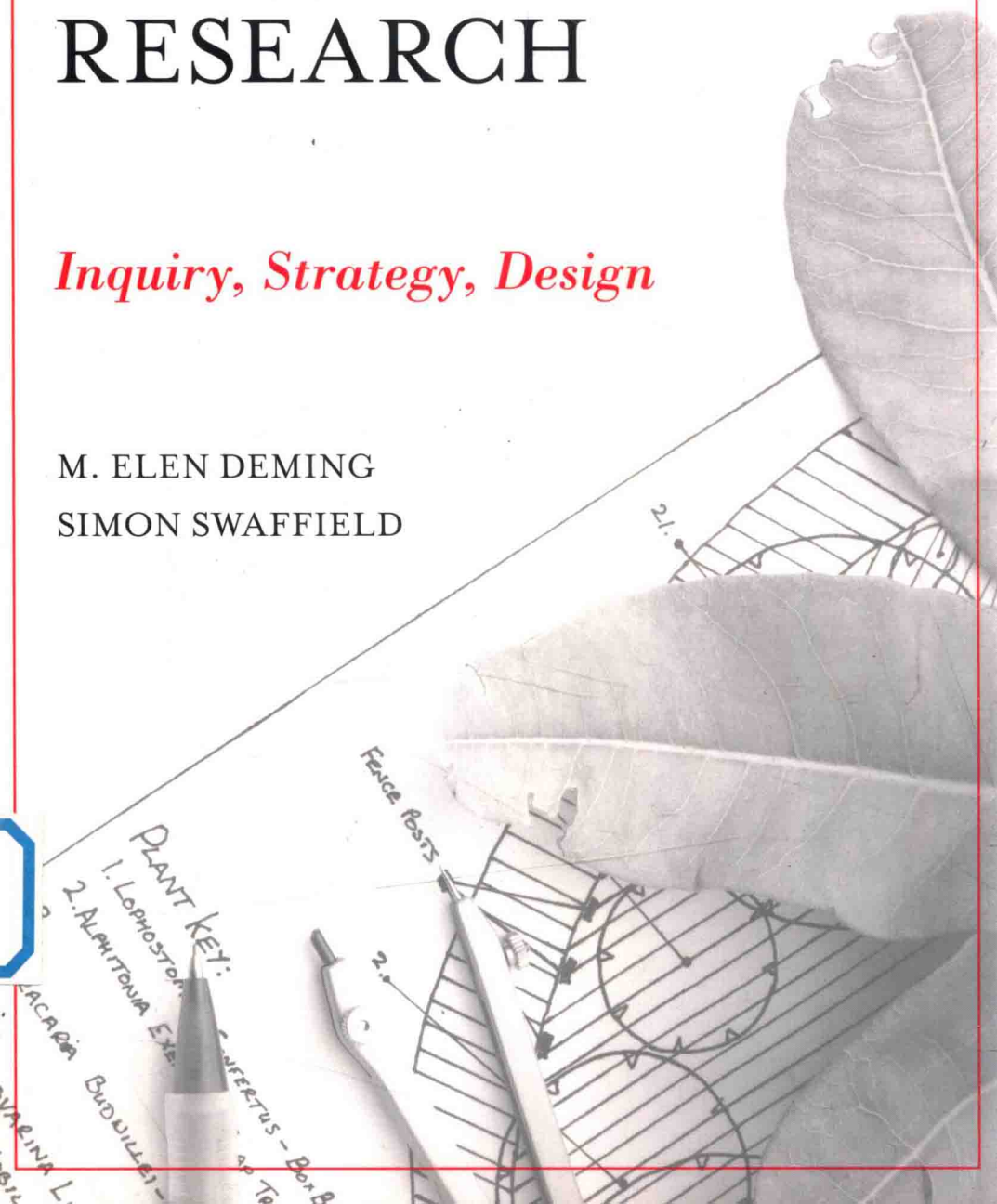


# LANDSCAPE ARCHITECTURE RESEARCH

*Inquiry, Strategy, Design*

M. ELEN DEMING  
SIMON SWAFFIELD



# Landscape Architecture Research

**Inquiry, Strategy, Design**

M. Elen Deming

Simon Swaffield



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**Landscape  
Architecture  
Research**

All science should be scholarly, but not all scholarship can be rigorously scientific . . . . The terrae incognitae of the periphery contain fertile ground awaiting cultivation with the tools and in the spirit of the humanities.

—JOHN KIRTLAND WRIGHT,  
cited in Yi Fu Tuan, *Topophilia*

# Preface

This is a transnational project, coauthored by professors living and working on opposite sides of the world. The *translational* challenges of the work, however, far exceeded what we originally anticipated. Our international partnership has forced us to reconcile different academic cultures, practices, and standards—a microcosm of the wider challenges addressed in the text itself.

It then goes without saying that this is also an ambitious project. Both authors readily acknowledge that any book about the state of research in landscape architecture will be an incomplete, evolving project—simply by definition. It is also a work in progress in the sense that the arguments are provisional and intended as a constructive contribution to an extended debate that will continue to shape our discipline. Our propositions, classifications, and examples will no doubt provoke and stimulate varying reactions, and we look forward to our colleagues' response.

It is also important to acknowledge that we are both generalists, having been privileged for many years with an unusual vantage on contemporary research in the field of landscape architecture from the perspective of editors, educators, and scholars. This is both an advantage and a potential limitation. In reviewing and interpreting the diversity of research strategies within our discipline we have had to simplify and translate. We hope that our own process of learning the very different traditions involved has not compromised their integrity or richness, and will help others facing the same interpretive challenge.

Both of us have served as editors of peer-reviewed journals, Swaffield as founding editor of *Landscape Review* (1995–2009) and Deming first as coeditor and then sole editor of *Landscape Journal* (2002–2009). We both serve on a number of editorial advisory boards. Our exposure to authors and peer reviewers alike has inspired our approach to this book, which is to use informative examples of what researchers are already doing to illustrate the main concepts. We hope that all students and practitioners who pick up this book will share a sense of empowerment in understanding how to make a difference through research and from knowing how, exactly, their work *matters*.

We believe the most important contribution of this book is not the specific selection or elucidation of examples we have chosen but, rather, the overview and the elasticity of thinking strategically about research. The vast majority of the examples we chose were compound studies—combining, for instance, classification with logical argumentation (Fredericks 1982), description with evaluation (Francis 2002), and so on. This makes it

all the more challenging for beginning researchers to develop a confident sense of understanding the relationship between strategy, design, and the need to know. In defence, we suggest that there is no such thing as a “pure” strategy—all research is constructed to address particular questions in particular contexts, and the examples reflect this process of matching approach to purpose. Similarly, research design is about fitness for purpose and the art of the possible.

However, there is a logic to developing a research strategy, and to its implementation, and we believe there has been benefit in probing the disciplinary literature in a systematic way: like an x-ray that illuminates the skeleton, it renders a more diagrammatic understanding of research strategy, design, and methods in our discipline. We hope the classification we have produced and the illustrations we have offered will open new vistas of comprehension, of analogy, and of pragmatic innovation that both inspire and guide new researchers, as well as provoke and challenge those already set in particular paradigms and conventions.

# Acknowledgments

**MED:** Having practiced and taught for many years, when I finally returned to graduate school I was treated to a seminar in research inquiry taught by Michele Addington. In 1997, in her efforts to guide graduate students toward producing a well-crafted thesis proposal in the shortest possible time, she facilitated a remarkable discussion of research methods—an epiphany for me. The universe of possibilities that emerged in those discussions served to demystify the processes of scholarly investigation that had eluded me for so long. That liberation changed my world view.

The initial impulse to write this book simmered up a few years later, at the ECLAS conference in Ås, Norway, in 2005, where Simon Swaffield presented an early version of his paper “Theory and Critique in Landscape Architecture: Making Connections” (2006). Filled with admiration for the clarity of the rubric he constructed there, knowing the importance of the project, yet still dissatisfied with specific limits of the vision, I threw down the gauntlet on the spot: “Either you write the book, Simon, or I will.” This work is the result of that early meeting of the minds, a stimulating and productive collaboration that has withstood the rigors of distance, time, training, exposure, misunderstanding, negotiation, reconciliation, and multiple stints of one or the other of us serving in administrative posts.

My work on this project was supported by financial assistance from a Wadsworth Endowment Faculty Research Award in the Department of Landscape Architecture, University of Illinois at Urbana-Champaign. The benefactors of this endowment, Jean and Brent Wadsworth, have been extraordinary friends of landscape architecture at Illinois. For well over a decade they have supported student excellence and faculty research aimed at improving the evidence base for the profession of landscape architecture and for society at large.

In part, the grant supported a research assistant, Lori Tella (MLA 2009), who helped us gather web sources on various research methods and test our initial rubric against the published literature. Debbie Huber’s capable assistance at a key point in the writing is also deeply appreciated.

**SRS:** The origins of my interest in research strategies lie at the start of my tertiary education. In the early 1970s the Department of Geography at Cambridge University was a whirlpool of competing paradigms that opened me to the challenge of mediating between alternative ways of knowing. The confidence to chart one’s own path came later, from my PhD studies at Lincoln University, under the scrutiny and with support of



supervisors from three diverse disciplines—Professor Kevin O'Connor, the late Dr Angus McIntyre, and Dr (now Professor) Harvey Perkins. Preparation of a reader on theory in landscape architecture stimulated my interest in the research foundations of our professional discipline, and as Elen has explained, our collaboration grew from there.

Most of the preparation of the text has been undertaken as part of my role as Professor of Landscape Architecture at Lincoln University, and I am grateful for the support and encouragement I have received from Stefanie Rixecker as the Dean of the Faculty of Environment Society and Design, and from Neil Challenger since he took over as Head of the School of Landscape Architecture. I received support from the Lincoln University Strategic Investment Fund to gain relief from teaching in 2010, and the Velux Foundation in Denmark has supported me as a visiting professor at Copenhagen University during the latter stages of production process.

Theresa Caracausa provided essential help in identifying and reviewing examples, as a summer scholar supported by the Faculty, and her pragmatic evaluations from a student's perspective helped shape the choices. Mathew Durning prepared the authors' illustrations, with additional support from Erica Gilchrist. Michelle Collings provided invaluable help in preparing the authors' manuscript for submission.

**MED and SRS:** Our work on this book was made possible by many forms of mutual trust and collegiate support. We are grateful for the support and encouragement of the editors and staff at John Wiley and Sons who have guided the process from its inception, particularly Margaret Cummins and David Sassian. That this book exists at all is testament to their patient efforts.

There is also the trust between colleagues. We owe a huge debt to those authors whose work we selected to feature in this edition. They not only read and suggested improvements to our synopses of their own published work, but their encouragement and advice on the larger project was very welcome.

We especially acknowledge the kind cooperation of the editorial and administrative staff at the University of Wisconsin Press Journals Division, publishers of *Landscape Journal*. We drew many examples of research strategies from the studies published in that journal since 1982.

We offer thanks to all those members of the Council of Educators in Landscape Architecture (CELA) and the European Council of Landscape Architecture Schools (ECLAS) who provided review comments on the conference papers that helped shape the text. We also thank the key informants we approached and whose knowledge particularly informed the discussion of gatekeepers and research quality criteria.

A number of colleagues reviewed early versions of the manuscript proposal and offered helpful feedback. It goes without saying that the inevitable errors, misunderstandings and omissions remain the authors' own. James Anderson, Laura Lawson, and John Stallmeyer (College of Fine & Applied Arts, University of Illinois), Lindsay Sowman (Lincoln University), Robert Brown (University of Guelph), Cheryl Doble and Dayton Reuter (State University of New York, College of Environmental Science and Forestry),

all read portions of early drafts and offered constructive criticism. Jeffrey Blankenship (Hobart & William Smith College) provided the signpost to the epigram. The most powerful and useful criticism came from former coeditor of *Landscape Journal*, James F. Palmer, who read the whole manuscript and challenged us to make it better. We are profoundly grateful for such colleagues, who are generous enough to constructively and honestly disagree with us. We hope that we have addressed the challenges they posed.

Of course, the importance of trust between coauthors cannot be overstated. As we noted in the Preface, the intellectual project represented in the text, and its writing and production, have been undertaken as a collaboration across a continent and an ocean, with a small number of working meetings, and many emails. We each acknowledge the intellect, experience, groundedness, humor, and personal generosity of our coauthor.

Simon also offers profound thanks and acknowledgement to Jenny, Matthew and Martin at home in Governors Bay in New Zealand. An author's family is the silent partner in any scholarly production, providing encouragement, love, and support when progress is slow and when things go wrong, and tolerating the intrusions into family life of the time and energy spent on the project.

Finally, we must gratefully acknowledge the mutual trust between students and their faculty. Many students have worked with us over the years and shown us the need for what we have written here. The sincerity and efforts of gifted and enthusiastic students—their capacity to generate new knowledge not from knowing exactly what to do, but from knowing how to ask the right questions—is what motivates this book.

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# Introduction

## 1.1 Knowledge in Landscape Architecture

The “new normal” in landscape architecture is the production and consumption of knowledge. The past two decades have seen an unprecedented increase in the standards and complexity of disciplinary expertise, and with that comes increasing pressure to formalize the ways in which we seek, create, and validate knowledge. As the discipline expands and engages with other disciplines to address the profound challenges of the twenty-first century, there is pressure to include a broader base of thinking in the field and to deepen the way we think. These dynamics intersect in research.

This book offers researchers in landscape architecture a place to begin shaping their research program. It comprises a critical review of research strategies that have built and continue to build the knowledge base in landscape architecture. Its primary audience is students in higher education who are working on capstone or terminal studio projects, advanced independent studies, theses, or dissertations, as well as faculty who are supervising graduate students. As the number and size of Master of Landscape Architecture (MLA) thesis and PhD programs expand (Tai 2003), candidates and examiners require guidance and clarity of expectations about acceptable research methodology—that is, the principles, practices, and procedures of inquiry that characterize the discipline.

The career development and eventual success of academic staff also hinges increasingly upon their research agenda: its productivity, value, and impact. Universities and funding agencies demand metrics of performance and productivity that indicate the quantity and quality of research activity and dissemination, and programs are frequently ranked on this basis. In some countries, public funding for universities is tied directly to research output (Forsyth 2008), and there may be financial incentives that favor postgraduate education that involves substantial research outcomes. All of these activities involve creation of new knowledge, for which a clear strategy, or systematic process of inquiry, is needed.

An important secondary audience for the book is landscape practitioners in private-sector design, multidisciplinary or corporate consulting firms, public-sector agencies, and academia. In the design and development industry, as well as in government sectors and at not-for-profit agencies, research is becoming integral to shaping policy and practice. Indeed, success in business often depends on developing strategies for innovation in order to maintain

competitiveness. “Evidence-based design” (Davies et al. 2000) is an area of fast-growing interest, as clients, public officials, and practitioners seek credible sources of knowledge of landscape and social processes upon which to base their evaluation of design proposals and policy recommendations. Forms of peer review are increasingly used in all of these situations, but they still beg the questions of which research strategies are effective and appropriate for the discipline and by what criteria should new knowledge be evaluated.

## 1.2 The Need for a Guide

There is at present little disciplinary guidance on research strategies. Nor is there any clear standard within landscape architecture for courses in research design and methods that are required in graduate design programs and, increasingly, taught to undergraduates. Rather than teaching from a broader “meta,” or strategic, perspective, faculty members often teach research design in a way that reflects their own familiarity with a single research method or a category of methods (e.g., survey or thematic maps). Their task is made even more difficult because no single text adequately serves the landscape architecture student in finding his or her own focus of inquiry or allows the student to position his or her work in the context of a larger investigative framework. The problem is confirmed regularly in informal and formal discussions at educators’ conferences in North America, Europe, and Pacific Rim countries, and we have repeatedly encountered this need in our own teaching.

Equally, there are no discipline-wide protocols or frameworks in landscape architecture by which to evaluate the validity of research proposals that seek commercial or public funding, or to assess the claims made by practitioners in the explanations of their projects, in competition entries, and in their written work. Clients in the public sector have no basis upon which to judge the validity of assumptions and presumptions made as a basis for policy advice.

This book aims to empower and inform new researchers, evaluators, and clients of research and theoretically justified work by providing a framework through which to address the following questions:

1. What research strategies are possible in landscape architecture?
2. What strategies do landscape architectural researchers tend to use?
3. How might an effective research strategy be shaped, and how might it be evaluated?

It follows that we focus primarily upon strategies rather than methods—on the configuration of an overall system of inquiry relative to the current range of epistemological and theoretical perspectives in our field, rather than upon detailed procedures, methods, and techniques that may be relevant to a particular investigation. This reflects our belief that, rather than method, it is the perspective driving an inquiry that is most fundamental in shaping any research project, and that it is the application of distinctive inquisitive strategies within particular theoretical contexts that shapes a discipline. Many methods and techniques are interchangeable across disciplines. It is the way they are

used, combined, and linked to theoretical propositions and practical actions in a coherent overarching strategy that gives them a distinctive disciplinary character.

It is also important to dispel any potential confusion in the overlapping concepts of *research design* and *research strategy*. In this book, *research design* refers to the logical order or structural composition of an investigation; essentially it is a formal, or a formulaic protocol. Trochim (2006) calls research design “the glue” that keeps a research project together. Many sources suggest that there are only a limited number of possible research designs (e.g., randomized experiment, quasi experiment, nonexperiment). Research design guides the way in which an inquiry selects from and processes all possible sources of data (i.e., sampling approach) and treatments.

*Research strategy*, on the other hand, is essentially conceptual and is shaped by intention—not by the “how,” but by the “why” of finding out. The nature of any research strategy is defined by two key dimensions that guide the process of scholarly inquiry. The first is the purpose or the relationship of the inquiry to theory—is the purpose of the investigation to build, shape, or test theory? The second dimension is the nature of the truth claims, or epistemology, that lie behind the investigation—is reality dependent upon, independent of, or interdependent between the researcher and the world?

Hence, research strategy is clearly related to, but larger and more conceptual than, research design. Research strategy subsumes research design within a larger order or agenda of thought and action. Research design is the investigative structure or logic created in the service of particular intellectual strategies; research methods are specific procedures used to advance particular research designs; research techniques are used to access and organize data (e.g., interviews) in support of particular methods.

In essence, the “strategies” that we present in this text are methodologies (studies of multiple methods) that are organized by and instrumental to an intellectual purpose and epistemological position. This guides their placement in a classification matrix (see Section 1.4). One order below that, our examples describe specific research designs, research methods, and analytical techniques that *illustrate* how these strategies operate in support of landscape architectural topics. The strategy itself is actually quite limited in its form and effect in our detailed discussions of examples, but it provides the essential context and logic for the investigation and its choice of design, methods, and techniques. Our hierarchy of terms is as follows:

1. Strategy: An agenda of thought and action for knowledge formation (*Nine strategies are classified in Table 1.1*)
2. Research design: The structure of how to choose, structure, or limit the evidence vis-à-vis the query (e.g., sampling frame or generative design)
4. Methods: Procedures of investigation, some serving more than one strategic category (e.g., historiography or survey)
5. Analytical techniques: The tools of investigation, almost all serving multiple strategies and designs (e.g., depth interview, statistical analysis, or coding)



Questions of research strategy in landscape architecture are neither new nor trivial. There have been intense debates within the discipline in recent decades as to the legitimacy of different research paradigms. Each paradigm carries its own presuppositions, and typically each commentator advocates for his or her own position. Cross-disciplinary investigation is increasingly common, yet boundaries between fields of knowledge and the validity of “borrowing” different ways of creating knowledge are increasingly contentious, particularly in relation to the closely related discipline of architecture.

As well as points of tension, there are also significant gaps in knowledge and research activity. This raises further questions: How does the discourse of “how we know what we know” shape the discipline? Which, or whose, knowledge survives this scrutiny, becoming legitimated and eventually reproduced? What questions, evidence, and ideas are excluded? And what are the implications for practice?

### 1.3 The Gatekeeping Dilemma in Context

Our approach to these questions of scope and legitimacy is inclusive rather than exclusive. Overall we advocate a greater focus on the conceptual logic of inquiry, explanation, and evaluation of research approach and outcomes. There have been classifications of research

#### Responses from Key “Gatekeeper” Informants

1. What criteria are used by your journal to evaluate the quality and validity of research and scholarship submitted for publication?
  - Scholarship—quality and insight
  - Method—coherence, integrity, and rigor
  - Outcomes—significance, relevance, and originality
  - Presentation—clarity and style
2. Does the choice and/or weighting of criteria change depending upon the topic of research, or is it standard across all submissions?
  - In principle, largely standard
  - In practice, nuanced according to the type of paper
3. Do you have an expectation or preference for certain acceptable research strategies in landscape architecture? If so, what are they?
  - A broad range is acceptable (even desirable)
  - Needs to be appropriate to the subject
4. Have you rejected any work in recent years because the research paradigm adopted is not acceptable to your journal? If so, what type of research was involved?
  - Never specifically
  - Typically, rejection occurs if the quality of work is “not good enough,” or subject is not sufficiently relevant to the target journal