

08: Some Notes on Architecture and Design Research

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Developing out of an initial idea put forward by Peter Gibbs Kennett, the RIBA's Research and Development Department launched the President's Award for Research Award scheme in 2005. The main aim of the award is to encourage and reward outstanding research in architecture carried out by individuals at all stages of their careers, from PhD students through to those with established track records in publishing and building. Our hope is that the awards will promote high-quality research and focus awareness on the important role research plays across academia and the profession in generating creativity and innovation, strategic and critical thinking.

Last year we made awards in two categories: an award for an outstanding PhD Thesis from a RIBA-validated School of Architecture, and an award for an outstanding piece of research carried out either by a sole individual or a group located within a RIBA-validated School of Architecture. This year we have added a key award to the suite, for an outstanding piece of research located in a professional practice initiated by an RIBA member and/or RIBA registered/chartered practice. In the future we will make awards in each of these three categories. In each category the research submitted may take the form of architectural and urban design, technology, history/theory/criticism, or aspects of professional practice.

In 2006, the winner for Outstanding PhD Thesis was Dr Rajat Gupta of Oxford Brookes University with his thesis entitled *Investigating the potential for local carbon dioxide reductions: developing a GIS-based domestic energy, carbon counting and carbon reduction model*. Rajat's research describes the development and validation of DECoRuM – a domestic energy carbon counting and carbon reduction model – for urban scale assessments of the cost benefits of a wide range of energy efficient and renewable energy options. The thesis deftly handles the complex and contentious literature on climate change, but the real novelty of the research lies in the ability to reliably aggregate results for individual houses up to an urban scale. This is an extremely impressive study both in terms of its scope and detail. This is an issue of widespread importance, as such the research is timely, and we believe should be taken up by local authorities and housing agencies around the country.

In 2006, the winner for Outstanding University-located Research was Dr. Wendy Pullan from the University of Cambridge for her research project *Conflict in Cities: Architecture and Urban Order in Divided Jerusalem*. This research, funded by the Economic and Social Research Council, concerns urban development in Jerusalem, exploring in particular the security wall that traverses the countryside in the region and the main road that runs towards Damascus gate. This is a groundbreaking and truly interdisciplinary study involving researchers from Israel and Palestine as well as the UK. The work contributes to a growing discourse on conflict in cities, arguing strongly that architecture plays a key role in negotiating difference. It combines insightful theoretical commentary, social critique from evidence gathered through interviews, and architectural and spatial analysis gained from a study of the use of urban sites, along with visual representations in the form of photographs and maps. The project is a highly significant piece of work, which demonstrates the relevance of academic research and architectural interventions to social and cultural interactions within a geo-political framework.

Assessment of the awards is undertaken by a Panel of Judges, appointed by the Research and Development Committee and approved by the President. The panel represents a range of research expertise, and a balance between professional practitioners and academics reflecting the aspiration of the awards.

Research occupies a pivotal position between practice and education. Starting out with a degree and diploma, one might pursue doctoral research, and then continue through professional practice and education/academia – transforming from student to professional practitioner and/or educator/academic. Or instead, and increasingly this is becoming an inspiring model, one might return to education to study for a Masters or Doctorate having spent a number of years in practice.

Given the context of this conference – the first RIBA Research Symposium – and one which places full attention on architectural practice – I'd like to make some notes – six points – about the aspirations of these awards with respect to architectural design research.

First, a note on research as a bridge or linking device. I suggest that research bridges or provides an interface between architectural education and professional practice. If we believe that the practice of architecture, as a professional design activity, always involves some degree of research, then this research aspect of practice is one that to date has been taken for granted. If research can be understood as a journey of discovery that is characterizing by not knowing as well as knowing, by the very activity of finding out, and transforming oneself in that often difficult and always unpredictable process, then despite their very divergent economic and social contexts, architectural education and practice already have a lot in common, both involve such journeys as well as share a passion for originality, and for producing things that are new – both abstract and concrete.

Second, I note the multi- and inter-disciplinary nature of architecture. I'd like to propose that architecture as research subject can be characterized by its multi- and inter-disciplinary nature one that encompasses at least three recognized modes of research activity. Architecture certainly includes the most well known (perhaps the most often parodied) and certainly the dominant model of research in terms of the funding allocated to it – the science model – where research is conducted through funded projects carried out by groups, structured hierarchically, with identifiable roles and relations, such as PI, CI, RA, PhD students, who publish their findings as research papers usually co-authored. Architecture also involves the perhaps older model of the arts and humanities, one where lone researchers produce books and articles. This is certainly in the minority in terms of the amount of funding allocated to it, but remains popular and hotly defended in architecture by writers, critics and academics. And finally design research. This new research mode is maybe closest to the core of architecture, and it is also akin to practice-led or practice-based research, a recent term generated in academia in art and design. I've written at length on distinctions between practice-led research in various forms of design including architecture, as well as conceptual art¹.

Third, a note on terminology. Architects tend to find the term practice-led or -based research unhelpful. For some, it is an extra complication – the question 'why not just

¹ See for example Jane Rendell, *Art and Architecture: A Place Between*, (London: IB Tauris, 2006) and Jane Rendell, 'Architectural Research and Disciplinarity', *ARQ* (2004) v. 8, n. 4, pp. 141-7.

practice?' is often asked. For others, it dissolves a distinction they are keen to exploit, one where design research conducted in academic institutions positions itself as a critique of, rather than as led by, the architectural profession. However, as this mode of research gains momentum, it is important that we develop the subtleties of this ready-made vocabulary, advancing a more nuanced and precise use of such terms as – design research, research by design, practice-led research, practice-based research – in order to clarify our differing opinions and sharpen the debate. The Research Symposium is an important part of that process.

Fourth, a note on the 'emergent' quality of design research. If, as some have argued, design is already a form of research, then we need to explore how we might distinguish between design-as-research and research-as-design, and question on what grounds and why such a distinction might matter. We should also pay attention to a relatively quiet but fascinating discussion around design research quality, and how excellence in this area is to be recognized. We can probably agree that not all excellent research is excellent design, but is all excellent design also excellent research? While some have argued that design does, and always has, involved research elements, the recognition that design itself might be considered research is new. In academia it is this recognition that has produced the current vibrant culture around design or practice-led research, which seems from the evidence of this crowded room and exciting line up of speakers today to be mirrored by an interest stemming from professional practice. The increasingly visible profile of architectural design research in academia in recent times is perhaps a response to the demands of the Research Assessment Exercise (RAE) in the United Kingdom and similar operations in other parts of Europe as well as Australia. The development of the criteria for judging the quality of research products by the RAE, as well as research processes/methodologies by the various Research Funding Councils, has produced a situation where architecture has had to look very closely at its own research culture. The upside to this has been the creation of a healthy discussion around architectural design research which keys into debates active internationally. This has resulted in an increasingly informed and sophisticated arena for architectural design research, one which can interface with research already produced by the profession, as well as broaden and deepen the scope and conceptual frameworks through which we understand the current climate of architectural research.

Fifth, kinds of architectural research. In his much-cited paper from 1993, 'Research in Art and Design', Christopher Frayling put forward a tripartite model for clarifying the complex set of relationships between design and research. In his view, research 'for' design tends to involve investigations conducted with a design application in mind, while research 'into' design examines design from a historical and theoretical perspective. In both these types of design research, design is the object and research the process, whereas in the third type, research 'through' design, design processes constitute the research. It is this last category that we call 'practice-led' or design research. While the model is clearly limited it provides a useful acknowledgment that the field of design research is diverse and that the research focus might be on product or process, and that these products and processes are themselves varied. Products or outputs take the form of buildings and parts of buildings, as well as exhibits, installations, artefacts, drawings and texts representing built, un-built, and un-buildable architectural projects, while processes involve research methodologies, which are investigative and interpretative, productive and reflective.

So sixth, and finally, the role of reflection in architectural design research. As design research becomes accepted, its more intuitive processes are brought under scrutiny,

and in so doing design methods are often post-rationalized in order to match up to idealized values of scientific and/or more traditional arts and humanities text-based, for example rigour. But in my opinion, architectural design research is of value precisely because it offers forms of enquiring, understanding and knowing, which differ from and often question normative research processes, deriving from the sciences as well as the arts and humanities. For example, architectural design research is able to query conventional research assessment criteria, by demonstrating a definition of rigour as the precision of materialization, rather than the result of systematic enquiry, one where the objective, the logical and the predictable are accompanied by the subjective, the intuitive, and chance.

The issue of research context is also interesting. While a researcher in the humanities would first explore the context for a research question in order to find out the current state of knowledge in the specific field, in some cases practitioners will investigate ideas through the production of a work first and later consider for whom and how the knowledge generated is original. Additionally for a designer, context is associated with conditions of the site for the production of a building or artefact – material, climatic, geological, social and cultural. The notion that the context of a work is the set of abstract idea connected with the design, or the group of other practitioners who might be operating in the same field using similar design methodologies, is often seen as a rather unhelpful way of developing the design proposition and certainly not the usual way of locating the work.

Unlike other modes of research, architectural design research is often propositional and this inverts the normal and usually linear order of activities in research. Instead of conducting a review of the field first, it is invention which takes place at the outset, producing works which are then reflected upon, generating an iterative motion. This pattern of production–reflection is both a form of design research in its own right but can also stimulate other forms of research. I am interested in how the action of reflection in design practice can be related to the critical. The defining qualities of critical theory are, for example, self-reflection – an awareness of the processes one is engaged in and complicit with – but also and importantly action – a desire for social emancipation – to change things.

Architectural designs that put forward questions in response to a brief, instead of, or as well as, solving the problems posed by that brief, produce objects and situations that critically rethink the parameters of the problem itself. This poses a link between the innovations made within architectural design research and the wider cultural context, providing the basis for research, and lending a critical dimension to reflection in practice.