

Design Research – History, theory, practice: histories for future-focused thinking

Dr Harriet Atkinson^{a*}, Dr Maya Rae Oppenheimer^{b*}

^a University of Brighton

^b Royal College of Art

*Corresponding author e-mail:

H.Atkinson2@brighton.ac.uk; mayarae.oppenheimer@rca.ac.uk

Abstract:

Writing soon after the 1962 Conference on Design Methods at Imperial College - the event that led to the founding of the Design Research Society in 1966 – J.C. Jones and D.G. Thornley described the Conference's purpose as twofold. Firstly, the event determined the parameters of a collective agenda and, secondly, it enabled discussions that would catalyse future developments in design methods work (Slann, 1963). On the occasion of the Design Research Society (DRS)'s fiftieth anniversary, this conference strand continues this dialogue with a specific agenda: to assess histories of future-focused thinking and to consider the histories, theories and practices shared between design researchers. What emerges from evaluations of the Design Methods Movement and of Design Research is the continuous search for a common language and common methods and an interest in problem solving, by bringing scientific methods to bear on design. If we understand the history of Design Research in generational terms, this panel suggests a new era: a generation of rigorous interdisciplinary collaboration. This stretches to include practice methods, research, writing and diverse collaborations across academic colleagues from various disciplinary enclaves. Victor Margolin echoed this vanguard at the DRS2010 conference, noting that design research today "pursues its interests based on its own criteria for best practice and meaningful results" (Margolin, 2010, p.1). We interpret this as pursuing meaningful discourse on shared- and dual-inspirational, creative work in design developments. As part of this collaboration we ask: what can design historians contribute to the understanding of design research as a process comprised of history, theory and especially practice? And what can design research contribute to design history's interest in critical, reflexive and inclusive investigations into past design contexts and developments, in order to ensure sound, future-focused thinking?



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

Keywords: Design Research, Design History, critical practice, design theory

1. Introduction

Writing soon after the 1962 Conference on Design Methods at Imperial College - the event that led to the founding of the Design Research Society in 1966 – J.C. Jones and D.G. Thornley described the Conference’s purpose as twofold. Firstly, the event determined the parameters of a collective agenda and, secondly, it enabled discussions that would catalyse future developments in design methods work (Slann, 1963). Making no apology for the ‘breadth’ of collected papers from this meeting, Jones and Thornley’s edited volume contained several contributions including the work of Christopher Alexander, William Gosling, and Joseph Esherick, as well as Jones’s foundational essay, “A Method of Systematic Design”. While varied in background, each author shared an epistemological belief in “systematic methods of problem solving, the application of scientific methods and knowledge to their own particular problems, and, to break down the barriers that exist between one activity and another, attempting to discover the possible connections that link all creative activities” (op cit, p.xi).

On the occasion of the Design Research Society’s (DRS) fiftieth anniversary, this conference strand continues this dialogue with a specific agenda: to assess histories of future-focused thinking and to consider the histories, theories and practices shared between design researchers. What emerges from evaluations of the Design Methods Movement and of Design Research is the sustained search for a common language and methods and an interest in problem solving by bringing scientific methods to bear on design. This initiative, however, has not been a steady one.

Several authors have recounted this history in generational terms. Horst Rittel, for example, asserts that the first Design Research generation spanned the 1960s and tended towards a rational and systematic development of the field. The second generation moved away from previous formalizations with several forebears, including J.C. Jones, retaliating against early work (Bayazit, 2004, p.21). According to the accounts of Jane Pavitt and Nigel Cross, a bifurcation then formed between, on the one hand, critical work with an immersion in research and, on the other, social projects over commercial interests and a continuation of previous methodological goals (Pavitt, 2012, p.133; Cross, 1993, p.17). Margolin suggests the third generation of the 1980s and early 1990s constituted a mix of the two, with Bruce Archer and Nigel Cross advocating communication across professional perspectives and diverse approaches for problem-solution collaboration (Margolin, op cit). Pavitt shares this view but without characterizing it as a third generation, noting that Archer was so collective in his work that he cannot be written about in isolation (Pavitt, op cit).

Characterizing Design Research in generational terms is a useful, albeit reductive, way of understanding shifts in thinking, as is searching for disciplinary definitions and boundaries, which has been another notable preoccupation in this area. In his paper, “A History of

Design Methodology”, which considered his activities in design research, Nigel Cross went towards clarifying the terms ‘design science’ (laws and rules of design), ‘science of design’ (body of work seeking to develop design via scientific method) and ‘design methods’ (application of systematic methods) to make room for other preoccupations (Cross, 1993).

Now, in 2016, we reconvene. If we continue to characterize the development of Design Research in generational terms, this panel suggests that we are in the generation of rigorous interdisciplinary collaboration. This stretches to include practice methods, research, writing and diverse collaborations across academic colleagues from various disciplinary enclaves. Victor Margolin echoed this vanguard at the DRS2010 conference, noting that design research today “pursues its interests based on its own criteria for best practice and meaningful results” (Margolin, op cit, p.1). We interpret this as pursuing meaningful discourse on shared- and dual-inspirational, creative work in design developments. As part of this collaboration we ask: what can design historians contribute to the understanding of design research as a process comprised of history, theory and practice, particularly across contexts of practice? And what can design research contribute to design history’s interest in critical, reflexive and inclusive investigations into past design contexts and developments in order to ensure sound, future-focused thinking?

2. Main Preoccupations & Inquiries

Several of our speakers have taken this, the DRS’s 50th anniversary, as an occasion for charting the origins, mandate and progress of the Society. Since 1966, DRS has led in the field of Design Research with peaks and troughs in its trajectory, as the DRS’s own website recounts.¹ These fluctuations and fractures within the Society’s ranks resulted, at times, in conflicting priorities for the field. While this internal temperature-taking is revealing, we must go beyond the DRS in order fully to understand the origins of Design Research; to survey other design organisations and networks through which design research has developed (ICSID and VNIITE, for example). We must also turn to the various art and design colleges that have pioneered design research (RCA, HfG and beyond), the international journals, the conferences and exhibitions and the influential figures associated with this embryonic movement. We might also look to pedagogical principles, design outcomes and policy impacts.

In order to determine what design historians and design researchers can exchange to mutually further their work, we have organised our paper submissions into three areas of interest and activity: history, theory and practice. The early founders of *Design Issues* had a similar approach for the mandate of their journal, adding the subtitle *History, Theory, Criticism* to the first 1984 issue to encourage what they felt were key areas of work (Margolin, op cit). Like them, we begin our trajectory with history: aiming to inform design research by critically examining the contexts of historical precedents and their development. Historical analysis operates in a number of ways within the papers in this theme: as a means

of comparison or clarification in contemporary design research (as papers by Boyd Davis & Gristwood and Murali show); and for historians analysing the origins, motivations and infrastructure of design research (Messell and Halland Rashidi). Pioneer figures within design research also engaged with history to inform their future-focused practice, and their work is referenced in several papers (Tomkin, Hall, Dorst). In addition, historical critiques of and objections to the Design Methods Movement allow us to reflect on contemporary cultures of design research and future scope in this area.

Our second panel theme is theory. With a predilection for examining the social, both designers and historians are aware of their situations of engagement, and design historians have the potential to draw connections between contexts of work, expand the field in question, and to critically reflect upon dominant narratives in the history of design research (from figures to geographies). As Andrew J. King highlights via his review of Jones's book *Designing Designing for the Journal of Design History*, "The history of design theory is of relevance to the history of design precisely because design theory evolves, questions, and reshapes the idea of what design is - it redefines the subject matter of design history" (King, 1995, p.75). Design pedagogy is also an area of interest, with the same potential for redefinition: various speakers explore specific teaching and learning methods; others develop this theme in relation to their own research including the PhD thesis as design research (Boyd Davis & Gristwood; Rodgers & Yee; Woelfel & Woelfel) and oral histories as critical reflection on the practices of design researchers (Tomkin).

Our third theme pertains to the application of work developed within the field of design research and pays particular attention to the needs and quicksilver nature of contemporary design work. How do social and cultural frameworks influence design research methods? How do changing demands from alternative economies and emerging industry shape evolving practice? By selecting practice as our third theme, we heed the noted change in design trends from product to service and system. We also extend Cross's perspective, making room for further discussion and progress not in design methodology but for design comprehension, both in the inclusive and intellectual - and perhaps tacit - definitions of the word (Cross, 1993).

History, theory, and practice are all valuable components in any work; in our first panel discussion, therefore, we present one paper as a representation for each theme. Our intention here is to suggest these are all essential components for rigorous design research work, but the ingredients and proportion of each will differ depending on the unique requirements of the system or project under development. Stephen Boyd Davis & Simone Gristwood's paper, "The Structure of Design Processes: Ideal and Reality in Bruce Archer's 1968 Doctoral Thesis", uses the document of their title to consider the relationship between histories of design institutions and pedagogy and early design research challenges. Douglas Tomkin uses oral histories of the Design Research community to underpin his paper, "Closing the Circle", and compares the period he spent at the RCA's Department of Design Research

working alongside Bruce Archer with his recent work at University of Technology Sydney's Design Innovation Research Centre. Peter A. Hall's, "Re-integrating Design Education: Lessons from History", also looks to histories of pedagogy to engage with visions of future design. He focuses on specific elements of interdisciplinary application, active learning and critical views of practice elements, especially in burgeoning areas of design-thinking and sustainable futures.

3. Histories & Contexts

The origins of design research as a discrete area denoting a more systematic and rational approach to design that emphasizes teamwork predates the DRS; its emergence in Britain and North America is closely related to the professionalization of design practice. The need for research within the design process was highlighted by critic and design historian Herbert Read as well as advertising executive Marcus Brumwell, whose pioneering British consultancy, Design Research Unit (DRU), emerged in 1943, bringing 'design' and 'research' into an enduring relationship.² "The Design Profession", an essay by DRU lead designer Milner Gray (1946) advocated design research as a client requirement, while design critic John Gloag (1944) - who, like Brumwell, was director of an advertising agency - discussed the need for Design Research Committees to direct design teams. DRU's Director, Misha Black, meanwhile seized the opportunity to disseminate design thinking to a new generation of designers becoming the RCA's first Professor of Industrial Design Engineering in 1959. A year later, Dorothy Goslett, DRU's lynchpin office manager, wrote her much-reprinted *Professional Practice for Designers* that gave extensive, practical advice regarding fee structures for research (Goslett, 1960).

These were all important moments in building the case for a discrete organisation to represent the Design Research community in Britain. The four papers in this panel reinforce the importance of understanding histories and contexts as impetus for current and future practice and reveal how design research has evolved across a range of diverse socio-historical contexts. These contexts include design conferences (as was the case for the DRS itself), government-sponsored design boards (including the GDR's Board of Industrial Design in Woelfel & Woelfel's paper) and designer-led organisations (such as ICSID in Messell's contribution), art and design colleges, universities and exhibitions (such as MOMA's 1972 exhibition of Italian design in Halland Rashidi's paper). Each context offered itself as a site both for evolving and disseminating design research thinking. In these papers - which are predominantly focused on the period from the 1960s to the 1990s - we encounter activities that we might describe as "design research" occurring across diverse geographies, from the US, to the GDR, to Mexico and the UK and united, at least at the outset, by an engagement with the notion of a progressive, systematizing 'good design'. Isabel Prochner and Anne Marchand's paper, meanwhile, make a renewed call for feminist critiques by surveying histories of industrial design in which women still have limited presence. Despite the work of historians such as Cheryl Buckley and designers including Sheila Levrant de Bretteville who

set to rectify this over 30 years ago, Prochner and Marchand seek future gender equality within design practice (Buckley, 2009; Levrant de Bretteville, 1999).

4. Agency of the Designer: Process & Methods

Design Methods, in its earliest form, was pioneered as an activity distinct from design practice. But today we might ask: if all design is increasingly understood as a form of “research”, with or without realisation in material form, how is Design Research distinct from other forms of research? And as Design Research is increasingly exported as a reliable development strategy in areas as diverse as design thinking in business to healthcare, who will steward and indeed safeguard future practice?

Papers in this final panel address a range of applications of Design Research and their juxtaposition, from business development in the Pearl River Delta to craft production in India. But are design researchers prepared or trained to conduct critical evaluations of historical contexts and sources with a conscious management of their own bias? Kees Dorst’s paper, “Design Practice and Design Research: Finally Together?” speculates on an apparent lack of unity and the possibility for a mid-field: Academic Design. Adam de Eyto and Carmel Maher present a case study for communicating present debates around design research practice in their contribution, “Beautiful Nerds: Growing a Rigorous Design Research Dialogue in the Irish Context”. Paul Rodgers & Joyce Yee take the discussion to a speculative, imminent tone, noting the strengths of design research to shape lives in multiple contexts and the need to marshal accessible communication, training and migration away from products and towards people.

These calls for frameworks for communication, multifarious and interdisciplinary strands, and a focus on people over products echo with current design history trends. Design historians are particularly attuned to reflexive applications of critical theory and history in an attempt to correct and progress their own discipline. As such, they are in a position to reflect and to develop in tandem with design researchers. J.C. Jones once articulated the dual process of firstly arriving at a thought, which is different from the subsequent task of writing it down and communicating it. This practice, be material, intellectual or discursive, requires both theory and communication. Inclusive research methods, such as oral histories and anthropological turns, intersectional perspectives, and geographic variations to dominant narratives, number among recent scholarly developments, which aid in this task.

“The exercise of collective choice in the exploration of a [hu]man-made future depends not only upon the use of sufficiently powerful methods but also on the public acknowledgement that methods must be continually remodeled to reflect the responses and insights, the beliefs and dis-illusionments, the protests and back-lashes, the moods and fantasies, the laughs and cries, that may result from the use, or the mis-use of our extending powers. In short: methodology should not be a fixed trace to a fixed destination but a conversation about everything that could be made to happen.” (King, op cit, p.71)

These words, written by Jones in 1984, suggest that conversation is part of responsible, flexible practice. Following his dictum counteracts the simplification of design methods to behaviour training as well as the reduction of a creative, ambiguous and evolving work to systematic, algorithmic protocols for design problem-solving.

5. Conclusion

This strand provides a structure for conversation, a kind of prospecting that allows experimentation and reflection, exposing tensions and creating synergies. In a paper called “Design Research: Towards a History”, presented at the 2010 DRS conference, Victor Margolin argued, “New connections need to be made between researchers who study design’s meaning in the past, present, and potentially in the future and those who are doing the research that is generating new and unprecedented products” (Margolin, op cit, p.7). Margolin outlines not only the early history of the DRS but also the societies, conferences and “communities of discourse” that have proliferated but not always communicated since 1962. He also underscores that the aim of these communities should not be to streamline design research to a common goal but to improve the quality of work and facilitate a “greater understanding of design as a social phenomenon” (Ibid., p.6).

This strand sets out to explore areas for collaborative discourse, broadly defined, between design historians and design researchers: accessible communication networks, multiple strands of research and contribution, emphasis on people over products towards sustainable, meaningful and ethical design. Our goal here is to investigate mutual interests in histories for future-focused thinking that can inform current communities of discourse in design. This essential exercise demands we question the status, context and nature of design itself rather than accept it as a social construct. We argue such action involves future thinking across constituencies of history, theory and practice; this, to borrow a principle from Jones, is design at the level of life (Jones, 1991).

Acknowledgements: The authors thank Professors Jeremy Aynsley and Cheryl Buckley for their support and advice on shaping this panel and to colleagues and members of the Design History Society. Especial thanks to Professor Peter Lloyd and the DRS2016 conference committee as well as the paper reviewers – this conference is the product of much commitment to and investment in design.

6. References

- Bayazit, N (2004) Investigating design: a review of forty years of design research, *Design Issues*, 1, pp.16-29.
- Buckley, Cheryl (2009) Made in Patriarchy: Theories of Women and Design- A Reworking’, in Brody, David and Clark, Hazel (eds.) *Design Studies. A Reader*, Berg.
- Cross, Nigel (1993) A History of Design Methodology, in *M. J. de Vries et. al. (eds.), Design Methodology and Relationships with Science*, Kluwer Academic Publishers, pp.15-27.
- Design Research Society (n.d.) History of the Design Research Society, <http://bit.ly/1q9PK9k> [Accessed 9 May 2016].

- Jones, J.C. (1992) *Design Methods* 2nd ed., Van Nostrand Reinhold.
- Jones, J.C. (1991[1984]) *Designing Designing* 2nd ed., Architecture Design and Technology Press.
- Gloag, John (1944) *The Missing Technician in Industrial Production*, George Allen & Unwin.
- Goslett, Dorothy (1984[1960]) *The Professional Practice of Design*, 3rd ed., Batsford.
- Grand, Simon & Jonas, Wolfgang (2012) *Mapping Design Research*, Birkhäuser.
- Gray, Milner (1946) The Design Profession, in Read, H. (ed.), *The Practice of Design*, L. Humphries.
- King, Andrew J. (1995) [Review] Design Methods by John Chris Jones; Designing Designing by John Chris Jones. *Journal of Design History*, 8 (1) pp.70-75.
- Levrant De Bretteville, Sheila (1999[1973]) Some aspects of design from the perspective of a woman designer, in Bierut, Michael, et. al. (eds.) *Looking Closer 3: Classic Writings on Graphic Design*, Allworth Press, pp.238-245.
- Lippincott, J.G. (1947) *Design for Business*, P. Theobald.
- Margolin, V. (2010) Design Research: Towards a History. Proceedings of the Design Research Society International Conference "Design & Complexity". Université de Montréal, Montreal, Canada, 7-9 July 2010
- Pavitt, Jane (2012) Input/Output: Design Research and Systems Thinking, in Reeve, Octavia (ed.) *The Perfect Place to Grow: 175 Years of the Royal College of Art*, Royal College of Art, pp.129-139.
- Read, Herbert (1934) *Art and Industry: the Principles of Industrial Design*, Faber & Faber.
- Slann, Peter A. (1963) Foreword, in Jones, J. C., Thornley D. G. (eds.) *Conference on Design Methods* (pp. xi-xv), Pergamon Press.

About the Authors:

Dr Harriet Atkinson is a design historian whose research interests centre on designers' work within 'official' contexts. She completed her PhD in design history at the Royal College of Art (awarded 2007) and teaches history of art and design at University of Brighton.

Dr Maya Rae Oppenheimer is a designer, writer and educator. She holds a PhD in Humanities & Cultural Studies (London Consortium) and teaches in the Critical & Historical Studies Department at the Royal College of Art.

¹ There were the early "fruitless attempts to establish a published journal, and equally fruitless internal debates about the Society's goals", which led to inactivity, only to be revived by the 1971 DRS Manchester conference on the theme of Design Participation (DRS, n.d.).

² An early leaflet advertising DRU's services had stated one of the group's key aims was "to find out by comparative research where British products lag behind the products of other countries" and "to carry out research into the needs of the consumer, realized or unrealized, and into the ability of the machine to meet those needs" (DRU leaflet, c.1946, Scott Brownrigg DRU Archive). According to DRU's logic, if research was carried out, design would be more successful and more profitable.