

The architect and the social sciences

When doing design research, the methods we choose to use have a big impact on the outcome. When the outcome is a building – with its own impact on the users, the surroundings and even on society – it should be well considered how it was created through research. How do we choose our methods? This depends on the person (or people) conducting the research, on their personal and educational background. At the faculty of Architecture the different chairs teach the students different sets of methods. It is interesting to consider that architecture used to be a non-scientific discipline at the university of applied science, where science or research itself was not part of the education. The discipline was more strictly defined, while the current architectural practice has many definitions. Most importantly, it has become a scientific discipline, with its own methodologies. Other than in most disciplines however, the education in architecture is still very *monodisciplinary*. As M. M. Mendes and T. Sá state in their recent essay on interdisciplinary relations between social sciences and architecture: “[in architectural education] *there has been a trend in recent years towards pushing complementary subjects such as social science and others to one side and continuing to guide students towards the worship of impactful, architectural works and not preparing them for didactical, practical, experimental and interdisciplinary briefs*”.¹ In my opinion those complementary subjects – social disciplines in particular – are lacking in the architectural education. I think it is worth exploring what it can bring us to work less monodisciplinary and more cross-, multi-, inter- and transdisciplinary, *especially* in the field of architecture where academic research is less evidently a part of the practice. In analysing my own research methods however, I have become aware of my limitations regarding the methodologies that I can use as an architecture student. When I started using certain sociological methods for my graduation research, I thought I could use those methods without studying them first. When I got further into the process, I learned that I cannot use them as a social scientist would, so I would have to find out what it means to use sociological methods as an architect.

The underlying concern to this personal aspiration of an interdisciplinary/sociological view on architecture is about our knowledge of the people we design for as architects. Simply put, I want to know whom I am designing for and what they want from my design. After all – perfectly stated in the words of Ray Lucas in his book about architectural research – “*architecture is constructed to serve the needs of people*”.² Social sciences can help us understand people and their needs and preferences. I am confident that an architect with knowledge of social sciences and the capability of using sociological research methods will be able to make higher quality designs. I have pursued this ambition before in my studies, by taking extracurricular courses on sociology. Hence also my graduation project and choice of studio are partly shaped by this interest. My graduation project is carried out within the graduation studio of Veldacademie; a research and educational organization outside of – but connected to – the faculty of Architecture. At Veldacademie, the general approach is to connect architecture and sociology with contemporary urban issues. The students (from i.e. architecture, sociology, psychology and pedagogical science) are provided with multi- and cross-disciplinary working methods and the possibility to use these methods in their individual projects. For my research and design project, I was encouraged to use sociological methods to accurately determine the housing needs and preferences of the target group for my design – which was the initial research question of my project. Although we were familiarized with sociological methods and interdisciplinary working in the first phase of the project, I have come upon some challenges and difficulties regarding the use of these methods. Therefore I will explore the following question for this methodology paper: **How can the architect-researcher use social science to learn about the future user of the architectural design?**

Firstly it is important to explain the difference between *architectural* research methods and *social* research methods, otherwise there is no question. Certain methods are often used within certain disciplines: interviewing, self-administrative questionnaires, structured observation, content analysis, data analysis, participant observation, and focus groups are typical examples of science methods, while cultural-historical analysis, case studies, drawing and diagrams are often used in architectural research.³ Behind the list of methods used within the separate disciplines, there are research approaches, research philosophies, *epistemes* and other frameworks. “*Architecture measures, works and interprets space in a way close to the poetic knowledge of art, while Sociology, in the scope of social sciences, treads the path of scientific knowledge*” as Fernando Bagulho states in his essay “If It’s Space, It’s Social” (2017).⁴ Thus how we interpret space depends on our scientific background or discipline. Another difference in methodology is named by Lucas: “*architecture is an interventionist discipline. This runs counter to social disciplines (...) which have a bias towards observation rather than making any direct change to a context*”.⁵ Therefore the research goal may differ, which influences the research methods. Also a different research subject could lead to a different method; while architectural research is more likely to look at the typology of a space, its function or the way it is experienced, socio-scientific research is more likely to look at its meaning in people’s lives or the way people behave in the space. This last research subject however, is also named as an architectural subject by Tom Avermaete in his essay on architectural epistemes, (the *praxeology*-episteme in this case).⁶ Seemingly the behavioural aspect of space plus people – as part of either sociological, psychological or anthropological science – is a common ground for the disciplines. The methods of the behavioural sciences are however not the only ones architectural research can draw from, as I will discuss later on in this paper.

To further explore the challenges and possibilities of using social research methods in architecture from a more personal experience, I will look at my own methodological process. The research on my target group and their housing preferences, that I am conducting for my project, consists of three parts. First a literature study, to get up to speed on the existing research on this topic. I had done literature research before in my studies, but the research subject was fairly new to me. Second was an analysis of precedents: I gathered housing projects that were built with the same target group in mind and by drawing and deduction I could reach conclusions about themes that were also named in the existing literature. Precedent-analysis is a very common method at the start of design projects at the faculty of Architecture, therefore I was very familiar with it. The third, last, and not yet executed part will be interviewing a small number of people who are part of the target group, to verify my literature findings and inquire their opinion on the precedents. Interviews, in any form, are unfamiliar territory for me, as I have never done them before in my studies. With these – mostly social science – methods I hope to obtain a precise view on the project that is substantiated by both the human and architectural aspects of dwelling design. Furthermore these methods ensure that the framework for the design is based on a real existing socio-spatial situation: the research subject is a defined target group in a defined area (Rotterdam-South) instead of hypothetical target groups, which is normally the case in the design studios.

Even though the graduation project is an exercise, a shortened version of actual architectural research and design, I can imagine the difficulties I encountered during the process are similar. While doing the literature research, the question soon arose whether I would have sufficient comprehension of the sociological field in order to understand and apply the theories described in the literature. This issue occurred due to the ambiguous relation between myself as architectural researcher and the social sciences. This relation is at the basis of my methodological research question and is frequently discussed in various literature. I will address three different perspectives on this relation, based on the literature findings.

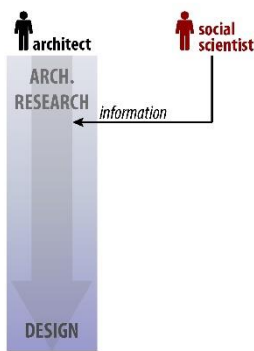


Figure 1a: social scientist as consultant

I The social scientist as consultant in the design process (Fig. 1a)

In a recent article about 'social design', Lubomir Popov and Gary David state that the architect is one of the *non-sociologists* that work on buildings without fully understanding the social entity of the building. They argue that there should be one step between "the need for a new building and the employment of an architectural service", one that requires the consultation of a sociologist.⁷ This scientist will then *design* the social entity of the building, instead of an architect claiming to do the same. From this view the architect does not engage in the social science, but merely consults the social scientist, who becomes parts of the design process. Also Ronald Hamel adopts this position in his paper on the benefit of environmental psychology in design processes.⁸ He wonders why architects consult construction and technique specialists, but do not consult experts on functionality and behaviour and experience

of users. He states that an environmental psychology specialist could contribute substantially to both the phase of problem analysis and to the 'solution' or design phase, because we as architects are not trained to recognise the possible socially negative effects of our designs. Hamel even suggests that an environmental psychologist alone could do the analysis of the target group, instead of the architect. Lucas on the other hand places a critical note by stating that when social scientists are treated merely as resource they have less reason to contribute, and therefore a *collaboration* would better suit the research.⁹



Figure 1b: multidisciplinary research

II The architect in collaboration with the social scientist multi- and interdisciplinary (resp. Fig. 1b & 1c)

Conducting research together with a social scientist can be multidisciplinary or interdisciplinary. For the difference between the two I refer to the following text by Alexander Refsum Jensenius:¹⁰

- Intradisciplinary: working within a single discipline.
- Crossdisciplinary: viewing one discipline from the perspective of another.
- **Multidisciplinary**: people from different disciplines working together, each drawing on their disciplinary knowledge.
- **Interdisciplinary**: integrating knowledge and methods from different disciplines, using a real synthesis of approaches.
- Transdisciplinary: creating a unity of intellectual frameworks beyond the disciplinary perspectives.



Figure 1c: interdisciplinary research

Lucas notes that for both approaches an overlapping field of study is needed for collaboration, and that concerns shared by the architectural and social discipline are mostly about the urban realm.¹¹

Avermaete describes an example of multidisciplinary research done by architects, sociologists and urbanists in 1969 aiming for the reduction of "social and spatial injustice".¹² They each applied their professional skills and abilities through public debates and interviews to learn about the urban problems of Brussels.

Interdisciplinary research is likely to be the most difficult expression of the relation between the architect and the social scientist. Lucas states both disciplines need to understand each other and a common language is needed. The methods also have to be familiar to both disciplines as they will conduct them together.

III The architect as social scientist (cross-disciplinary) (Fig. 1d)

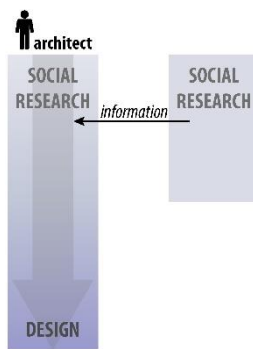


Figure 1d: architect as social scientist

Cross-disciplinary research in the case of architectural social science can imply 1) using existing social research results, theories or literature, 2) using social research methods, or both. The social scientist plays no part in the research.

Adam Jasper makes a case for cross-disciplinary exchange between anthropological and architectural research in his article *Anthropology and architecture: a misplaced conversation*.¹³ He says that “*anthropology is particularly well equipped to study everyday transactions*” and could therefore contribute to the understanding of the target group and their housing preferences.¹⁴

Sociological research on demographic groups and their housing preferences has been conducted over the years by the national government, by housing market agencies and by urban development firms. Methods like data gathering through surveys, analysis of housing mobility and in-depth interviews are used to make statements about how people want to dwell – including the preferred architecture.¹⁵ In a research report on housing preferences from 25 years ago, it is stated that architects and other designers refuse to use the outcome of socio-scientific research in their design process, because it is supposedly ‘stating the obvious’, ‘unrealistic’ and ‘too conservative’.¹⁶ Only indirectly – through the municipality or client who reads the research reports – does the outcome influence the architect and his design. The author of the report argues that other types of research would better serve the architect; for example typological housing research.

Lucas remarks in this context that using literature of another discipline can be very difficult and time-consuming: “*the primary concern is the difference in language and reference points between one discipline and another [...] and you may need to do a great amount of background reading before you start*”.¹⁷ Hamel adds that most scientific research is concentrated on one variable, leaving out all other influences. This makes it difficult to apply the research outcome in real urban or architectural situations.¹⁸

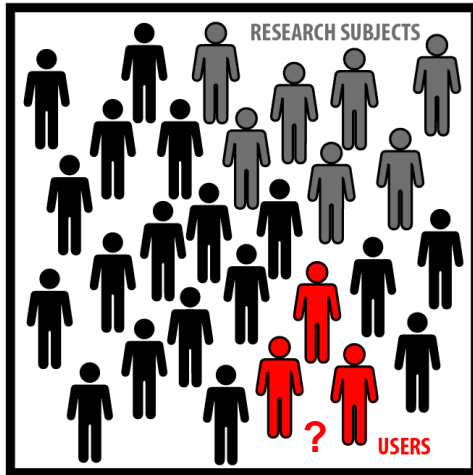
In the second category of cross-disciplinary research the architect uses research methods from i.a. sociology, anthropology or psychology. Linda Groat names in her chapter in *Architectural Research Methods* ethnography as an interesting qualitative approach to architectural research, because it also looks at site-specific settings. Observation is the “*primary mode of data collection*” and could for example be used for analysis of the design site or target group.¹⁹

As mentioned before in this paper, behavioural science – within the praxeology episteme – is a common ground for architecture and social sciences. Avermaete names in his ‘lecture notes’ *Architecture and Its Epistemes* multiple architects who have studied the relation between architectural space and human behaviour.²⁰ He elaborates further on this matter in his essay *The Architect and the Public* where he explains how groups of architects wanted to take the “*everyday dwelling habits and modern patterns of living*” as guiding principles for architectural design.²¹

An example of using both existing social research and social research methods, can be found in the study of David Greenwood and Oliver Jones, two professors from the field of architecture. They did a study seven years ago within the discipline of architecture, drawing upon theories and methods from cognitive psychology (i.e. surveys, experiments and eye-tracking), saying “*it demonstrates how such methods can assist better understanding of human-environment interaction*”.²² Their study and research question was very specific and therefore they could precisely look into the aspects of psychological theory they needed. Also the goal of the research was of a more social-scientific nature, as they wanted to reach scientific conclusions rather than input for a future architectural design.

Social research and target group analysis

In order to formulate an answer to the research question, the previously described literature findings have to be linked to the issue of 'the future user' – being part of a target group. I want to draw attention to the difference between architectural social research on a defined target group and more general



TARGET GROUP

Figure 1: Distinction between target group, research subjects and future users

architectural social research. In the methodological examples described above, the approach was to either learn about social aspects in architectural space in general, or to learn about certain groups in certain areas. In the case of target group analysis – including the future user – the last approach is more suitable. However, there is an issue concerning the distinction between the target group, the research subjects and the future users. In research on their housing preferences, aiming to contribute to design decisions of the architect, the future user is in most cases unknown at the time of the design. The research – and the design – is therefore done based on a target group of people, typologically grouped by certain characteristics. From this target group, a set of research subjects is selected as representatives of the group (See Figure 2). Using sociological methods for target group analysis and research on housing preferences would by the definition of sociology mean that

a group of people is studied, and not individuals. However, every person *dwells* differently and can therefore not be represented by someone else. In the current era of individualisation of society, an increasing amount of 'typologies' of people will result in more diverse housing preferences.²³ This leads to an interesting question: would it be better to study representatives of the target group using sociological methods, or to study behaviour, use and experience of spaces in general using environmental and behavioural psychology methods? I think the answer to this question lies in the possibilities of participatory design. The suggested gap between the actual future user, the target group and the general user could be filled by making the actual future user part of the design process. This is definitely not possible in every design project, but we should not neglect the capabilities of the user himself by seeing the architect as 'master-architect' who is an 'independent artistic personality' and all-knowing about the use of spaces.²⁴

Reflecting on the literature findings, I would state that the architect-researcher should be very well aware of his own knowledge and capability. If he acts as social researcher, a devotion to the social sciences is needed. He needs to achieve sufficient comprehension of the discipline he is using, even though it is very time-consuming to get there. However, there are many arguments opposed to presuming that the architect can act as social scientist and use social research methods. I am more inclined to argue for the collaboration between architect and social scientist. The different disciplines – in particular sociology, anthropology, environmental and behavioural psychology – can contribute in many ways to the architectural research and design process. Not only can different and important subjects be researched than is normally the case in architectural research, also the overlapping subjects can be studied in a multi- or interdisciplinary way, resulting in surprising outcomes. This collaboration has to be well organised and would be served best with a common goal and specific research question. Nonetheless, the architect could also profit from social sciences in the way that it could make you a better architect. More knowledge of existing social research, or even just a different view on architecture from a different discipline, can be rewarding, as it people whom we design for.

Notes

- ¹ Mendes and Sá (2017, p. 40)
- ² Lucas (2016, p. 15)
- ³ Bryman (2016) and Lucas (2016)
- ⁴ Bagulho (2017, p. 23)
- ⁵ Lucas (2016, p. 65)
- ⁶ Avermaete (2018, p. 5)
- ⁷ Popov and David (2017, p. 16)
- ⁸ Hamel (2009)
- ⁹ Lucas (2016)
- ¹⁰ Jensenius (12-03-2012), based on Stember (1991)
- ¹¹ Lucas (2016)
- ¹² Avermaete (2010, p. 56)
- ¹³ Jasper (2017)
- ¹⁴ Jasper (2017, p. 2)
- ¹⁵ Hoojmeijer (1994)
- ¹⁶ de Vreeze (1994)
- ¹⁷ Lucas (2016, p. 61)
- ¹⁸ Hamel (2009)
- ¹⁹ Groat (2013, p. 225)
- ²⁰ Avermaete (2018)
- ²¹ Avermaete (2010, p. 51)
- ²² Greenwood and Jones (2016, p. 65)
- ²³ Tilman (2007)
- ²⁴ Avermaete (2010)

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