields different results. From a given question, it undertakes a systematic exploration of the possible propositions. Its goal is to provide a general overview of the situation. Hence, instead of a vertical sequence, research by design can be described as producing a horizontal scope.

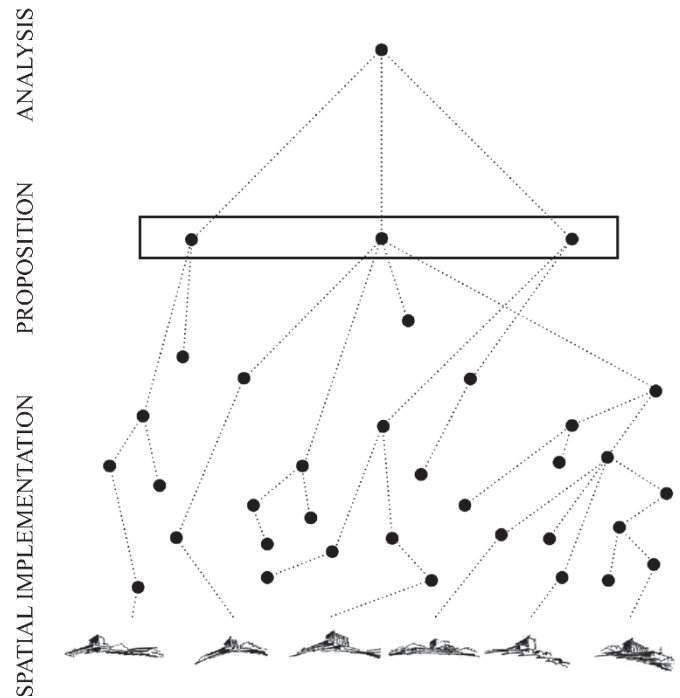


Figure 2. The result of research by design

4 DIFFERENCES

This reasoning will be made more explicit here with the case of the study carried out in the European Quarter of Brussels.

The European Quarter is a district set east of the historic centre between two major parks, the park Royal and the park Cinquantenaire. This territory represents the perimeter on which the question of the residential attractiveness is investigated.



Figure 3. The European Quarter of Brussels

The differences between research by design and study are explored in the dissimilar outputs they deliver when treating the question of residential attractiveness. This comparison was made possible thanks to the disinterested environment provided by the university. Hence, coupled with the actual study commissioned on the European Quarter, the team of architects pursued the issue of residential attractiveness from the academic standpoint of research by design.

4.1 *Research by design*

As stated above, the LAPs lists two complementary operations in order to carry out research by design: revealing possible logics of habitat and ordering those logics according to their inherent attributes.

4.1.1 *Revealing possible logics of habitat*

On the basis of this strategy, various logics of habitat can be brought to light

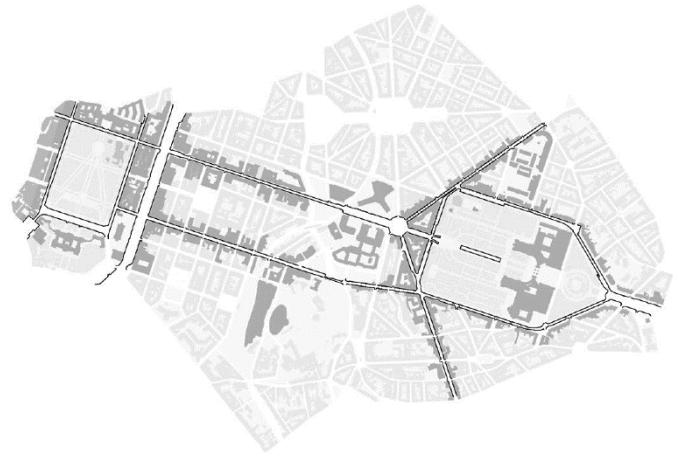
The first underlying logic would be to build on the existing major networks of the district. Those are the institutional road axis of the city. Hence this logic could be called “the city as a program”. And effectively, the main buildings attached to this logic are essentially institutional ones (e.g. the European and the Belgian parliament, the European Commission and the European Council buildings, the royal palace ...). Furthermore, the parks that are articulated to this logic are very formal and give an impression of carefully orchestrated order, once again referring to an institutional character.

The second logic that could be built on is a series of features prior to the erection of the city such as topography and natural elements. As was the case with the first logic, a sequence of networks in the neighbourhood are organised according to this logic. A number of buildings and parks are also fabricated in relation to this particular logic. They develop in a more organic manner along the Maelbeek valley, a small river that once ran through the area. According to the nature of those elements, this logic could be entitled “the city as a natural framework”.

Finally, a third logic organizing habitat in the neighbourhood would be the one arranged around the leftovers, the side-lined spaces of the city. A logic that would fit in the cracks of the two preceding structures. In that regard, the ancient Quartier Léopold is very interesting since it assembles numerous spatial bodies responding to this logic. Once again those can be categorized in road networks, buildings and green spaces.

As stated before, there might be other possible logics organizing habitat in the neighbourhood. Research by design should challenge those three logics in order to uncover them all. For the sake of this paper, this array will be regarded as complete.

LOGIC 1
the city as program



LOGIC 2
the city as a natural framework



LOGIC 3
the city of the sidelined spaces

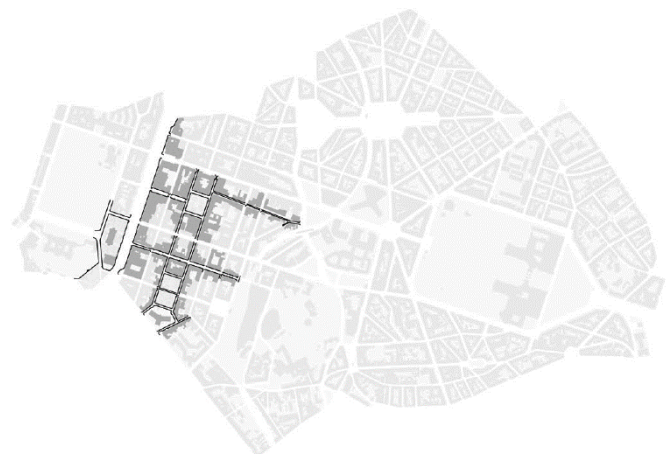


Figure 4. Logics of habitat

4.1.2 Ordering the unveiled logics

Once the array of logics has been revealed, the second operation of research by design would be to order them according to their attributes in terms of character as well as their implementation conditions. In order to do this, each logic is tested according to the kind of interventions it produces. Hence, within each logic, a series of fictitious projects are drawn. In addition to this, the real projects in the area are listed and analysed. Together, those two types of projects help understanding the nature of the possible logics of habitat in the European District.

The first logic - the city as program - generates larger-scale projects of a highly institutional nature. It is the case among fictitious projects. Those include the covering of the inner ring road of Brussels with a market hall bridging the district to the old city centre, the creation of a gigantic winter garden on the mail running in front of the European parliament to enhance some kind of public life in a usually deserted space ... The same nature of interventions can be found in the actual projects carried out in some parts of the district. It is the case for instance with the PUL (*Projet Urbain Loi*) led by Christian de Portzamparc, or the development project for the Schuman roundabout by Xaveer De Geyter facing the Park Cinquante-naire. All of those institutional projects require large amounts of funding, extended political support, and a considerable period of time.

The second logic - the city as a natural framework - relies on the pre-existing natural infrastructures of the city. Among fictitious projects, a new park system could be imagined, running along the ancient Maelbeek river bed. Not only would such an intervention create an overall structure for the district but it would also set forth a series of opportunities for local projects. Those projects are built on the natural structure of the valley. Once again, real-life projects can also be identified as referring directly to this logic. It is the case with numerous small to medium-scale housing projects as well as the redevelopment of the general accesses to park Léopold, an ancient landscape park set in the heart of the district, in the shadow of the European parliament. By analysing those various designs, the second logic can be qualified as more organic since it refers in the first place to what existed prior to the city. In terms of implementation, the necessary resources are less considerable both in terms of means and stakeholders.

The third logic - the city of the side-lined spaces - is based on scattered opportunities and specific local circumstances of the district. A series of fictitious projects were designed for various neglected public spaces (streets and squares) as well as buildings. Once again, an investigation into real cases provides information about the nature of this third logic. In this case, the interventional means and stakeholders are more flexible and the timeframes are reduced. Most projects are conducted by local associations.

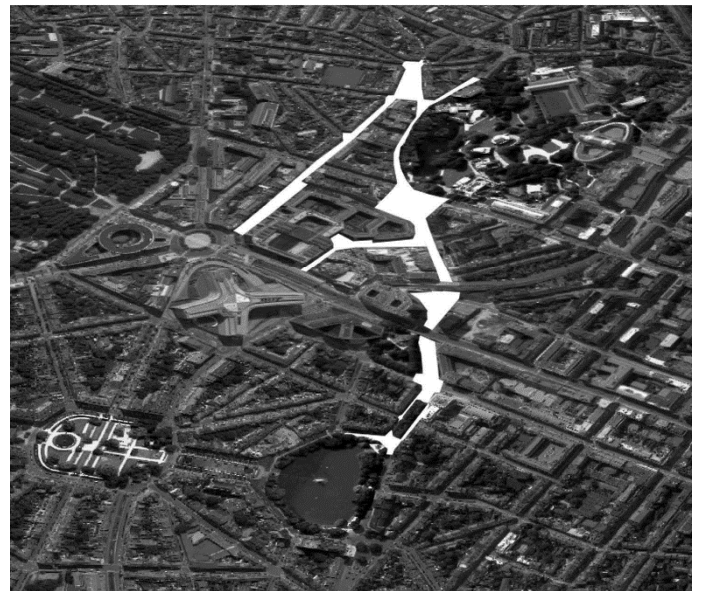
LOGIC 1

winter garden on the European parliament mail



LOGIC 2

a network of parks along the Maelbeek valley



LOGIC 3

soft strategies for the Montoyer street



Figure 5. Illustrations of the logics of habitat

4.1.3 Overall picture of the possible habitats

As illustrated above, the research by design process carries out two kinds of operations: identifying the possible logics of habitat and classifying those logics according to the intervention they produce.

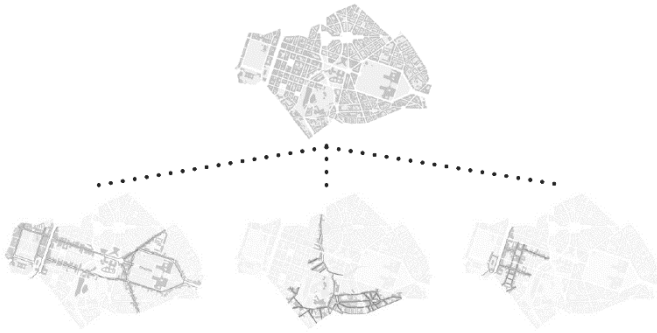


Figure 6. An array of possible logics of habitat

Those two operations generate a comprehensive overview of a specific situation. Hence, in our particular case, the knowledge of the built and unbuilt structures of the European Quarter and its conditions for future evolutions has been brought to light by architectural design's specific means.

4.2 Study

The study, on the other hand, adopted a very different position. While research by design produces an array of potential logics of habitat, a regular study pursues a particular logic in order to produce a specific intervention. This choice is directed by several factors: the commissioner and the nature of the study (global, local, prospective vision ...), the practical and financial feasibility, the personality and the expertise of the author...

4.2.1 The European Quarter study

In the case of the European Quarter study, the nature of the commissioner as well as the available means led the team to work on design schemes relating to the third logic.

As previously stated in the introduction, a socio-logical as well as a spatial analysis of the district was carried out prior to the design phase. Based on this in-depth analysis of the district, a series of neglected spaces and buildings were selected to be worked on. For each one, a drawn proposal was produced by the means of architectural design. Then, in order to evaluate and communicate the implementation of the designs, each scheme was summarized on a project sheet listing the location of the intervention, its socio-demographic dynamics as well as the potential stakeholders and the means to implement the design. Finally, in order to communicate the findings of the study, a set of postcards was produced representing each of the interventions. These are treated as ancient

coloured postcards as if the future of the district would somehow reflect the bright past of the neighbourhood.



Figure 7. Communicating the findings through a set of coloured postcards

4.2.2 A specific strategy

As the foregoing clearly shows in the case of the European Quarter, the principles of the commissioned study differ significantly from those of the research by design carried out in the University.

The study produces its own *modus operandi* in terms of method and communication in order to generate findings. Similarly to an architectural project, it is a subjective investigation taken from the initial demand. Ultimately, the study tries to answer a specific request and its value can only be judged by the satisfaction of the commissioner. Hence, whereas research by design was trying to probe the potential of a specific situation, producing an array of possible logics, the study provides the commissioner with a specific solution for a particular situation.

5 CONCLUSION

The analysis of this particular case study helps underlining the main differences between research by (through) design and study. To conclude, those differences can be summarized as follows.

Firstly, the two notions differ in terms of framework. On one hand, to be conducted properly, research by design should not be affected by the contingencies of the commission. It is preferably carried out in the disinterested environment usually provided in universities. On the other hand, the study is accomplished within the limits of a specific assignment. Such studies are usually carried out in the framework of a "studies office".

Secondly, the concepts diverge in terms of generalization. Indeed, research by design proffers a holistic approach of a specific situation which can hence be helpful for orienting strategic visions of development. On the contrary, a study focuses on a specific and pragmatic proposal. It can thus serve as a lever for implementing particular projects. As unambiguously stated by Jeremy Till, research needs to be systematic while study (or project) needs to be thorough (Till, 2008).

Thirdly, research by design and study are different regarding reproducibility and communicability. Indeed, by definition, two operations are required in the case of research by design: unveiling a series of potential habitats and cataloguing them. Those operations try to be as exhaustive as possible. Henceforth, not only does it permit, but it requires a critical peer-reviewing to be as complete as possible. On the other hand, the search for reproducibility is important in the case of a study in order to communicate the findings in the most coherent fashion.

Fourthly, while the cumulative nature of the process is a fundamental feature of research by design in order to produce a critical array of potential habitats, this feature does not seem necessary for a study.

Finally, the two notions diverge in terms of falsification. By their very nature, the findings as well as the method of research need to be tested rigorously in order to verify the consistency of the knowledge brought to light. In the case of a regular study, no subsequent verification is needed when the findings meet the initial request as well as the satisfaction of the commissioner.

In view of the discrepancies highlighted above, the two notions should be adopted for very different purposes. They afford the opportunity to formulate innovative groups of stakeholders to address issues at various scales. Therefore, a careful distinction should be made between research by design and study since a lot of work labelled as research by design should probably go under the name study. Once the two notions can clearly be distinguished, their benefits will be more acute and hence of greater value for one another. To this end, architecture academics and practitioner should find some common ground instead of ignoring or using improperly each other's work.

REFERENCES

- Archer, B. 1979. Design as a discipline. *Design Studies*, 1, 17-20.
- Archer, B. 1995. The Nature of Research. *Co-design, interdisciplinary journal of design*, 6-13.
- Avissar, I., Loeckx, A., Corijn, E., Mabilde, J., Persyn, F., Smets, B. & Vanempten, E. 2015. Metropolitan Landscapes, Espace ouvert, base de développement urbain, Merelbeke, Vlaams Bouwmeester.
- Borgdorff, H. 2012. *The Conflict of the Faculties: Perspectives on Artistic Research and Academia*, Leiden University Press.

- De Visscher, J.-P., Hemeleers, N., Ledent, G., Berger, M. & Crahay, A. 2015. The European Quarter of Brussels: From District to Neighbourhood. Bruxelles.
- Ellefsen, K. O., Van Cleempoel, K. & Harder, E. 2015. *Research by Design: EAAE 2015*, Copenhagen, European Association for Architectural Education.
- Frayling, C. 1993. Research in Art and Design. *Royal College of Art Research Papers*, 1.
- Masson, O. & Ledent, G. 2012. Architectural Design Tested by Research: Benefits for Education. Université Catholique de Louvain.
- Nilsson, F. 2013. Making, Thinking, Knowing Architecture. Notes on Architecture as a Making Discipline and Material Practice. *When Architects and Designers Write / Draw / Building Material?*, 126-147.
- Pleixinx, R. 2012. Le champ des possibles. *Lieux Dits*, 1, 17-22.
- Sequeira, M. For from design and through design and for design are all things. Fourth International Conference on Architectural Research by Design ARbD'14, 2014 Lisbon. 77-93.
- Stevenson, A. 2010. *Oxford Dictionary of English*, OUP Oxford.
- Till, J. 2008. Three Myths and One Model. *Building Material* 17, 4-10.
- Verbeke, J., 2013. This is Research by Design. LUCA, Sint-Lucas School of Architecture, Brussels-Ghent.
- Verhaert, I., Broes, T., De Langhe, K., Roose, H., Van Aerschot, W. & Vanobbergen, T. 2012. Ontwerpend onderzoek als methodiek.