

RESEARCH IN  
LANDSCAPE  
ARCHITECTURE  
METHODS AND  
METHODOLOGY  
EDITED BY ADRI VAN DEN BRINK,  
DIEDRICH BRUNS, HILDE TOBI AND SIMON BELL

**Edited by Adri van den Brink,  
Diedrich Bruns, Hilde Tobi and  
Simon Bell**

# **Research in Landscape Architecture**

**Methods and methodology**

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# Research in Landscape Architecture

Defining a research question, describing why it needs to be answered and explaining how methods are selected and applied are challenging tasks for anyone embarking on academic research within the field of landscape architecture. Whether you are an early career researcher or a senior academic, it is essential to draw meaningful conclusions and robust answers to research questions.

*Research in Landscape Architecture* provides guidance on the rationales needed for selecting methods and offers direction to help to frame and design academic research within the discipline. Over the last couple of decades the traditional orientation in landscape architecture as a field of professional practice has gradually been complemented by a growing focus on research. This book will help you to develop the connections between research, teaching and practice, to help you to build a common framework of theory and research methods.

Bringing together contributions from landscape architects across the world, this book covers a broad range of research methodologies and examples to help you conduct research successfully. Also included is a study in which the editors discuss the most important priorities for the research within the discipline over the coming years. This book will provide a definitive path to developing research within landscape architecture.

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Landscape architecture is a potentially powerful profession and discipline: a field poised to transform the planet for the better. This possibility will only be realized through a more robust research agenda. The authors of *Research in Landscape Architecture* have produced just such a framework. They present a helpful, thoughtful roadmap for landscape architecture scholars.

— Frederick Steiner, Dean and Paley Professor, School of Design, University of Pennsylvania, USA

As a practice-led discipline, landscape architecture faces a challenge when trying to impose methodology on a somewhat theory-resistant subject. This new book presents cases of landscape architecture research in their methodical context. We learn how landscape architecture research questions are formulated and how evidence for answering them can be found. We live in an era of ever increasing complexity on the one hand and strong specialisation on the other. Where to position the holistic perspective of this domain? This book will give valuable orientation for anybody looking for systematic knowledge production in landscape architecture. It will inspire especially early-career researchers.

— Ellen Fetzer, Nürtingen-Geislingen University, Germany, International Master of Landscape Architecture (IMLA)

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# Introduction

Adri van den Brink, Diedrich Bruns, Simon Bell and Hilde Tobi

## THE GENESIS OF THE BOOK

Landscape architecture is a discipline – or a disciplinary field – which developed from a very practical basis in park and garden design. The name was coined in the 19th century when it became a profession along with that of architecture. Landscape architects were originally trained as pupils or apprentices to established practitioners, as was common for many professions. The ideas and theories which the original practitioners applied derived from a range of sources such as architecture, gardening, engineering, agronomy and dendrology. Formal education in universities or colleges of higher education only started in the early 20th century. The first landscape architecture programme in the USA was founded in 1900 at Harvard University, followed in Europe at the Norwegian Agricultural University at Aas near Oslo in 1919, the Technical University of Berlin Germany in 1929, the University of Reading in the UK in 1932, the University of Lisbon in Portugal in 1942 and Wageningen University in the Netherlands in 1948, and other institutions followed. The teachers of the early programmes were a mix of horticulturalists, dendrologists, architects, agronomists and engineers, perhaps with some other disciplines, depending on the character of the institution. Studio courses were interspersed with lectures on scientific subjects along with practical work. Studio tutors often came from offices and many professors had offices themselves so there was a strong connection between theory and practice. In the second half of the 20th century there was a growth in the number of schools, in the range of work undertaken by the profession and in the professional status of landscape architects. The original multi-disciplinary character of the field continued to expand and specialisations gradually developed. However, until recently there was little in the way of academic research taking place which could be considered as strictly belonging to landscape architecture. Professors with doctorates tended to obtain these in associated or neighbouring subject fields and it is still the case that in a number of places it is difficult to study for a doctoral degree in landscape architecture.

Of course, all landscape architects are familiar with the idea of carrying out research and many, whether in offices or universities, undertake projects commissioned by various clients which have a research component. Equally, all planning or design projects need some research, for example into the history of a site, using methods such as archival study or the dendrological analysis of ancient trees. This kind of research is important and it familiarises practitioners with a range of basic research skills but it is different from the kind of academic research undertaken in many other disciplines such as natural or social sciences, humanities, art history and the like. Perhaps it takes a special kind of

person to move away from the world of site design and the satisfaction of seeing a project built and maturing over time, serving people and conserving the environment towards the laboratory or library in order to carry out research which will not directly result in concrete plans or designs. We do not suggest that a landscape architect should be either a planner/designer or a researcher – far from it, and many combine both aspects. Be that as it may (and we will explore the nature of academic research in comparison with project-based research in Chapter 1) there is a desperate need for much more research in landscape architecture to equip the profession with a solid evidential base for its practice, to help it to deal with many of the challenges facing society and the environment, and in order to hold its own in the competitive academic world, to name but three compelling reasons.

The multi-disciplinary origins of landscape architecture and the diverse range of institutions where it is taught have persisted and this is what characterises landscape architecture: concurrent diversity. It tends not to be a field where research can excavate deeply into a narrow seam in the way that much scientific, art and humanities research can – focusing on a single gene, the work of a single author or a narrow historic period. Instead, landscape architecture research must keep its feet firmly on the ground and its head out of the clouds for the very simple reason that landscape architects want new knowledge in order to solve complex problems. Indeed, owing to the interaction between the physical environment and people, which is essentially what landscape architecture concerns, problems frequently, if not always, involve research both on people's surroundings and on the people together (and possibly some further dimensions).

As research within landscape architecture has developed it has tended to borrow shamelessly from methods developed and tested in many other fields. In 2011 the European Council of Landscape Architecture Schools (ECLAS) published an edited volume entitled 'Exploring the Boundaries of Landscape Architecture' (Bell et al. 2011) in which a range of experts in some of the 'neighbouring disciplines' summarised a number of key theoretical foundations and research methods used in each of these subject fields. ECLAS has also carried out some surveys to see how much academic research is undertaken across Europe within university departments and using which methods (Clewing and Jørgensen 2006; Bell et al. 2010; Fetzer 2011; see also van den Brink and Bruns 2014). The results tend to show that a diversity of subjects are studied and many methods are used but that it is very difficult to identify any methods which can strictly be said to belong solely to landscape architecture. Frequently, mixed methods are used, selected from a kind of *à la carte* menu drawn from the wide range of neighbouring disciplines. So, to contrast the deep enquiry in a narrow seam, much landscape architecture academic, doctoral or commissioned research tends to look broadly at a problem from many angles but cannot (and often does not need to) dig so deeply into them.

In its efforts to develop and strengthen landscape architecture as a discipline (or disciplinary field), and as a result of surveys such as those noted above, ECLAS aims to improve the understanding of the character and nature of landscape architecture research, to raise awareness and to increase the understanding of the specific nature of landscape architecture research and how to approach research design and methodological development among academics and professionals, teachers and students. This book is an attempt to capture and present some key aspects which ECLAS believes are fundamentally important for anyone coming into academic research, whether as a doctoral student or an early career researcher post-doc joining a research team for a project or, for that matter, more senior academics coming from a practice background who wish to pursue their own research. We have tried to present a possible scenario faced by a new researcher in developing their research in order to demonstrate how the reader might approach the book.



## SO YOU WANT TO BE A LANDSCAPE ARCHITECTURE RESEARCHER?

Consider this scenario: you have just been accepted as a researcher to join a team in a well-known landscape architecture department. Your first task is to develop one or more research proposals and to apply for research grants in order to build up the academic reputation of the department. You report to a senior professor who happens to be a renowned landscape architect with an impressive project portfolio and who has already attracted several young researchers who, like yourself, are eager to help to build up an innovative research group. You soon discover, since your professor's experience is mainly in project design and little in academic research, that your need for advice about what research approach and which methods to include in a project application is not met. You look for help and turn to the other researchers in your group. These include, for example, doctoral candidates, each of whom is pursuing a research topic that is different from yours and is applying methods which seem inappropriate for what you want. None of your immediate peers is able to provide useful assistance. You are getting worried. What should you do? Where and to whom can you turn for help and guidance?

You should bear in mind that it has mainly been through design solutions that landscape architects have succeeded in the past, and continue to succeed, in advancing their field. The proactive planning and design way of thinking has contributed to major innovations but in almost all cases they tend to be area- or site-specific and, although their use as precedents is common, there is also a desire among creative people to show originality and uniqueness, as opposed to generating solutions which may be transferred more widely. Do not underestimate the extent to which creativity has been a feature of some of the major scientific breakthroughs, so that we should not feel that scientific research approaches are necessarily achieved through mechanical data analysis and logical reasoning alone!

All the while you continue having difficulties in defining your research question, in designing your study and in selecting your study methods. You probably have a pretty good idea of your topic, whether it be addressing a particular climate change issue, contributing to urban sustainability, dealing with landscape impacts of renewable energy transition, understanding the relationship between health and green infrastructures, or 'something' on water and biodiversity. However, even formulating a good title and set of research questions, a task that initially appeared to be a straightforward thing to do, may be soon turn out to be rather complicated. You are finding yourself diving deeply into the available scholarly literature on the topic of your choice. You are finding how, like many other design fields, landscape architecture presents itself as a discipline integrating and synthesising knowledge from several other fields, some of which you now need to start learning more about.

You are also finding that landscape architects not only take broad views on the world as it is; they also have views on how the world should be. As practitioners your senior staff and thesis supervisors may not easily free themselves from normative thinking. They may, in fact, be confronted with the same difficulties as you. Your research project, however, should be approached differently from solving a design project commissioned by a client needing spatial or procedural solutions. Your study addresses, first and foremost, the requirements of academic research. You and your supervisor need to respond to standards and expectations set by the academic community at large. Academic quality standards are common to all disciplines – often ones with whom you will be collaborating – as most of the grand landscape challenges of our time require multi-, inter- or trans-disciplinary approaches.