Spatial Imagination in Design

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Overview: Situating *Spatial Imagination in Design*

This cluster developed out of a conversation between Peg Rawes and Jane Rendell which highlighted our theoretical, historical and practice-led interest in the role of the imagination in spatial design practices. Through our conversation we identified how the imagination is frequently misunderstood and/or overlooked in both professional and academic discussions in the spatial and architectural design disciplines that prioritize determined or predicted relations between the designer, users and products. From this perspective the built product is seen to demonstrate (or prove) the intellectual and 'reasoned' control of the design process by the designer, the responses of the user, and the economic, intellectual or professional success of the product. The imagination features here as a neglected constituent of the cultural, social and historical value of architectural and built environments, and in many cases the spatial imagination is considered in what we would call *negative* terms, for example: as indicative of uncritical, populist or frivolous modern architectural design;[1] as a sign of amateur or immature design processes – those that relate to either, the untrained or unprofessionalised production of design, or to the responses of an 'immature' reason, for example, play or a child's engagement with spatial design and environments;[2] as evidence of 'irrational' intuition – despite the positive 'all-in-one-grasping' which an intuitive understanding of spatial design might designate, the imagination is more frequently allied to knowledge which is 'unruly' or 'unreasonable', and is therefore positioned in opposition to the production of design through deterministic, rational and reasoned thought;[3] as gender-specific – linked to 'feminine' or therefore 'inadequate' concepts or codes of behaviour, for example

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[1] See, for example, the 'frivolous' imagination associated with buildings by architects such as Ron Herron, *Imagination Building*, (London, 1989) or Alsop Architects, Peckham Library (London, 1999), and Ontario College of Art and Design (Toronto, 2004).

[2] See Aldo van Eyck, children's playgrounds in Amsterdam (1947-1978), or Mark Dudek's *Kindergarten Architecture: Space for the Imagination* (Spon Press, 2000) in which children's games represent 'unconscious' design activities that inspire professional, modern architectural design of playgrounds and schools.

[3] Frank Lloyd Wright, *An Autobiography* [1932] (Horizon Press, 1987), refers to his childhood fondness for Fröbel's blocks, suggesting an early aptitude for imaginative spatial design awareness.

values inherited from eighteenth-century European understandings of the 'genius';[4] as disembodied and fantastical – in opposition to the empirical, material manufacture of design, and thereby relegated to general rather than specific designs of an idea, space or artefact.

In response to these common cultural, social and historical perceptions which continue to inform understandings of design (even in the twenty-first century), we set out to develop the project in order to address each of these negative associations. In particular, we propose the following counter-arguments through which to reconstitute the spatial imagination in design as an active and critical research environment, enabling the imagination to be understood as a positive and productive constituent in the design process:

First, that the spatial imagination needs to be uncovered from within, or introduced into, the professional and academic design context. Here we suggest that prioritizing the imperative of reductive scientific or axiomatic design procedures to produce 'clear truths' or 'complete' objects conceals the *actual* indeterminacy of these complex cultural processes.[5] Second, that the spatial imagination is politically and culturally specific.[6] Here we propose that understanding specific cultural and political imaginations as belonging to the individual designer and user, enables the imagination to positively inform understandings of the design process, and as a result, such understandings of the imagination may therefore inform and reflect the specific cultural, historical and political diversity and value of the architectural and built environment to the design community and beyond. Third, that the spatial imagination may be a temporal form of design. Here we argue for the production of a narrative that enables understandings of spatial processes in relation to temporal conditions, for example, the relationship between an individual's lived experiences and memory in relation to the spatial organisation of the modern city.[7] Fourth, that

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[4] Christine Battersby, *Gender and Genius: Towards a Feminist Aesthetics* (Pluto Press, 1989) provides a critique of the masculine and feminine forms of imagination which excluded eighteenth-century women from having access to 'reason'.

[5] See, for example, an examination of Leibniz's 'fictional' geometry in Peg Rawes, 'Plenums: Rethinking Matter, Geometry and Subjectivity', Katie Lloyd-Thomas (ed.), *Material Matters* (Routledge, forthcoming, 2006).

[6] See, for example, Guy Davenport, *The Geography of the Imagination: Forty Essays* (David R. Godine Publishers, 1997).

[7] The philosophical writings of Walter Benjamin, including, *One Way Street* (Verso, 1992), explore how temporal narratives are produced by the individual in the modern twentieth-century city.

the spatial imagination contributes to the designer's and user's embodied experiences and understandings of the urban and built environment. Here we demonstrate that an individual's sensory and perceptual engagement with an environment or space is, in part, constructed by his/her powers of imagination.[8] Finally, we critique the spatial imagination as a design agent which augments scientific understandings of design that are generated by deterministic design procedures, and offer instead self-reflective modes of practice-led knowledge to academia, the design professions and the public at large.[9]

Activities 1: Processes of *Spatial Imagination in Design*

Our cluster was composed of fifteen members, drawn from architecture, exhibition, product and interactive design; fine and public art; psychotherapy, history, economics and philosophy; structural engineering and construction management, with project partners Kate Trant of CABE (Commission for Architecture and the Built Environment) and Greg Cowan of the RIBA (Royal Institute of British Architecture). Through a series of three workshops, each one devised and led by cluster members, and held at three monthly intervals throughout 2005, we explored the spatial imagination as a mode of perception and tool of production in the experience and design of space, through particular design processes of: 'modelling', 'writing' and 'drawing'.

Starting with visits to two very different exhibition collections, the modelling workshop focused on 'immersion' and allowed us to investigate how various qualities of the spatial imagination – paranoid, critical, intuitive, perceptual, temporal – produced a range of relationships to objects and places. The cluster was divided into two groups. One visited the Museum of Childhood, the other the Hornimann Museum plus the Dulwich Picture gallery designed by Sir John Soane. Subsequent experiments – responses to our 'immersion' in the museum environments – drew on a range of images and materials to produce new objects that provided the opportunity for conversations concerning chance, wandering and performance in the design process to emerge.

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[8] See, for example, Peg Rawes, 'Reflective Subjects in Kant and Architecture', *Journal of Aesthetic Education*, (University of Illinois Press, forthcoming, 2006).
[9] See Georges Perec, *Species of Spaces and Other Pieces* (Penguin, 1997) where Perec suggests how mathematical procedures are also creative qualities in the spatial design of the built environment and literary texts.

The writing workshop took further our nascent interests in how imagined space exists simultaneously and dialectically with real space. Such concerns were encourage to unfold during our walk through London led by environmental artists Platform, following the colonial expansion of the East India Company. At certain sites, imaginative projections – geographical and historical – were superimposed onto, and at the same time triggered by, our understandings of 'real' or material space. An accompanying writing workshop utilized principles of juxtaposition to create writing modes where objective and subjective experiences were combined.

The drawing workshop took the form of a group 'crit' where each cluster member presented their work in progress for the forthcoming exhibition. The intention was to present the research in such a way that it exposed the soft underbelly of the design process – in opposition to the usual form of the design 'crit' where in anticipation of a difficult critique the presenter adopts a defensive position, negating the possibility for any 'real' development or discussion of the issues raised through the work, we produced a situation conducive for the emergence of critically-engaged dialogues.

Activities 2: Products of *Spatial Imagination in Design*

Over the year, the development and design of the website by Stuart Munro played an important role in communicating our on-going activities to an internal and an external audience through two routes, one which 'explains' the cluster's research processes to the user, and another which allows the user to 'discover' places in which to get lost, drawing strongly on more intuitive and less determined states such as curiosity and uncertainty.[10]

From the outset it was the group's intention to develop our understandings of the spatial imagination through the production of artefacts. The site chosen for the exhibition of these works, the Domo Baal Gallery, housed in an eighteenth-century house in Clerkenwell, London, provided an important context for the development of the research – this was a location that provoked our spatial imagination, both through the architectural features of the original design, but also through patterns of historical and contemporary occupation.

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[10] See www.spatialimagination.org.uk

The building was designed between 1730 and 1750. The textured edge and central rose of the white ceiling in the main first floor room of the gallery were the most evocative manifestations of the delicacy of spatial imagination in the rococo, an architectural style connected with this historical period. The initial occupation of the building as a family home and a solicitor's office had left traces, hinting at the complex negotiations between domestic and institutional space which continue in the building today, where the everyday life of a family coincide closely with the ongoing activities of an art gallery.

This place provided an opportunity for each cluster member to make a new work drawing on understandings gained from previous conversations, visits and walks, yet informed by each individual's own particular interest in the spatial imagination in design. The final works took the form of proposals and exhibits – including sound pieces, texts, drawings and models – that operated across the disciplines of art, design and architecture communicating the spatial imagination through a configuration of material designs. [fig. 1] Out of the production of these art, architectural and design works, three key thematics emerged:

First, a number of projects looked at the use of the imagination in the operation of political power – both as a tool of oppression and of resistance. For example Faye Carey's work, taking the form of a textile printed with symbols used to identify jews, examined how the imagination has been used as a 'perverse' legal power by societies to divide, conceal and repress jewish communities into 'ghettos', raising questions about the responsibility of the spatial imagination in architectural construction. [fig. 2] The walking-works of collaborative environmental and interdisciplinary artists' group Platform presented as an audio piece in the gallery invited the participant to imagine the production, management and labour embedded in the built environment and in so doing to animate the imagination as critical tool. For Katja Grillner, critical theorist Walter Benjamin's notion of 'distraction' suggested the power of the peripheral imagination to rethink architectural and landscape criticism from a political perspective, shifting the critic's gaze and attention to what is out of, rather than in, focus.

Second, a number of works combined the traditional design processes of drawing,

writing and modelling. For example, Brigid Mc Leer's 'writing-as-drawing', located in a gap between two doors, in re-writing Alain Robbe-Grillet's novel *La Jalousie* (1957), explored how the emotion of jealousy heightens the perception of space between individuals. [fig. 3] In various works the architectural drawing was re-configured. While Peg Rawes retrieved the technical geometric imagination through the aesthetic experiences of drawing while thinking, in Christine Hawley's architectural drawings the imagination provided a principle of transposition, which connected the different notational modes of presentation with the material and physical properties of the architectural process and form. In what she calls a 'drawing-as-model' Penelope Haralambidou's work demonstrated the extent to which the imagination produces multiple space-times. In placing the architectural model she produced as a design tool for curating the exhibition in the corner of the gallery, she made a *mis-en-abyme* or a space within a space. [fig. 4]

Third, an understanding of imagination as a space of ambiguity between designer and user could be seen in a number of works. For Jonathan Hill, drawings operated as 'ambiguous objects' indicating the power of the eighteenth-century imagination to connect the individual with architecture and the landscaped garden, while Metaphor's miniature models of landscape furniture existed in the contemporary moment but also led the viewer back into the imaginative re-enactment of an eighteenth-century pastoral landscape. [fig. 5] In Rory Hamilton's work the imagination animated space in moving silhouettes, which oscillated between legible and illegible images, while in the drawing instruments that Nat Chard produced, the imagination negotiated an indeterminate relation with architectural space. [fig. 6] In repeatedly writing the word 'purdah' (a word which refers to a screen or architectural element as well as a veil or item of clothing) Jane Rendell transformed the window – an architectural site of visual connection – into a screen – one of separation. Where the definition of purdah in certain versions of the Koran, demands covering as a response to female embellishment, 'An Embellishment: Purdah', suggested that artifice structures rather than decorates divisions in the gendering of space. [fig. 7]

And finally, all the works converged in their desire to critique conventions of architectural design practice through productive methods. The exhibits were physical statements but ones that did not seek to be understood as demonstrations or applications of pre-existing theoretical ideas. Rather these were provisional works,

which registered the importance of discovery in the process of production. Each piece was an example of the materialization of the spatial imagination in action.

An accompanying catalogue played a key role in providing a more focused and complementary view of each of the fifteen contributors' works in progress. In the editorial we offered a framework for thinking about the ways in which the cluster's research interests ran through the different practices, methods and works in the exhibition. And through image and text, each cluster member contributed their own perspective on the various ways in which the spatial imagination is both a tool for investigation and proposition in the design of objects and spaces.[11] In a symposium, 'Spaces of Exchange', held at CABE, with speakers from the cluster, partners Kate Trant and Greg Cowan, and Nathalie Weadick from The Architecture Foundation, Daisy Froud from 'Agents of Change', and developer Lee Mallett, we discussed in more detail the role of the imagination in both academic and professional design research.

Reflections 1: *Spatial Imagination in Design* as a Prototype

Spatial Imagination in Design has enabled us to generate a new understanding of the 'prototype' in contrast to its meaning in engineering-based design processes. Taking place in the second workshop of the project, Rawes, together with the artist Rory Hamilton and engineer Jon Rogers, introduced ways in which 'immersive' understandings of spatial design related to the imagination. Hamilton and Rogers introduced the group to the notion of 'prototyping', a discussion which the design consultancy IDEO has transformed out of the rigid rules of testing in laboratory experimentation into testing design products in the everyday world.[12] Taking pictures of the everyday with throw-away cameras, the group developed a series of spatial narratives in response to three museum collections which showed how prototyping is a design activity that is not just demarcated by scientific or technical procedures of iteration. Instead, this workshop revealed how spatial imagination is embedded throughout the design process.

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[11] See Peg Rawes and Jane Rendell (eds), *Spatial Imagination* (The Bartlett School of Architecture, UCL, 2005).
[12] See Marion Buchenau and Jane Fulton Suri's article, 'Experience Prototyping' (http://www.ideo.com/media/info.asp?x=6).

The role of the prototype is evident on a number of different levels; for example, the prototype is a kind of aesthetic structure for the production of the design drawing, text or model. Rogers' exhibit in the exhibition was a plinth that contained a digital animation of a foggy walk in Scotland and showed how an Ordenance Survey map functions as a disfunctional prototype of the actual geographical location when it is used to navigate a walk in inclement weather. [fig. 8] Alternatively, Yeoryia Manolopoulou's model of shutters for a house in Greece operates as both a 1:1 model in itself, but also as prototype for the actual construction of this structure in the building. [fig. 9]

Moreover, the project showed that prototyping also constructs relationships between the activities of the designer and user. First, the designer's intentions provide an initial prototype. Second, multiple variations of the prototype are generated by the user's own interaction with the building, space or environment. Third, each contributor's exhibit represents a distinct, original prototype of spatial imagination during the project, one that also endures beyond the boundaries of the one-year project in the development of an individual's spatial design practice or theory. Fourth, the project showed that the exhibition is an additional, sometimes difficult, prototype of the design process. As a result, the cluster generated multiple ideas, artefacts, tests or prototypes through its activities, further underscoring the material diversity of the imagination in spatial design and the world at large.

Reflections 2: *Spatial Imagination in Design* as Research

The year of research activities comprising *Spatial Imagination in Design* serve to embed the following observations concerning interdisciplinary and practice-led research.

First, the value of practice-led research is its role in questioning and redefining modes of research traditionally developed in the sciences and humanities. In 1993, The Royal College of Art, London, published Christopher Frayling's paper 'Research in Art and Design', where Frayling put forward a tri-partite model of 'in', 'through', 'for', in order to clarify the complex set of relationships between design and research. In the last decade, research 'for' and 'into' design has developed non-problematically, partly because such work can easily be positioned within existing disciplinary modes

in science and the humanities. Research 'through' design has produced more debate and is currently being further developed in discussions around the relation between theory and practice. In 1999 the AHRB put forward a set of criteria for assessing the extent to which practice-led funding proposals could qualify as research. This required that a proposal be defined according to four elements – questions, methods, contexts, and modes of dissemination. This has been widely adopted across the research community as a 'definition' of practice-led research.[13] However, it has become increasingly clear, and the creative processes adopted by the practitioners in *Spatial Imagination in Design* clearly indicate, that practice-led work differs from more traditional 'academic' text-based research in its sequencing of the four elements of research processes. [14] For example, in much practice-led research, the process operates through generative or propositional modes, producing works that may then be reflected upon, along the lines of Donald Schön's 'reflection in action'.[15]

Second, research 'through' architectural design operates between the architectural profession and its educational and academic counterpart – the university. This is a site of intersection that often operates according to differing value systems, and so it is vitally important that we examine carefully the expectations and methodologies of design research in these different contexts and for these divergent user groups. For example, while 'critique of concepts' might count for an academic audience as the most original form of new knowledge to be gained in design research, the 'application of concepts' might be considered more viable to a client-based in industry. The precise mechanisms, therefore, for exchanging knowledge between different parties in the production of new research understandings cannot be underestimated.

Third, research aims and methodologies vary across different forms of practice-led research, namely art, design and architecture, as well as those of theoreticians who view writing and criticism as a form of practice-led research. For example, as became apparent in the development of works for the *Spatial Imagination* exhibition,

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[13] AHRB, 'The RAE and Research in the Creative & Performing Arts', (September, 2003) http://www.ahrb.ac.uk/strategy/policy/response/the_rae_research_in_the_creative_performing_arts.asp
[14] For an extended discussion of points one and two see for example, Jane Rendell, 'Architectural Research and Disciplinarity', *ARQ,* v. 8, n. 4, (2004), pp. 141-7.
[15] See Donald Schön, 'Educating the Reflective Practitioner', (1987). See educ.queensu.ca/~ar/schon87.htm.

artists and designers are frequently interested in gaining different kinds of knowledge and do so through diverging forms of acquisition and dissemination. If traditionally, design has tended to define its methodology in response to a brief, where the creative outcome is the solution to a posed problem, as a growing number of artists adopt design-like working methods, producing objects that 'look like' designed artefacts, the distinctions between art, design and architecture are becoming more complicated. At the same time, designers are taking on the basic tenets of conceptual art, which we might define as a critique of the terms of engagement of the brief, and so moving towards modes of practice traditionally associated with fine art, and so further increasing the complexity of interdisciplinary practices.

Fourth, it is important that we define carefully what the terms interdisciplinarity and multidisciplinarity mean in the current research context. In both academic and arts-based contexts, the term interdisciplinarity is increasingly used interchangeably with multidisciplinarity, yet historically the terms have been used to refer to quite different modes of research: multidisciplinarity to a mode of research where a number of disciplines are present but that each maintains its own distinct identity and methods; interdisciplinarity to a mode of research where individuals move between and across disciplines and in so doing question the basic tenets of their own disciplinary procedures, including legitimate objects of study, contexts, terminologies and methodologies. Given the complex terrain of interdisciplinary practice noted above in point three, it is vital that the critical context for interdisciplinarity as defined in 1998 by Julia Kristeva is maintained. [16] Interdisciplinary work is not simply procedural but demanding emotionally and politically, as well as intellectually, because this way of working requires researchers and practitioners to be open to transformation and change.[17]

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[16] Julia Kristeva, 'Institutional interdisciplinarity in theory and practice: an interview', in Alex Coles and Alexia Defert (eds) *The Anxiety of Interdisciplinarity, De-, Dis-, Ex-*, vol. 2 (Black Dog Publishing, 1998) pp. 3–21, pp. 5-6.
[17] For an extended discussion of points three and four see for example, Jane Rendell, *Art and Architecture: A Place Between*, (IB Tauris, 2006).

Further suggested reading

Edwin Abbott, *A Flatland: a Romance of Many Dimensions* [1884] *(*HarperCollins, 1983).

Louis Aragon, *Paris Peasant* [1926] (Exact Change, 1994).

Mieke Bal, *Louise Bourgeois' Spider: the Architecture of Art-Writing* (University of Chicago Press, 2001).

Roland Barthes, *Camera Lucida: Reflections on Photography* (Vintage, 2000).

Walter Benjamin, *One Way Street* (Verso, 1992).

Jennifer Bloomer, *Architecture and the Text: the (S)crypts of Joyce and Piranesi* (Yale University Press, 1993).

André Breton, *Mad Love* (University of Nebraska Press, 1987).

Victor Burgin, *The Remembered Film* (Reaktion Books, 2004).

Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and the Beautiful* [1757] (Scholar Press, 1970).

A. S. Byatt, 'Old Tales, New Forms', *On Histories and Stories* (Vintage, 2001).

Italo Calvino, 'Cybernetics and Ghosts', *The Literature Machine* (Vintage, 1997).

Janet Cardiff, *The Missing Voice* (Artangel, 1999).

Sverre Fehn, *Pavilion of the Nordic Nations* (Venice Biennale, 1962).

Elizabeth Burns Gamard, *Kurt Schwitters' Merzbau: the Cathedral of Erotic Misery* (Princeton Architectural Press, 2000).

Thomas L. Hankins and Robert J. Silverman, *Instruments and the Imagination* (Princeton University Press, 1995).

Immanuel Kant, *Anthropology from a Pragmatic Point of View* (Masrtin Nijhoff, 1974).

Cristina Iglesias, *Tilted Hanging Ceiling* (1999).See Iwona Blazwick, *Cristina Iglesias* (London: Whitechapel Art Gallery, 2003).

Steve Pile, *The Body and the City* (Routledge, 1999).

Marcel Proust, *Remembrance of Things Past* (trans. C.K. Scott Moncrieff) [1913] (Chatto and Windus, 1941).

Do-Ho Suh, *Seoul Home* (1999). See for example, Lisa G. Corrin and Miwon Kwon, *Do-Ho Suh* (London: Serpentine Gallery, 2002).

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Fig. 2 Faye Carey, 'Cum Nimis Absurdum: Perverse Imagination/Endless Solution', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 3 Brigid Mc Leer, 'A Jealousy', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 4 Penelope Haralambidou, '3 John Street, 1:50', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 5 Metaphor, 'Hardwick Park: Paradise Restored', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 6 View of Exhibition showing, from the left, the work of Penelope Haralambidou, Jonathan Hill, Nat Chard and Yeoryia Manolopoulou, *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 7 Jane Rendell, 'An Embellishment: Purdah', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 8 Jon Rogers, 'Unmarked Path', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.

Fig. 9 Yeoryia Manolopoulou, 'Shutters, House F', *Spatial Imagination*, (London: The Domo Baal Gallery, 2006). Photograph: David Cross of Cornford & Cross.