The book form inherently has within it the notion of the archive: it records experience and serves as a document itself. Tim Guest suggests, in his introduction to *Books by Artists*, that the documentary function is one of the four main thematic elements of artists' books.[1] Due to its repository quality, the book is a natural vehicle for the *post factum* documentation of architecture.

In this chapter, the book and its role as documentation is surveyed, specifically the documentation of event, place, journey and interior space. The qualities and characteristics of books, as described in Chapter 1 – pagination and the frame of the page, multiple pages and sequence, structure, the objecthood of the book and the act of reading – offer the reader a particular way of approaching this content, and the documentation of time passing.

This chapter explores the points of intersection between books and architectural representations, such as drawings and models, allowing the clarification and reshaping of artists' books as representation to occur. The specificity of the book as *post factum* documentation, and its role and potential within the design process as acknowledging the importance of interpretation and reflection is then examined. This chapter further outlines the ways in which books and architectural representation intersect, which is demonstrated in more depth in later chapters.

Recording event, place, journey, movement and time

Books have been used by artists to document performances, and to describe future plans or an unfinished or impossible project.[2] For example, Michelangelo Pistoletto's *L'Umo Nero, Il Lato Insopportable* (*The Black Man, The Intolerable Side*) (1970) chronicles a day in 1969 full of ideas and non-realised works. Although the book is printed documentation, it approaches the status of art in the absence of the artwork.[3]

Books bear witness and give enduring form to personal experience. Books that document

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1   Tim Guest and Germano Celant, *Books by Artists* (Toronto: Art Metropole, 1981), 9.
2   Guest and Celant, *Books by Artists*, 8.
3   Cornelia Lauf and Clive Phillpot, *Artist/author: Contemporary Artists' Books* (New York: Distributed Art Publishers: American Federation of Arts, 1998), 41.

performance art or events, or record a journey or place, categorise larger elements, to make sense of situations, and are of relevance to the study of artists' books and the documentation of architectural representation. Taking the assumption that action is a producer of traces[4], time may be incorporated in this documentation. Time may be present as a gap, occupying the space between an ephemeral act and its record. In 1977, Laurie Anderson's *Notebook* was published. This companion book to four performances is an assemblage of scripts, scores, photographs, anecdotes and audience reactions. It provides a document for a past event. Jochen Gerz's *2146 Steine Mahnmal gegen Rassismus, Saarbrücken* (1993) is the documentation of an art project. This book describes the process of assembling lists of Jewish cemeteries in Germany and inscribing these on paving stones, placed facing downwards, in the square of the Saarbrücken castle.[5] Similarly *In One Ear: A Three Part Story* by Emily Martin (1996, Iowa City: Naughty Dog Press), provides three versions, from different points of view, of a childhood event, through a pop-up accordion book format [Fig. 1]. These books record the ephemeral in another format as *post factum* documentation.

The documentation of place may be seen in books by Lucy May Schofield, of internal photographs of a doll's house – *The Doll's House Series* (2008) – and Tom Sowden's *Homeless People* (2004), in which photographs of Bristol feature abandoned shopping trolleys [Fix. 2]. Tracey Bush has documented the River Thames in books, including *The Thames pH Book* (2001), a multiple of tiny litmus paper books which are dipped page by page in river water, and stamped with the site and pH reading [Fix. 4]; *Printed upon the ICE on the River Thames* (1998), a blind embossed, accordion format map of the river and its contours, with rubber stamped dates and hand-written details of historical events when the river froze enough to skate or walk across; and *River Stairs* (2002), a set of photographs documenting old river access stairs in the Docklands area of London, formerly used for industrial boat activity. In these examples, place is seen as temporally static.

Place, alternatively, may be seen as a location for the action of time. Sol LeWitt's *Brick Wall* (1977, Tanglewood) is a series of thirty black and white photographs taken of a section of a wall at different times of the day and under different light conditions [Fix. 3]. Each image extends to the edges of a single page and the viewer must '"read" the tones of light shifting across the facade of a richly textured surface'.[6] Claudia Renedo Skarneo's *Memento* (2007) records interior furniture placed in front of the buildings of a housing estate in the UK. Their shadows are projected onto the elevations, and recorded with masking tape. Time is included within these books as having an

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4 Celant, in Guest and Celant, *Books by Artists*, 92.
5 Renée Riese Hubert and Judd D. Hubert, *The Cutting Edge of Reading: Artists' Books* (New York City: Granary Books, 1999), 134.
6 Robert C. Morgan, "Systemic Books by Artists," in *Artists' Books: A Critical Anthology and Sourcebook*, ed. Joan Lyons (Rochester, New York: Visual Studies Workshop Press, 1985), 210.

effect on light quality and location, rather than its passage as a sequence.

Place as the location of journey is documented in Sally Waterman's *Journey Home* (2004). This book records the repetition of travelling from Waterloo station, London, to the Isle of White over a five month period. The repeated journey over time aids the definition of what is shown, with each trip's slight variations recorded. Jorge Macchi's *Buenos Aires Tour* (2004, Turner/Musac) offers an alternate route through the city of Buenos Aires [Fig. 5]. Rather than the route being determined by significant places and buildings, it is determined by breaking a piece of found glass over a map, and tracing the fracture lines. Eight itineraries through the city are drawn from the network of these lines, creating intriguing and idiosyncratic routes. *Seven Short Walks* (2002) by Stuart Mugridge is a pocket-size folio contained in a transparent plastic wallet reminiscent of a waterproof map case which, at first glance, seems to be a conventional site-specific walking guide: map signage, grid references, orientation to north, viewing points and descriptions of incidents to enjoy en route in the Grizedale Forest of England's Lake District [Fig. 6] However, the scale remains ambiguously undefined: it is the magnifying glass that emphasises how 'short' these walks actually are. They are 'so diminutive that our "views" scrutinise the surfaces of mosses and lichens, tree-bark, a quarry face, boulders, and stones in a hand-built wall.'[7] In these examples, the particular spatiality of the journey is not incorporated, but instead place as a space that one may move through is documented, that is, the book locates the path of travel.[8]

Alternatively, the movement through space and the particular quality of that space, is shown in flip books, by employing sequential photography. *Eames House Fliptour* (1997, Eames Office/Optical Toys) allows the viewer to journey from the garden, to the interior, upstairs and view back down to the living space. Similarly *Plan Libre: Le Corbusier Villa Savoye* (2007, Mori Art Museum/CAD Center Corp.) moves through the house and terrace through computer generated drawings. In these examples, time is included within the 1:1 scale book object, not as content, but as a sequenced reading experience. *Nella Nebbia di Milano (The Circus in the Mist)* by the Italian designer Bruno Munari, allows the reader to travel forward, through the book's pagination. Black ink on translucent tracing paper expresses scenes of a town in the mist: the fading of the black ink to grey due to the turning of pages is similar to the haze of fog. Towards the end of the book, the

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7   Eyres, Patrick, "On Site-specificity and Storytelling," Catalogue essay for Arcadia id est touring exhibition, curated by Sarah Bodman, (Bristol: Centre for Fine Print Research, University of the West of England), accessed 24 March 2011, http://www.bookarts.uwe.ac.uk/arcpat.htm.

8   'Arcadia id est' (2005–2007) exhibition showed examples of how nature and the landscape are used within the format of the artist's book, through 111 works. These ranged from a celebration of the natural landscape, and our relationship to it, to nature within an urban landscape, or to despair at our destruction of the global environment. Centre for Fine Print Research, University of the West of England, Bristol, viewed 24 March 2011, http://www.bookarts.uwe.ac.uk/arcadia.htm.

circus appears out of the mist, in colour [Fig. 8]. Similarly, the turning of the page of Ed Ruscha's *Every Building on the Sunset Strip* (1966) creates a sense of movement, different from if the book presented the work as one image: paging through the book creates the analogy of time moving [Fig. 9, 10].

Time is included in the book format as the agent which affects change of the book itself. The pages of Finlay Taylor's *Trail* (2002, Pupa Press, UK) were buried, and show the results of snails eating the pages [Fig. 12]. Jude Walton's book *Officially Dead* was buried, exhumed every six months, photographed, and reburied, for a period of three years. The final book is the photographs of this process, with the relic of the original book as a sample. Time in these examples charts the disintegration of the book.

Time as an accumulation of pages is shown in the work of Jane Hyslop. *Wild Plants Collected in Midlothian* (2002) is a series of etchings of collected plants from various sites, with each page representing one month [Fig. 13]. The concertina book unfolds to reveal a continuous frieze from January to December. Similarly, *North Uist* (2000) chronicles the daily botanical drawings of Laurie Clark on an island in the Outer Hebrides [Fig. 11]. *Impressions of Forty Working Days* (1985) records the front page of a daily newspaper reconstituted into an A4-sized sheet by Bea Maddock for forty consecutive days [Fig. 14]. The date and the number of hours worked on it daily are blind-printed onto these new pages. *Space and Time* (2002) by Ken Leslie records the passage of time on one place [Fig. 15]. This double-sided, circular, die-cut book photographs Leslie's garden over the space of a year. Fifty-two equally spaced points were determined, and a section of a weekly photograph is added together over a year. This can be read as a record of the 360 degree turn of the photographer over the course of one year, or the passage of the Earth around the artist.[9] The viewer is brought full circle through the seasons as well as through the garden. Similarly, *GoMA/Flip Book* (n.d., Queensland Art Gallery/Gallery of Modern Art) uses the technique of photographs taken from a fixed location, recording the building process of the gallery [Fig. 7]. Time passing is integral to the structure of these books, through the accumulation of days and, hence, pages.

Bernard Tschumi's description of one mode of architectural drawing is analogous to this accumulation of pages as recording time. The practice of placing successive layers of transparent tracing paper upon one another, each with its respective variations, leading to reworking or refining organising principles of a design scheme, forms a record of a process 'based on intuition, precedents and habit'.[10] Tschumi writes that this method of work makes up one of three relations

9 Ken Leslie, "Space + Time," accessed 13 June 2010, http://www.kenleslie.net/artist_book_files/spacetimedetail2.html.

10 Bernard Tschumi, *Architecture and Disjunction* (Cambridge, Massachusetts: MIT Press, 1994),

within any architectural sequence, the others relating to actual spaces and program.[11] Michael Graves writes that the difference between working on opaque and transparent surfaces ultimately affects the understanding and conceptualisation on any composition.[12] This cumulation of drawings creates a transformational sequence, that is, time as event.

These examples show the documentation of place made by capturing its particular qualities or relevant historical information, and by identifying place as the location of events and the action of passing time. One's passage through a place, in the form of a journey, is also a way of documenting it. Time may be acknowledged as the gap between an event and its documentation in book form. Time may also be included through the cumulation of pages that rely on the passage of time for their making or their reading. The strength of the book format due to aspects of pagination and structure, offer insight to content beyond that of conventional documentation. The seriality and sequencing and 'reading' of the book place it in a unique position in regard to the documentation of architecture. These examples show ways in which the artist's book influences the possibilities for the drawings and photographs contained within them.

With the acknowledgement that all representations omit as much as they include[13], it is time that is neglected in conventional documentation of architecture, which instead offers a version of the building at a static moment in time.[14] Architectural drawings look like they provide a fully complete statement. This is aided by the meaning of the lines within the drawing: every line in an architectural drawing is a line to be built, or one that has been built. However, these drawings can only offer a partial version of the process, due to their moment-in-time quality. In these drawings, 'what disappears is a fundamental dimension of architecture: its temporal experience, which by definition *is not reproducible*.'[15]

The notion of the plan as a segment comes about due to its drawn idealised snapshot of a moment within the life of the building. It can be said that architectural drawings are a sliver of

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11 Tschumi, *Architecture and Disjunction*, 153.

12 Michael Graves, "The Necessity for Drawing: Tangible Speculation," *Architectural Design* 47, AD Profiles 6, 1977, 387, cited in Wood, Peter. "Drawing the Line: A Working Epistemology for the Study of Architectural Drawing," (PhD thesis, University of Auckland, 2002).

13 Jonathan Hill, *Immaterial Architecture* (London: Routledge, 2006), 56.

14 The use of photography to document a built project has the same approach to time: 'Traditionally, the photographer gains access to a building once it has just been completed and ideally landscaped, yet before it has entered its normal life cycle in the social and physical fabric of the city. The freezing of this metaphysical condition on the film characterises the bulk of images in design publications.' Pierluigi Serraino, "Framing Icons: Two Girls, Two Audiences, The Photographing of Case Study House #22," in *This is Not Architecture: Media Constructions*, ed. Kester Rattenbury (London: Routledge, 2002), 129.

15 Pierre-Alain Croset, "The Narration of Architecture," in *Architectureproduction, Revisions 2*, guest ed. Beatriz Colomina, ed. Joan Ockman, (New York: Princeton Architectural Press, 1988), 201.

illumination of a moment in the process and time of a building. The passage of time, both of a building's life and of the design process, is not acknowledged. Norman Bryson has written of this quality:

> Stabilizing the entity as a fixed Form, with a bounded outline, is possible only if the universe surrounding the entity is screened out and the entity withdrawn from the universal field of transformations. The concept of the entity can be preserved only by an optic that casts around each entity a perceptual frame that makes a *cut* from the field and immobilises the cut within the static framework. But as soon as that frame is withdrawn, the object is found to exist as part of a mobile continuum that cannot be cut anywhere.[16]

For example, the house, as drawn in documentation, casts itself as the 'Form' of the house, and separates itself from the rest of the 'house process.' The occupancy or life of the space once built is a complex system, yet this type of representation presents it as simplified. The architectural orthographic drawing, in being separate from the 'house process', embodies the notion of the fragment as a snapshot in time. Similarly, Eduado Cadava, in citing Walter Benjamin's description of photography – that the 'past must be held fast as an image flashing within the Now of recognizability'[17] – describes the camera as an instument of citation, in the seizing of an image in the split-second temporality of the shutter's blink.[18] The consequence of a frozen, documented snapshot in time is to elevate that particular moment to represent all moments. Alternatively, the book admits time through the accumulation of pages, its content, and the reading of it, as a performance in time.

An example of a commercially published book which includes time within the documentation of a residence is Gary Chang's *My 32m² Apartment: A 30-year Transformation*.[19] This intriguing book documents the author's original family apartment in Hong Kong through five iterations, from 1976 – when it was inhabited by the six members of the Chang family plus lodger – through to 2007 – with just the author inhabiting it. Each stage of the apartment is comprehensively explained through plans, internal elevations, perspectives, sketches, text, photographs and ephemera. In this example, it is the succession of each of these, that begins to record time: in flipping between the various iterations of the apartment, the reader begins to note the changes and internal shifts over

16 Norman Bryson, in *Vision and Visuality*, ed. Hal Foster (Seattle: Bay Press, 1988), 97–98.

17 Benjamin, *Gesammelte Schriften*, ed. Rolf Tiedemann and Hermann Schweppenhäuser (Frankfurt am Main: Suhrkamp Verlag, 1972), 591–2, cited in Eduardo Cadava, *Words of Light: Theses on the Photography of History* (New York: Princeton University Press, 1997), 43.

18 Cadava, *Words of Light*, 43.

19 (Hong Kong: MCCM Creations, 2008).

time. Time is also included in the documentation of the final phase, through cumulative drawings of the moveable elements of the apartment; a series of twenty-four plans highlighting the discrete activities that the apartment caters for; and photographs taken at twenty-four different times of the day, showing spatial flexibility and lighting levels [Fig. 16, 17, 18]. Another way of including time is demonstrated in Stephen Willats's *Stairwell* (1970, Coracle Press) [Fig. 19]. This book follows a school-building staircase from top to bottom from a sequence of positions, in which Willats always looks both up and down.[20] This non-narrative sequenced book, according to Drucker, 'embodies a manual of looking as a self-conscious act.'[21] Its photographs include the wear and tear of a building – graffiti and dirt – and the text reinforces a spatial specificity: 'A jet plan zooms overhead'; 'The long groan of wind'.[22] Rather than an idealised moment of time, as shown by plans, sections and elevations, *My 32m² Apartment* and *Stairwell* acknowledge the notion of architectural palimpsest.

Another example which includes time, although far less comprehensively, is *The Presence of Mies*. Five photographs of Mies van der Rohe's Toronto-Dominion Centre (1968) open this book, edited by Detlef Mertens [Fig. 20]. They are taken on 26 September, 1988, at different times of the day, from the same spot and register the transformation in its appearance over the course of the day. According to Mertens, this building has often been interpreted as exemplary of the self-referential and transcendental modernist object.[23] However, the photographs by Peter McCallum reveal the building to be continually shifting under the different light and weather conditions, 'from total opacity to total transparency'.[24] Mertens chooses this opening sequence as an analogy for the pursuit of the book, that is, the reappraisal of the building and its architect: 'Could it be that this seemingly familiar architecture is still in many ways unknown, and that the monolithic Miesian edifice refracts the light of interpretation, multiplying its potential implications for contemporary architectural practices?'[25]

The artist's book, in its seriality and sequence, is able to admit narrative to the documentation of architecture. Le Corbusier has written that 'Architecture is not a synchronic phenomenon but a successive one, made up of pictures adding themselves one to another, following each other in time and space, like music.'[26] According to Pierre-Alain Croset, narration is the only technique that

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20 Johanna Drucker, *The Century of Artists' Books* (New York City: Granary Books, 2nd edition, 2004), 276.
21 Drucker, *The Century of Artists' Books*, 276.
22 Drucker, *The Century of Artists' Books*, 276.
23 Detlef Mertins, "Introduction: New Mies," in *The Presence of Mies*, ed. Detlef Mertens (New York: Princeton Architectural Press, 1994), 23. Philip Johnson has referred to it as 'the biggest Mies in the world'. Mertens, *The Presence of Mies*, 23.
24 Mertens, *The Presence of Mies*, 23.
25 Mertins, *The Presence of Mies*, 23.
26 Le Corbusier, *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable*

can represent built architecture in all its dimensions, in its evocation of the temporal experience: that is, the perception of the body senses inside the building – 'the light, the resonance of steps and voices, the vertigo, the impression of intimacy, the muscular effort of climbing a stair, the refreshing sensation offered by the marble surface of a hand rail.'[27] This necessity of architectural representation relates to Philip Johnson's concept of procession – the experience of moving through a building – being the most important element of architecture. This aspect reinforces architecture as existing in time.[28]

An example of Johnson's procession is shown in the *Eames House Fliptour* in which the reader travels within the house through photographs. Another example of narration, not through progress of movement, but rather through the mere cumulation of a repeated image, is in the work *Panique Général* (1993, Editions de l'Observatoire), by Francine Zubeil [Fig. 21]. In this book, the same black and white photograph of a young bride appears on every page of milky white translucent paper. The relentless repetition creates an uncanny work.[29] The bride, whose face is entirely dark, is veiled and so has a ghostly quality. The translucency of the paper lends a blurred, eerie dimensionality.[30] The one image is repeated but different each time, due to the transparent paper. The images are not perfectly aligned and the slight displacement gives the impression the woman is moving slightly; the image of the bride seems to exist in space.[31] A single line of text printed in fine red letters – 'this disarray of the soul' ['*ce déssarroi de l'âme*']; 'a feeling of suffocation' ['*une sensation d'étouffement*'] – creates a space of enclosure and fear.

This example demonstrates that the static quality of architectural projections may be used, through their sequence on multiple pages, to achieve narrative. Pages within the book, rather than remaining separate spatially, are able to connect in relations of continuity, 'their surfaces functioning as part of a whole image or field.'[32] By re-presenting architectural drawing, a different outcome results.

The role of artists' books within architecture is in the documentation of site analysis and context, the generation of a design project, the progress of a project, the recording of a built work,

to *Architecture and Mechanics* (London: Faber and Faber, 1961), 72–3, cited in Charles Rice, *The Emergence of the Interior: Architecture, Modernity, Domesticity* (London: Routledge, 2007), 107.

27 Pierre-Alain Croset, "The Narration of Architecture," in *Architectureproduction, Revisions 2*, guest ed. Beatriz Colomina, ed. Joan Ockman, 202.

28 Paul Goldberg, *Why Architecture Matters* (New Haven: Yale University Press, 2009), 125.

29 Drucker, *The Century of Artists' Books*, 137.

30 Drucker, *The Century of Artists' Books*, 137–8.

31 Janis Ekdahl, "Artists' Books and Beyond: The Library of the Museum of Modern Art as a Curatorial and Research Resource," *International Journal of Special Libraries* 33, no. 4 (1999):246, accessed 5 May 2010, http://archive.ifla.org/VII/d2/inspel/99-4ekja.pdf.

32 Drucker, *The Century of Artists' Books*, 131.

and the experience of the person within the space. The sequence of the codex structure and form of the book allows drawings and photographs to be presented in a particular way through the processes of noticing, recording, collecting, collating, categorising, and editing. Time may be admitted within this documentation, both as a factor of the content, and as a consequence of the structure of the book. The book offers another mediating representation through which space is read, as a full-scale object.

The book embodies the notion of the difference of gaze that an alternative representation offers, which is then part of an ongoing design process. The realm of *post factum* documentation has been seen to exist separately from the design process.[33] Architectural drawings, whose primary function is not necessarily to project temporality forwards, may be relegated to historical drawings. Due to the classification of architectural representation, there exists a hierarchy of importance of drawings and models that are produced, and therefore, examined. This defines the design process as being made up of certain activities, while excluding others. A clear and distinct separation exists in the design process, due to this naming, which is defined by its associated drawings. David Leatherbarrow questions how these two types of drawings co-operate in the single task of creating and representing architecture.[34] With this categorising of drawings, documentation is seen as being a part of the design process, but at the end of that process. Documentation, therefore, is regarded as having a prescriptive endpoint, rather than being part of an open-ended improvisation.

The most conspicuous examples of drawings made after-the-fact are historical recordings of buildings and measured drawings of built projects, drawings not commonly associated with the design process. However, *post factum* representation encompasses forms other than these. Examples of drawings that incorporate a reading of the original, that is, of that which exists in some form, include analyses and *parti* diagrams of precedents; site drawings and models; interpretive context studies; program analyses; mappings of the design process; and conceptual drawings and models done after the project is completed. These examples are all produced within various design processes. By naming these examples as after-the-fact documentation widens the definition of *post factum* documentation and includes it in the design process. This then repositions books, with similar content, within an expanded notion of the design process, in order to displace the finality of the built object as the endpoint of that process. This highlights the importance of documentation as interpretation and the generative and propositional possibilities of *post factum* documentation.

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33 For further discussion of this, see Marian Macken, "Beyond Simulacrum: The Model as Three-dimensional *Post-factum* Documentation," (Master of Architecture (Research) thesis, University of Technology Sydney, 2008), http://hdl.handle.net/2100/608, 27–30.

34 David Leatherbarrow, "Showing What Otherwise Hides Itself: On Architectural Representation," *Harvard Design Magazine*, Fall, 1998, 51.

As an example of this, Mike Davis writes of a hybrid digital-analogue drawing practice operating in a design project. One of the five strategies for the maintenance of the abstract critical facility of drawing in this project is the aggregation of the drawings. Due to the suite of tools and techniques designers now encounter, there is no longer a core medium in which the repository of process work may reside, yet the demand for it still exists.[35] With the Ecostore project, which Davis outlines in his essay, the iterations of the Rhinoceros model and AutoCad drawings were 'digitally folded away and rendered opaque,' yet the knowledge they contained needed exposure and evaluation.[36] This led to the project repository to be established in book form. The importance of this document was that it existed separately from the media in which the content was originally produced and the process of collating the content into this new form was a means to develop understandings of each facet of the project and their inter-relationships.[37]

Using the book in this way brings the notion of reflection to reside within the design process. Ranulph Glanville writes of the inherently recursive and reflective nature of design.[38] Arguing that most programs of academic study do not acknowledge this aspect of design, concentration is given to design-the-noun, that is, design as an outcome, rather than to design-the-verb, that is, design as a process. According to Glanville, for the outcomes of architecture to be improved, this emphasis needs to be reversed. One way for this to occur is to emphasise an overlooked aspect of the design process, that is, the importance of documentation as interpretation. Reflection allows the recursive nature of design to be acknowledged, and the importance of interpretation to be made explicit. This then acknowledges the role of the book as a design response.

Potentiality of the book as architectural documentation

The qualities and characteristics of books and an understanding of their role as *post factum* documentation leads to three areas of potentiality of the book as a tool within architectural representation. These are: the altered presence of the drawings, representations and the page; the interiority of representation; and representation as copy. These are briefly outlined below and will be explored in more detail in the following three chapters, through specific examples.

The shifted presence of the drawings, representations and the page

35 Mike Davis, "Maintaining the Abstract: Critical Facility in Post-digital Drawing Practice", *Interstices: Journal of Architecture and Related Arts: The Traction of Drawing*, no. 11 (2010): 87.
36 Davis, "Maintaining the Abstract," 87.
37 Davis, "Maintaining the Abstract," 87.
38 Ranulph Glanville, "An Irregular Dodekahedron and a Lemon Yellow Citroen," in *The Practice of Practice: Research in the Medium of Design*, ed. Leon van Schaik (Melbourne: RMIT University Press, 2003), 259–60.

A page might normally be thought of as either a surface support for a graphic pattern or image, or a means of presenting an illusion. Within artists' books, the drawing and its page are integrated, so the page is as important as the drawing on it. The drawings within artists' books are not merely black ink lines printed onto the surface, but rather their placement, size and the means by which they are drawn, are integral to the page and hence, their reading. The page can be taken literally as an image and as a page simultaneously.[39] The drawings within artists' books have a frame which is the physicality of the page edge, rather than a graphic design outcome. Architectural drawings are usually frameless: the boundary of the page defines the layout of the page rather than any conceptual edge. As Avis Newman states, without the structural certainty of framing, 'the work's space is one of displacement, open to an imminence of actualities.'[40] Due to these elements, the drawings are given a different conceptual character and the page is seen as a three-dimensional space. The drawings then achieve a strong presence due to this solidification of the page and exist in a new visual arrangement.

The interiority of representation

Books admit narration through sequence to the architectural representation, allowing time and movement to be documented. Architecture has used the format of cinema to achieve narrative, yet the artist's book is able to use drawings to attain an analogous result. Books offer a sequential, episodic narrative that is codex-based rather than plan-based. The representations form relationships when bound into a fixed sequence. This set of representations can be bi-directional, that is, the reading of the book may be non-linear. This sequence creates a single simultaneous space: the book as a totality leads to the drawings as content inherently becoming a set. The cumulation of pages offers the relationship between the book as a 1:1 scale object and its content's scaled references. Books are objects, yet allow scale and representation to be admitted in their making, and in their reading. The page may shift from two-dimensional to three, and hence allows volume to be admitted to the book. In this way, the book may operate as a 'folded model,' which begins to have a particular and different spatiality. The book does not aim for the totality of grasp, or a synthesis of comprehension through a single image, as a model does. The book offers a codex-based sequence, through cumulation.

The housing of drawings within books allows the drawings to be viewed flat. Walter Benjamin

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39 Drucker, *The Century of Artists' Books*, 199.
40 *The Stage of Drawing: Gesture and Act, Selected from the Tate Collection by Avis Newman, Curated by Catherine De Zegher* (London: Tate Publishing; New York: The Drawing Center, 2003), 170.

writes of painting's desire to be viewed vertically as opposed to drawing's desire to be viewed flat.[41] He argues that this forms a distinction between painting and graphic arts, and hence, between representational and symbolic readings of these. Gevork Hartoonian refers to the presentation of drawings horizontally as relating to former practices of drafting whereby 'most architects faced downwards looking onto a blank drawing paper, today they face a computer screen, similar to a painter standing in front of a canvas.'[42] The drawings become tactile and spatial. Physicality is fundamental to the meaning of the book. The resulting intimacy of apprehension is of importance: the solitary reader holds the book, and hence the drawings, in their hands. The intimacy of reading the artists' book can be aligned with the personal interpretations of architectural space. The result of these outcomes being that the interiority of the book may be aligned with the notion of the interiority of representation.

Representation as copy

In exploring the potential of the multiple, editioned book, the architectural representation as copy may be documented. The architectural drawing is itself reproducible, and that which it represents – the building – is potentially reproducible. In each of these situations, the notion of the original, the copy and the process of reproduction have different intentions, qualities and results. Imitation, simulacrum and authenticity are neglected areas of architectural representation, however the book makes reproduction evident. The book offers a vehicle for the representation of reproduction, documenting translation. The book also offers an alternative type of exhibition of architecture, the book *as* exhibition.

Taking Ulises Carrión's description of the page as a site, and the collection of these pages as 'a sequence of spaces'[43], the artists' book may be seen as a space of potential beyond that of bound drawings and photographs. The cumulation of these as content, combined with their sequencing, the structure of the book and the act of reading, elevates the book beyond a neutral vehicle of documentation. Instead, the book is a medium that carries and distributes information in a particular mode: it makes it possible to see some things more clearly by suppressing other things: something gained, something lost.[44] The acknowledgement and inclusion of time within the documentation

41 Walter Benjamin, "Painting and the Graphic Arts," in *Walter Benjamin: Selected Writings Volume I 1913–1926*, ed. Macus Bullock and Michael W. Jennings (Cambridge, Massachusetts: Harvard University Press, 1996), 82.
42 Gerork Hartoonian, "The Drawing Position," *Architectural Theory Review* 14, no. 3 (2009): 248.
43 Ulises Carrión, "The New Art of Making Books," in Lyons, *Artists' Books*, 27.
44 Robin Evans, "Architectural Projection," in *Architecture and its Image: Four Centuries of Architectural Representation: Works from the Collection of the Canadian Centre for Architecture*

is one particular augmentation. Time is included in the book format through the documentation of place, as the location of events and the effect of passing time; one's movement through space; the gap between event and record; and the passage of time in the making and reading of a book. This then opens the possibility for architectural narrative through representation. Furthermore, as will be explored in the subsequent chapters, the book presents a shifted presence of the page, through the specificity of the relationship between the page and drawing; an interiority to representation; and the ability to document the act of reproduction.

exhibition catalogue, Canadian Centre for Architecture, Montreal, ed. Eve Blau and Edward Kaufman (Cambridge, Massachusetts: MIT Press, 1989), 199, in reference to a particular view of representation.

Architecture presents itself through the economy and apparatus of the line: its boundaries and capacities are defined by the workings of orthogonality, or the 'right-angledness' of the line.[1] So one would assume, writes Catherine Ingraham in her essay 'Lines and Linearity: Problems in Architectural Theory', that the condition of linearity – the system enabled by the line that underlies representation – has a special, perhaps more revealed, position within architecture.[2] However, the subject of 'linearity' does not make itself known easily. This is due to the line's contradictory qualities as a kind of originary marking apparatus – since it is impossible to design anything without thinking the line first – and its use to display the conceptual accretions of architecture, at the end of the act of design.[3] On the one hand, the line – whose genealogy is constructed inside a 'geometrico-mathematical horizon'[4] – is defined as 'pure extension without breadth or depth, without horizon'[5], and on the other, simultaneously, it is the habitat of the accumulation of conceptual thinking, holding ideas that are representative of potential full-scale manifestation.

Robin Evans notes that the line within architecture, moving from scale drawing to built form, does not occupy a 'uniform space through which meaning may glide without modulation.'[6] However, in order for the transfer of information from drawing to building, a certain suspension of critical disbelief has been necessary: as though the drawing operates as a 'stand-in' for the built work. Yet this enabling fiction has not entirely been made explicit within architecture, which Evans argues, writing in 1997, has led to an under-examination of the properties of drawings.[7] The method of production of these drawings has shifted since then, yet the possibility for further examination of the properties of drawings is still valid.

Exploring architectural drawings housed within artists' books allows for an examination of

1   Catherine Ingraham, "Lines and Linearity: Problems in Architectural Theory," in *Drawing Building Text*, ed. Andre Kahn (New York: Princeton Architectural Press, 1991), 66.
2   Ingraham, in Kahn, *Drawing Building Text*, 66.
3   Ingraham, in Kahn, *Drawing Building Text*, 67.
4   Ingraham, in Kahn, *Drawing Building Text*, 67.
5   Ingraham, in Kahn, *Drawing Building Text*, 67.
6   Robin Evans, *Robin Evans: Translations From Drawing to Building and Other Essays* (London: Architectural Association, 1997), 154.
7   Evans, *Robin Evans: Translations From Drawing to Building and Other Essays*, 154.

the line within architectural drawing that has a different nature. The book presents the *page* as the site for the drawing as strongly as the drawing itself. Due to this quality, the method of drawing is as important as the final work. The method of presenting drawings and the technique of drawing is different from the usual way of presenting architectural drawings, that is, black line on film, trace or paper. These drawings may be drawn without the magnitude of the presence of the black ink line, but rather by other techniques such as embossing, cutting or scoring. This embeds the drawing within the page in a particular way, forming a relationship between the drawing and its paper. This technique gives conceptual character to the line, by the altered reading of the actual page as a three-dimensional space. Hence, the drawings then have a presence, beyond that of referent for a proposed building: the drawing is not cast as a two-dimensional proxy for the manipulation of a three-dimensional world.[8] These methods have been used to present architectural drawings, for example in the work of CJ Lim [Fig. 1, 2]; however, it is the housing and reading of the work as a book which is of importance to this thesis.

This chapter explores the qualities and characteristics of architectural drawing within the book as a speculative practice rather than as purely instrumental. This is done by examining not just the drawing, but also the page it sits within, and the relationship between the structure of the book and drawing surface, frame and sequence. This chapter explores these ideas through the writing of Marco Frascari and Catherine Ingraham, and examples of work by Olafur Eliasson and others. The role of the book as a form of, in Frascari's terms, architectural *facture* – that is, consideration of the book and the drawing in terms of their making, as interfacing records of their-having-been-made[9] – will be examined.

The notion of the line within architectural documentation

Architectural drawings, that is, orthographic projections such as plan, section and elevation, deal with the particularities of translation due to changes in dimension and scale. In order to read these drawings as precursors of built work, it is possible to interpret architectural documentation as possessing a one-to-one correspondence between the represented idea and the final building. The notion that drawings and models are the lens through which one views the proposed building is referred to by Alberto Pérez Gómez and Louise Pelletier in *Architectural Representation and the Perspective Hinge*. They write that representation may be seen as:

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8   Peter Wood, "Drawing the Line: A Working Epistemology for the Study of Architectural Drawing," (PhD thesis, University of Auckland, 2002).

9   Marco Frascari, "A Reflection on Paper and its Virtues Within the Material and Invisible *Factures* of Architecture," in *From Models to Drawings*, ed. Marco Frascari, Jonathan Hale and Bradley Starkey (London: Routledge, 2007), 23.

[N]ecessary surrogate or automatic transcriptions of the built work. The process of creation prevalent in architecture today assumes that a conventional set of projections, at various scales from site to detail, adds up to a complete, objective idea of a building.[10]

Gómez and Pelletier go on to write that each projection then constitutes part of a dissected whole, and these representations are expected to be 'efficient neutral instruments devoid of inherent value other than their capacity for accurate transcription.'[11] This description given by Gómez and Pelletier does not acknowledge all forms or strategies of contemporary architectural drawing, but there is still evidence that it is not an uncommon view. In the abstract of his doctoral thesis, Peter Wood similarly writes of the conventional model of the drawing as merely a utilitarian convenience for the passage of the architect's imaginings.[12] For most architects, writes Mike Linzey, drawings are 'only a sign, a semiotic device that points away from itself towards what truly matters.'[13] This acceptance of assumed ideas of linear translations between the built object and its representations, when viewing architectural drawings, casts the drawings as occupying interstitial space, as 'premonitions of buildings yet to come'[14], or what Vitruvius called the *operis futuri figura*, the future form of an intended built work.[15]

Frascari writes of the dangers of this thinking regarding drawings, that they must not be understood as merely visualizations.[16] To think of architectural drawings as scaled-down pictures of buildings 'cannot account either for the instrumentality of architectural representation or for its capacity to render abstract ideas concrete.'[17] Stan Allen argues that as architecture proposes a translation of reality carried out by abstract means, these means are never neutral, 'never without their own shadows.'[18] In the case of architecture, it is the 'ephemeral shadow of geometry cast on the obstinate ground of reality that marks the work of architecture as such.'[19] And this translation

10 Alberto Pérez Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, Massachusetts: MIT Press, 1997), 3.
11 Pérez Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, 3.
12 Wood, "Drawing the Line." See also Mike Linzey, "Architectural Drawings Do Not Represent," *Interstices: Journal of Architecture and Related Arts: The Traction of Drawing*, no. 11 (2010): 31.
13 Linzey, "Architectural Drawings Do Not Represent," 31.
14 Jasmine Benyamin, "Analog Dreams," in *306090: A Journal of Emergent Architecture and Design, 11: Models*, ed. Emily Abruzzo, Eric Ellingsen and Jonathan D. Solomon (Princeton, New Jersey: 306090, School of Architecture, Princeton University, 2007), 90.
15 Linzey, "Architectural Drawings Do Not Represent," 32.
16 'The misconception of architectural representation as an independent instrument is not only deceptive and misleading, but also seriously dangerous.' Marco Frascari, "Horizons at the Drafting Table: Filarete and Steinberg," in *Chora* 5, ed. Alberto Pérez Gómez and Stephen Parcell (Montréal, Québec: McGill-Queen's University Press; Chesham: Combined Academic, 2007), 197.
17 Stan Allen, *Practice: Architecture, Technique and Representation* (London: Routledge, 2009), 41.
18 Allen, *Practice*, 7.
19 Allen, *Practice*, 7.

is neither linear – as it is often conceptualized to be – nor without loss or gain.[20]

Allen writes in reference to this process of transformation:

> By the translation of measure and proportion across scale, architectural projections work to effect transformations of reality at a distance from the author. Projections are the architect's means to negotiate the gap between idea and material: a series of techniques through which the architect manages to transform reality by necessarily indirect means.[21]

It is projection, writes Evans, that connects 'thinking to imagination, imagination to drawing, drawing to building, and buildings to our eyes'[22], and these are all zones of instability.[23] This translation then, is the realm of connecting the visible to the invisible[24]: according to Frascari, these tangible lines become 'carriers of fluid and invisible links that guide intangible thoughts.'[25]

Explicitness of the act of translation and transformation inherent within the drawing shifts the drawing's primary function from representing something else, 'to present *themselves* as something new.'[26] This relates to the drawing as an autonomous and novel architectural idea. Similarly, Frascari writes:

> Architectural drawings do not just represent something – they are something in their own right. Any given architectural drawing is not just a summa of arbitrary signs that stands for something else … but they are an assembly of signs that derive their meanings from actually embodying in their tracing the events that they represent.[27]

According to Linzey, the drawing does not re-present the future form of, as yet, unbuilt work, due to the issue of strict temporal ordering: it is drawings that 'take priority *in time* and

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20 Ingraham, in Kahn, *Drawing Building Text*, xi

21 Allen, *Practice*, 3

22 Robin Evans, *The Projective Cast: Architecture and its Geometries* (Cambridge Massachusetts: MIT Press, 1995), xxxi.

23 Evans, *The Projective Cast*, xxxi.

24 Frascari, in Pérez Gómez and Parcell, *Chora* 5, 180. Also: 'Drawings are produced in an "in-between" condition, making "visible" and accountable for a transformation that is "invisible" when looking in the present condition, at the building.' Frederica Goffi, "Architecture's Twinned Body: Building and Drawing," in *From Models to Drawings*, 88–9.

25 Marco Frascari, "Lines as Architectural Thinking," *Architectural Theory Review* 14, issue 3 (2009): 202. Hence Frascari names architectural drawings *ontophanies*, that is, graphic material manifestations of 'the essence connecting the visible to the invisible.' Frascari, in *Chora* 5, 180. For this act of translation needed in the viewer, Frascari uses the term *transitus*, which refers to the viewer's mental journey across an image in the act of interpretation. Frascari, in Frascari et al, *From Models to Drawings*, 28.

26 Linzey, "Architectural Drawings Do Not Represent," 32.

27 Frascari, "Lines as Architectural Thinking," 203.

buildings follow'.[28] This is not to deny that drawings do sometimes mediate between architects and architecture, representation is not their *primary* role and function.[29] Rather, drawings work in another way, 'as autonomous performances of innovative meaning'.[30] Although Mark Wigley writes that architectural drawings are neither an idea nor an object[31], Linzey argues the opposite, that they are *both* a graphical object *and* a performative idea and hence, the *being* of architecture.[32]

The ability for the drawings of architecture to be reproduced is crucial to their use. We commonly encounter architectural drawings as reproduced images in publications. In this format, they are variously rescaled, cropped and reoriented, depending on the graphic design layout that best suits the page [Fig. 3]. They are not included as important drawings *per se*, but are included as graphic reminders of the scheme; they have a 'substitutive and objectifying power'.[33] In this format, they are regarded as frozen mimetic images of the absent building rather than as instruments of the imagination of construction.[34] The plan, as image, is present to illustrate textual commentary, rather than to offer insight or comment on the project through drawing.

As outlined in Chapter 1, many architects have explored the print medium as an alternative space of architectural imagining and discourse, such as Diller+Scofidio (with continued exploration as Diller Socfidio + Renfro), Daniel Libeskind and Morphosis. These examples use the book as a site of propositional speculation and debate. However, the proliferation of architecture-related publications, whose main concern is the presentation of documentary photographs and reproduced drawings of built works, places these types of books in the published minority.

Architectural drawing has no inherent composition within the page it sits on, its lines can be lifted and placed somewhere else, unlike other artwork, and maintain authority of authorship. The plan's outer linework edge defines its composition; the drawn building's perimeter is its definition. In this presentation, there is no relationship between architectural ideas and projects and the vehicle of their dissemination.[35] The printed page with architectural drawing simply reproduces or perpetuates what exists, and is reinforced by Stan Allen's claim that the drawing as artifact is unimportant, that rather it is a set of instructions for realizing another artifact, much like a script, a

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28 Linzey, "Architectural Drawings Do Not Represent," 32.
29 Linzey, "Architectural Drawings Do Not Represent," 32.
30 Linzey, "Architectural Drawings Do Not Represent," 32.
31 Mark Wigley, "Towards a History of Quantity," in Anthony Vidler, *Architecture Between Spectacle and Use* (Williamstown, Massachusetts: Sterling and Francine Clark Art Institute, 2008), 157.
32 Linzey, "Architectural Drawings Do Not Represent," 32.
33 Pérez Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, 332, note 73.
34 Qi Zhu, "The Cultural Context of Design and the Corporeal Dynamism of Drawing as the Foundations for the Imagination of Construction," in Frascari et al, *From Models to Drawings*, 79, 82.
35 Beatriz Colomina et al, "Models of Dissemination: *Clip/Stamp/Fold: The Radical Architecture of Little Magazines 196X–197X*," in Abruzzo et al, *306090*, 193.

score or a recipe.[36] Similarly Mark Wigley writes of the almost nothingness of drawing, 'the lightest of traces on the lightest of material'[37] in contrast to the 'excessive materiality and the blinding super-sufficiency of architecture itself'.[38]

However, these descriptions underplay the objecthood of the drawing and its potential as a site of architectural innovation and debate.[39] To examine the drawing as object gives prominence to the relationship between the image, its method of making and the page. Marco Frascari argues that drawings must be understood as essential architectural factures. According to Frascari, the word *facture* is 'the Latin past participle of *facio*, *facere*, meaning both at the same time "to make" and "to do"; it thus has the same derivation as "fact", which might be defined as something evidently done.'[40] To speak of an 'architectural facture' then is to consider both a piece of architecture and its drawing in terms of their making, as both can be seen as interfacing records of their own having-been-made.[41] Therefore, the signifying power of the drawing is in the liturgy of its making: 'It generates an aura that can be inferred from a simple casting glance both by the maker and the reader.'[42]

It is with this scope of drawing in mind, that artists' books are particularly relevant. The book allows the presentation of a different type of drawing, a drawing that strongly exists in its 1:1 scale form, similar to Frascari's notion of architectural facture. Drawings with a strong presence are further removed from the notion of the architectural drawing merely as a lens through which one views a full scale building.

A way to address the descriptions of drawings apparent in the writings of Frascari, Ingraham and Linzey, is to acknowledge, as Allen does, that technique is not neutral: the drawing's working methods condition the results.[43] This can be achieved by the drawing being embedded within the page in a particular way. For example, rather than ink printed on bond paper or trace, the drawing may be made by embossing, cutting or scoring. These methods interact with the paper and the drawing is formed by the paper's surface manipulation, forming a different relationship

36 Allen, *Practice*, 41.
37 Mark Wigley, "Towards a History of Quantity," in *Architecture Between Spectacle and Use*, ed. Anthony Vidler (Williamstown, Massachusetts: Sterling and Francine Clark Art Institute, 2008) cited in Linzey, "Architectural Drawings do not Represent," 31.
38 Wigley, in Vidler, *Architecture Between Spectacle and Use*, cited in Linzey, "Architectural Drawings do not Represent," 31.
39 Colomina, in Abruzzo et al, *306090*, 192.
40 Frascari, "Lines as Architectural Thinking," 203.
41   Frascari, "A Reflection on Paper and its Virtues Within the Material and Invisible *Factures* of Architecture," in Frascari et al, *From Models to Drawings*, 23.
42 Frascari, "Lines as Architectural Thinking," 203. In Italian, a factura (*fattura*) is also a magical procedure, so by analogy, 'an architectural factura is a mounting or falling of the energies played out during the process of architectural conceiving.' Frascari, in Frascari et al, *From Models to Drawings*, 23.
43 Allan, *Practice*, 48.

between the drawing and the page itself. The drawing within a book is produced through different working methods and also is part of a sequence. When housed within a book, these drawings form a relationship with each other: each page is read in relation to every other page and the book's structure is related to the overall sequence of drawings.

Examining the method of production of the drawing and its linework, and its relationship to the page as part of a sequence presents the drawing as object and, hence, the book as a site for architecture. This presentation of representation begins to acknowledge the 'power that drawings and photographs have to alter, stabilize, obscure, reveal, configure, or disfigure what they represent.'[44]

The artist's book as architectural facture

The earliest surviving example of the cut within paper as a means of artistic expression is a circular cut from sixth-century China.[45] According to Paul Sloman, it is the delicacy of the paper and the potential for the cut to be destroyed with a small error, that inspires the character of the art.[46] Early Chinese paper cuts, often in red paper, were either purely decorative or designed as gifts and were displayed on doors and windows.[47] Although Chinese cutting is the most developed of paper cuts, other countries have their own traditional variations: in Japan, *kirigami* is a variant of origami in which cutting is also employed [Fig. 4]; *sanjih* developed in India; paper cuts were adapted to Swedish legal documents, to protect against forgery; and in 1345, Rabbi Shem-Tov ben Yitzhak ben Ardutiel claimed in his treatise *The War of the Pen against the Scissors* that he had written his manuscript by cutting letters into paper, having discovered that his ink had become frozen.[48] Contemporary cutting has shifted from individual sheets of paper [Fig. 5, 6], and developed within the book. This sometimes results in the book form becoming the basis of sculptural work, such as in the book carving work of Kylie Stillman, Georgia Russell [Fig. 8] and Guy Laramée[49] [Fig. 7]. In these examples, the pagination of the book, or the sequencing of pages, is not employed in order to understand the work.

44 Robin Evans, "Architectural Projection," in *Architecture and Its Image: Four Centuries of Architectural Representation: Works from the Collection of the Canadian Centre for Architecture* exhibition catalogue, Canadian Centre for Architecture, Montréal, ed. Eve Blau and Edward Kaufman (Cambridge, Massachusetts: MIT Press, 1989), 21.

45 Paul Sloman, *Paper: Tear, Fold, Rip, Crease, Cut* (London: Black Dog Publishing, 2009), 24.

46 Sloman, *Paper*, 24.

47 Sloman, *Paper*, 26

48 Sloman, *Paper*, 28–30.

49 For example, Stillman's *Cascading Pine* (2005) and *Pictorella Finch* (2003), Kylie Stillman, "Kylie Stillman: Images," accessed 2 November, 2011, http://www.kyliestillman.com/. Russell's *The Story of Art II* (2006), Sloman, *Paper*, 116; and Laramée's Roanji (2010), Paul Sloman, *Book Art: Iconic Sculptures and Installations Made from Books* (Berlin: Gestalten, 2011), 25. An example using the sequence of cutting is demonstrated in the stop-frame animation *Going West*, by Andersen M Studio, for the New Zealand Book Council (2009); see Sloman, *Book Art*, 179.

The page as a site of removal is shown in Mira Schendel's *Perforations II* (c. 1970s) and Lucio Fontana's *Spatial Concept* (1966), a concertina book of gold paper with punched holes[50] [Fig. 9]. Dieter Roth made books of original comics and children's colouring books, with randomly cut circles removed from the page, for example *2 bilderbücher* (1957), BOK 3b and BOK 3d (1961)[51] [Fig. 10]. More recently, Donna Ruff's *Spreads of Influence* (2010) removes elements of text, and its connected paper, in order to emphasise others[52] [Fig. 11]. These works begin to see the paper as an object in space by admitting the light and volume that exists beyond the page, to come forward through the perforations. These works introduce a tactile and sculptural sensation to the act of reading.[53]

A book which uses the technique of removal to draw and the entirety of its form to increase the effect of this, is Olafur Eliasson's *Your House* (2007), which is a journey through the artist's private residence in Copenhagen, Denmark [Fig. 12]. *Your House* is made up of 452 pages, each with a lasercut cross-section at a scale of 1:85. Each page then corresponds to making a section every 220mm throughout the house. This work offers a version of being within the space, different from a two-dimensional, sectional drawing. In making the space by a sequence of sections – each one a page – one moves through the house in a particular way. These lasercuts create negative spaces in the paper, which cumulatively produce 'the sensorial illusion of being inside the house'[54] as each individual section gives the reader information as to the rooms' proportions. When the book is closed, it refers to the house also and gives us information about its content: the thickness of the book gives a dimension to the length of the space. Since each page denotes a progressive section through the house, the accumulation of bound pages represents the density of the house volume. The result is a book that operates like a true to scale model that has been spliced apart into pages, which spans the entire volume of a book, both open and closed, and at scales 1:85 and 1:1.[55]

In viewing these drawings of Eliasson's, a curious new reading of the interior and exterior is created. In the absence of a black ink line, the line as edge within this page connotes solid and void, at both a 1:85 and a 1:1 scale. This new line no longer predominately denotes wall/not-wall but rather page edge/not-page edge: the interior is the edge of the page. In this instance, the wall

50 These were included in the Museum of Modern Art, New York exhibition 'Paper: Pressed, Stained, Slashed, Folded' (2009).
51 Reprinted in 1974 as *Collected Works, Vol. 7*.
52 See also the work of Kyoko Tachibana: http://sohonstudio.blogspot.com/.
53 A recent AHRC funded research project, symposium and exhibition explored the use of lasercutting technology, 'Paper Models: Investigating Lasercutting Technology to Develop New Artists' Books and Paper-based Creative Practice for Arts, Crafts and Design' (2010), was conducted by Tom Sowden of University of the West of England.
54 Olafur Eliasson, "Models are Real," in Abruzzo et al, *306090*, 18.
55 Petra Schmidt and Nicola Stattmann, *Unfolded: Paper in Design, Art, Architecture and Industry* (Basel: Birkhäuser, 2009), 61.

thickness and its materiality disappear. However, as Ingraham writes, the line, in architecture, 'is never without the dimensionality and interiority of the wall, even as it proposes to outline an idea … architecture lives with the sense that uprightness – the presence and visibility of form – is a condition won only by keeping to the line.'[56] On these pages, the solidity of the wall is implied and merges with the materiality of the page so that the drawing's frame, and infrastructure, is the mass of the building itself, demonstrated by the paper.

The line, in conventional Western thinking, marks the disjunction between what is to be excluded and what is included. The line most often delineates the external limits of a form: it establishes a dichotomy by dividing inside from outside.[57] The line in architecture, due to its link with the wall, is difficult to separate from inhabitation. While other disciplines such as geography, cartography and painting use orthographic systems, 'only architecture must directly contend with the problem of inhabiting the space of linear geometries. Architecture, therefore, to some degree, must construct the inhabiting subject along geometric lines.'[58] Architectural drawings both construct and reveal the space of the house. The strength of Eliasson's work is that the walls become part of the frame that is held over the interior of the house. The wall is read as part of the frame of the void – both of the paper, at a 1:1 scale and of inhabitation, at a 1:85 scale – rather than as a separation between two spaces.

Architect Johan Hybschmann, while a student, made *Book of Space* (2009) [Fig. 13]. Inspired by film-maker Alexander Sokurov's *Russian Ark* (2009), Hybschmann questions the nature of cinematic narrative which never goes into reverse.[59] *Book of Space* is a three-dimensional space of windows and passageways, two spaces from the film sequence cut into each half of the book. Perspectives and shadows are created, which allow the reader to flip back and forth through the space.[60] Hybschmann achieves a sense of progression through a represented space by the use of frames, rather than section. However, similar to Eliasson, it is through the accumulation of pages, that spatial distance is achieved.

The line may be made in other ways directly related to the page's paper, such as embossing. Jonathan Jones's *Untitled (White Poles) 1, 2 & 3*, (2005) uses the technique of embossing as a companion piece to *Blue Poles* (2004) [Fig. 15]. While displayed as separate sheets, not within a

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56 Ingraham, in Kahn, *Drawing Building Text*, 76.
57 Adrian Snodgrass, "Thinking Through the Gap: The Space of Japanese Architecture," *Architectural Theory Review* 9, issue 2 (2004), 76; and Adrian Snodgrass and Richard Coyne, *Interpretation in Architecture: Design as a Way of Thinking* (London; New York: Routledge, 2006), 237.
58 Ingraham, in Kahn, *Drawing Building Text*, 81.
59 Paul Sloman, *Book Art: Iconic Sculptures and Installations Made from Books* (Berlin: Gestalten, 2011), 106.
60 Sloman, *Book Art*, 106.

book, the work shows the subtlety that embossing allows. Ron King's *Turn Over Darling* (1990, Circle Press) uses the technique within the book form to create a woman's body [Fig. 17]. Each side of the page has either the top or bottom half of the figure, which unite across the middle of the opening. As the page turns, the negative space of the impression is turned into positive space, giving the sculptural form a different reading.[61]

Sol LeWitt explored the crease as line in his work *Folded Drawing* (1971) and *Untitled* (1974) [Fig. 14]. The Japanese artist Hiroshi Ogawa also creates geometric patterns from creased and folded paper [Fig. 16]. More recently, Martin Creed's *Work No. 327: A Sheet of Paper Folded and Unfolded* (2004), continues this exploration.

The work of the Japanese artist Naoyo Fukuda creates the line through a textural method. Fukuda performs acts of embroidery on the pages of books, postcards and business cards, working over the linework of text to build up tactile versions of the words. The possibility of reading the words in these works is eliminated, but there is the knowledge that the artist has read that which lies under the thread.[62] As Yusuke Minami writes, by eliminating the possibility of reading, she can monopolize ownership of the text.[63] Fukuda says of her work *Pilgrimage/Calling Card* (2008–10) that although the words are left in a condition in which they can no longer be read to extract their ordinary meaning, something behind the self appears after traces of it are lost[64] [Fig. 19].

In these artworks, Fukuda calls up the words of others, and performs a process that doubles them, and which makes them ongoing[65] [Fig. 20]. In her work *The Spirit of Words* (2009), the artist undertakes the time-consuming process of searching for old paper-back books published by Iwanami Bunko in which the ink in the printed letters of the title on the front and back is faintly transferred to the thin, semi-transparent paper used as a protective covering. These glassine book jackets, which are readymade objects, record the trace of words from an absent object [Fig. 21].

A tangential, yet interesting example of architectural work which employs cutting and folding techniques is the work shown in the books of Sophia Vyzoviti. *Folding Architecture: Spatial, Structural and Organizational Diagrams* and *Supersurfaces* present folding as a generative process in architectural design. [Fig. 22–25] Vyzoviti states that her particular interest lies in the morphogenetic process, that is, the sequence of transformations that affect the design object.[66] The

61 Drucker, *The Century of Artists' Books*, 176.
62 Yusuke Minami, "FUKUDA Naoyo: *Kaibun* and Art," in *Artist File 2010: The NACT Annual Show of Contemporary Art: 018 Fukuda Naoyo* catalogue (Tokyo: National Art Center, 2010), 6.
63 Minami, in *Artist File 2010*, 6.
64 Minami, in *Artist File 2010*, 7.
65 Minami, in *Artist File 2010*, 7.
66 Sophia Vyzoviti, *Folding Architecture: Spatial, Structural and Organizational Diagrams*

paper's transformative actions are described as a list of verbs: fold, press, crease, pleat, score, cut, pull up, rotate, twist, revolve, wrap, pierce, hinge, knot, weave, compress, unfold.[67] Each model or 'paperfold' – the result of the process of folding paper, the product of a folding performance – bares the traces of the activity that brings it into being. Therefore, the paperfold unfolded, 'becomes a map of its origination process' due to the marks on its surface.[68] In this process, the architectural object is not a target to be achieved through the succession of actions and transformations. Rather, paper folding as a method of form generation, is fundamentally a diagrammatic technique; it allows the attribution of architectural properties to the diagram and defines architectural prototype.

Folding emerged in architectural discourse at the end of the twentieth century, with the Architectural Design Profile, *Folding in Architecture*[69], guest-edited by Greg Lynn, as an important publication in its development, appearing in 1993. This publication, which draws philosophical substance from Gilles Deleuze's *The Fold: Leibniz, and the Baroque*[70], presents the architecture of the fold as a tactic for the integration of difference within a heterogeneous yet continuous system.[71]

Folding as an organisational diagram and spatial device may be seen in the unbuilt OMA project *Two Libraries Jussieu*, Paris, France (1992) [Fig. 26]. In this winning competition entry, floor planes, rather than being stacked above each other, are manipulated to connect and form a single trajectory, like 'a warped internal boulevard'.[72] Folding as an architectural strategy inspired single surface projects. Diller + Scofidio's *Bad Press* (1993) is an example that explores this notion [Fig. 27]. Their discussion of this work draws on the Deleuzian discourse and offer the crease in opposition to the fold. According to Elizabeth Diller, one of the primary attributes of the fold is mutability – if something can be folded, it can be unfolded and re-folded: the fold is forgetful. Vyzoviti writes that paperfolds have the potential of reviving a 'flat-plane state', comprising in mathematical terms 'developable surfaces'; one of the constraints of the paperfolds is that they are fixed without sticking.[73] The crease, on the other hand, has a memory, it is a trace and therefore, has representational value, in the nature of an inscription.[74]

Vyzoviti presents folding as an experimental design method and a method of form generation. They are presented as physical artifacts, but it is paper that is manipulated, not pages. The

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(Amsterdam: BIS Publishers, 2003), 8.

67 Vyzoviti, *Folding Architecture*, 9.

68 Vyzoviti, *Folding Architecture*, 9.

69 Greg Lynn, ed., *Folding in Architecture* (Chichester, West Sussex ; Hoboken, New Jersey: Wiley-Academy, rev ed, 2004).

70 (Minneapolis: University of Minnesota Press, 1993).

71 Vyzoviti, *Folding Architecture*, 131–2.

72 OMA, "Jussieu – Two Libraries, France, Paris, 1992," accessed 2 November, 2011, http://oma.eu.

73 Sophia Vyzoviti, *Supersurfaces* (Corte Madera, California: Gingko Press, 2006), 7.

74 Elizabeth Diller, *Flesh: Architectural Probes: Elizabeth Diller and Ricardo Scofidio: The Mutant Body of Architecture* (New York: Princeton Architectural Press, 1994), 58–9.

paperfolds operate sequentially but not as successive pages. The examples in *Folding Architecture* and *Supersurfaces* present techniques for the manipulation of paper, which may be altered to be included within the book format.

In these examples of making the line through cutting, embossing, creasing and embroidery, the drawing manipulates the materiality of the page: it is the surface of the paper which, rather than receiving the drawing, is manipulated to form, the drawing. The page then becomes more than a receptacle for pre-existing aesthetic decisions: the page is an element in the composition itself. This connection between the drawing and its paper is rarely examined within architecture. Frascari discusses this relationship, between the architect and paper, in his essay, 'A Reflection on Paper and its Virtues Within the Material and Invisible *Factures* of Architecture'.[75] According to Frascari, paper allowed architects to move away from the site during the making of their architectural factures, and hence has transformed the procedures of architectural conceiving.[76]

Regrettably though, many architects and design critics perceive paper as the passive support of the finished drawing. This relates to the old technical word 'subjectile', meaning that which is put under the drawing or painting – the support – which makes the image or representation possible.[77] This view of paper undermines the influential 'continuo-counterpoint' on the imagination of the architect that changes and manipulations in the paper play.[78] Rather than support the finished drawing, Frascari believes the materiality of paper should be considered as part of the dynamic characteristic of the architectural facture.[79] Acknowledging this relationship allows drawing to mediate and sublimate architectural factures of future edifications, rather than seeing drawing on paper as an 'automatic transcription onto a surface of ideas that are already clear in the architect's mind.'[80]

The similarity of the verb form 'to draw' and the noun 'the drawing', that is, an act and a thing, allows different interpretations of the intended form of the word.[81] By using the word drawing, the action and the result of that action are inseparable, due to the interchangeability of the word itself. This brings immediacy to the act of drawing, allowing the act to reside within its resultant noun. The action is implied, when referring to the manifestation of that act. Therefore, the space of the

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75 Frascari, in Kahn, *From Models to Drawings*, 23–33.
76 Frascari, in Kahn, *From Models to Drawings*, 23.
77 Laurence Simmons, '"Drawing Has Always Been More Than Drawing": Derrida and *Disegno*,' *Interstices: Journal of Architecture and Related Arts: The Traction of Drawing*, no. 11 (2010): 116.
78 Frascari, in Kahn, *From Models to Drawings*, 23.
79 Frascari, in Kahn, *From Models to Drawings*, 23.
80 Frascari, in Kahn, *From Models to Drawings*, 24.
81 For more discussion of this see: Marian Macken, "Beyond Simulacrum: The Model as Three-dimensional *Post Factum* Documentation' (Master of Architecture (Research) thesis, UTS, 2008).

action and the space of the page can be linked metaphorically. It is the space of the paper that is occupied, and is a holder of the trace of an action; the hand's trail of lines leaving evidence of this.[82] The drawing may be seen as 'a map of time recording the actions of the maker', as a record of 'lived temporality.'[83]

The action of drawing is less inherent within architecture, and so the word exists more strongly as a noun within this realm. The sketch, where the action is strong, is often dismissed as a gestational, embryonic and fleeting stage of the design process. Other architectural drawings, such as construction drawings, are able to be legal documents, emphasising the drawing-as-noun. It is the noun, the depiction, which is dominant. This leads to the association of the noun form as substantive, and, therefore, pointing to a static moment of being. This is in opposition to the verb form which has a dynamism and 'modes of becoming' associated with it. [84] Conventional architectural drawing does not usually have the ability 'to translate the mark back into the action of the hand'.[85] Treating the paper as subjectile reinforces the drawing-as-noun, whereas it is drawing-as-verb that relates to Frascari's description of the potentially dynamic relationship between the architect and paper. It is drawings formed through the manipulation of the page itself that provide a 'field' for action.[86]

The method of drawing, and of how the reader encounters these drawings, is important for another reason. They provide a haptic connection between the maker and the reader. Juhani Pallasmaa writes of the importance of this in his book *The Thinking Hand: Existential and Embodied Wisdom in Architecture*.[87] Pallasmaa writes of the importance of the 'making' of work within the design process, due to the sense of touch during its execution. This extends to the reception of the work, by the viewer, who is able to hold and to feel the work.[88] Pallasmaa argues

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82 Angela Kingston, describing the method of Claude Heath, in *What is Drawing?* Ed. Angela Kingston (London: Black Dog Publishing, 2003), 15. Philip Rawson writes: 'A stroke, even a dot, takes time to make and so shows to the spectator its beginning and its end. Herein lies the vital, unique quality of drawing, which distinguishes it from the other visual arts – its expression of time, movement and change.' Philip Rawson, *Seeing Through Drawing* (London: British Broadcasting Corporation, 1979), 24, cited in Patrick Maynard, *Drawing Distinctions: The Varieties of Graphic Expression* (Ithica: Cornell University Press, 2005), 190.

83 Michael Newman, cited in *Vitamin D: New Perspectives in Drawing*, ed. Johanna Burton et al (London: Phaidon, 2005), 10.

84 R.E. Somol, "Dummy Text, or the Diagrammatic Basis of Contemporary Architecture," in Peter Eisenman, *Diagram Diaries* (London: Thames and Hudson, 1999), 9.

85 Avis Newman, in *The Stage of Drawing: Gesture and Act, Selected from the Tate Collection by Avis Newman, Curated by Catherine De Zegher* (London: Tate Publishing London; New York: The Drawing Center, 2003), 82.

86 Michael Davidson, "The Material Page," in *A Book of the Book: Some Works and Projections About the Book and Writing*, ed. Jerome Rothenberg and Steven Clay (New York City: Granary Books, 2000), 79.

87 (Chichester, UK: Wiley, 2009).

88 To demonstrate the importance of touch, Wood cites Frascari's contemporary fable of Capo Maestra, a girl who was born blind but who wishes to become an architect. Capo is able to draw tactile pictures by embossing wet paper, feeling into her designs where the sighted might only 'see'

that the understanding of the fundamental role of the body in the making of architecture is grossly undervalued today; the dominance of the sense of vision in today's technological culture undermines a multi-sensory approach to architecture.[89]

Drawing the line through techniques which shift the surface dimension of paper, such as cutting out, embossing and scoring, creates an unchangeable line. The line cannot be undone, shifted or redrawn easily, which relates to the notion of the line within drawing, in comparison to painting, within art. Norman Bryson writes:

> Oil paint can be worked and reworked; its density and opacity permit endless acts of revision and alteration, erasure and recommencement. The drawn line, in the West, obeys a different convention: With few exceptions, line is indelible, final, irretractable. A fundamental principle of non-erasure means that whatever marks were made, those are the marks we see … The drawn line is always raw, on permanent view. It has no mantle of invisibility to conceal its emergence into the world. The blankness of the paper exerts a pressure that cannot be sure without shields or screens, with no hiding places, a radically open zone that always operates in real time.[90]

This is different from the notion of the drawn line within architectural documentation, the usual method of which involves iterations. The subtle shifts and versions and editions of drawings for a particular project may be generated by many people over time, although authorship seems to rest with the project that is represented, rather than with the actual drawing. In architectural drawings, the author is seen to be that of the original architect, who may or may not have actually drawn the plans, sections or elevations. There are, of course, notable exceptions, where the recognisability of the mark of certain architects is present.[91] However, the pervasiveness of an office's drawing culture is often not acknowledged and the drawing is seen to have been created by the firm or practice as a collective. The author of a *post factum* presentation of a project is rarely acknowledged as the drawer; it is the project the drawing represents that is of importance.

An example of this ambiguity of the author is shown in the documentation of Mies van der Rohe's Brick Country House project (1924). The only two drawings known to have been

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shadows. Marco Frascari, "The Construction Drawings of a Blind Architect," in *On Architecture, the City, and Technology: Proceedings of the Eighth Annual ACSA Technology Conference*, ed. Marc M. Angilil (Stoneham, Massachusetts: Butterworth-Heinman, 1990), 52–54, cited in Wood, "Drawing the Line."

89 Pallasmaa, *The Thinking Hand*, 15, 21.

90 Norman Bryson, in *The Stage of Drawing*,149.

91 Such as exhibitions devoted to marked-up, drafted drawings of certain architects, for example the recognisable hand of Carlo Scarpa on distinctive yellow trace, as shown in the exhibition 'Carlo Scarpa: Houses and Landscape 1972–78', at Palazzo Barbaran da Porto, Vicenza, 2000.

made for this project were destroyed or lost and survive as reproduced in a photograph.[92] These drawings were redrawn by Werner Blaser for his 1965 monograph during a period of contact with Mies himself, but give no clue as to authorship. As Fritz Neumeyer writes, these drawings largely determined the conception of this project, 'insofar as this reconstruction was readily accepted in other circles as a Mies drawing.'[93] A photograph was found by Wolf Tegethoff in the Mannheim Kunsthalle, showing the two original drawings pinned to the wall, thus demonstrating a number of differences and deviations from these in this reconstruction.[94]

As another example of the unfounded claims of documentation's authority, Mies is known to have overseen the inaccurate redrawing of built work, in the case of the Barcelona Pavilion. In 1964, the no longer existing pavilion was recreated through drawings, under Mies's supervision.[95] However, these drawings do not reproduce with complete fidelity the reality of the building constructed in 1929.[96] The inaccuracies were less of a concern for Mies; the drawings are more about corresponding with his ideal of the plan. If the image reproduced his idea, then for Mies it was true.[97]

There is an assumed accuracy and authority and reliability inherent within architectural drawing, similar to the 'evidential force' Roland Barthes writes of regarding photography: 'From a phenomenological viewpoint, in the Photograph, the power of authentication exceeds the power of representation.'[98] Ingraham writes of this authenticity and the questions raised of architectural representation:

> Architecture has maintained its dedication to linearity in the face of what seems like astounding counter-evidence: the drift and turbulence of forces that can barely be resolved and dissimulated into the vertical striation of space; the tenuousness of graphite on paper or ink on trace; the loss of resolution in repetition and reproduction; the interior mess of the wall … Architecture has, without question, seen linearity as a way of upholding properties belonging so completely to its history that it is hard to imagine what architecture would be apart from them.[99]

92 Arthur Drexler, ed., *The Mies van der Rohe Archive Volume One* (New York; London: Garland Publishing, 1986), 94

93 Fritz Neumeyer, *The Artless Word* (Cambridge, Massachusetts: MIT Press, 1991), xiv.

94 These differences are outlined in Drexler, *The Mies van der Rohe Archive Volume One*, 90.

95 George Dodds, *Building Desire: On the Barcelona Pavilion* (London: Routledge, 2005), 129.

96 A second attempt at redrawing was undertaken by Dr. Ruegenberg. These are more a personal proposal of a new way of constructing the building than a faithful description of the material characteristics of the building as actually constructed. Ignasi de Solà-Morales, Cristian Cirici and Fernando Ramos, *Mies Van Der Rohe: Barcelona Pavilion* (Barcelona: Gustavo Gili, 1993), 6.

97 Dodds, *Building Desire*, 129.

98 Roland Barthes, *Camera Lucida*, trans. Richard Howard (London: Vintage, 1982), 89.

99 Ingraham, in *Drawing Building Text*, 73.

The unchangeable quality of the line as shown in the examples of work by Eliasson, Fukuda and others refers to the assumed accuracy of the drawing and, hence, the limitations of architectural projections.

The description of the drawings within artists' books as outlined relates to Nelson Goodman's way of distinguishing between two different artforms – that is, autographic and allographic – in *Languages of Art: An Approach to a Theory of Symbols*.[100] According to Goodman, autographic artworks depend upon the direct contact of the author for their authenticity, such as painting and sculpture. In contrast, allographic works exist in many copies, and can be produced without the direct intervention of the author, such as music and dance performances. Despite potentially different circumstances and changes of interpretation, every performance of allographic works counts as an authentic instance of that work. It is the internal structure of the work, as set down in the score, which guarantees authenticity, rather than the presence of the author, writes Allen, in reference to this.[101] Allen refers to this discussion due to his interest in examining architectural drawings as scores or scripts and, hence, the notational practices involved in drawing them. According to Allen, architecture is neither clearly autographic nor allographic: the drawings are not an end in themselves and the durable and physically present built work of architecture is in opposition to the ephemerality of allographic works.[102] *Post factum* architectural drawings within artists' books are similarly ambiguous: although being aligned more strongly with an autographic work, they still operate as allographic, in their transitive nature.

Allen raises Goodman's discussion as a way of aligning the architectural drawing with the diagram, instead of with notational, or instructional, systems. According to Allen, notational systems operate according to shared conventions of interpretations, and belong to time, while diagrams are open to multiple interpretations and belong to space and organisation.[103] Although the diagram is often thought of as an after-the-fact drawing – an explanatory device to communicate or clarify form, structure or program[104] – it also acts as a generative device, mediating 'between a palpable object, a real building, and what can be called architecture's interiority.'[105] Peter Wood writes that the diagram is 'located in the domains of between-ness and hybridity' and should be

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100 (Indianapolis, Indiana: Hackett, 2nd ed.,1976), 218.
101 Allen, *Practice*, 45.
102 Allen, *Practice*, 46.
103 Allen, *Practice*, 49, 50.
104 Allen, *Practice*, 50.
105 Peter Eisenman, "Diagram: An Original Scene of Writing," in Eisenman, *Diagram Diaries*, 27. Also R.E. Somol writes that the diagram, unlike drawing or text, operates precisely *between* form and work. Somol, in Eisenman, *Diagram Diaries*, 8.

described as 'a transformation which relies on an existing relationship to, and with, drawing.'[106]

With this description in mind, the artist's book may be thought of as operating as an architectural diagram. It, too, acts as an explanatory device and is projective, in that it opens new territories for practice.[107] According to R.E. Somol, a diagrammatic practice is in opposition to the tectonic vision of architecture as the legible sign of construction[108]; equally, artists' books present an alternative to built work as endpoint of the design process, that is, the representation as process is their focus.

The book's *post factum* character creates an indexical relationship with other architectural drawing: as Rosalind Krauss writes, 'indexes establish their meanings along the axis of a physical relationship to their referents. They are the marks or traces of a particular cause.'[109] The book's presence – that is, the work's acknowledgement of the medium through which it is executed – and its relationship to drawing, may also be aligned with the notion of architectural facture. The book operates as an architectural facture, in Frascari's terms, due to this explicitness of its medium; the objecthood of the book acknowledges its – and its drawings' – having-been-made.

The advantage of reading the artist's book as an architectural facture which operates diagrammatically is to place the book in a particular relation to architectural discourse. The book sits within the lineage of representation, altering the temporality of the process of invention from *pre-factum* drawings, and the built form, as the site of architectural conceiving.[110] The graphical procedures involved in architecture are able to be re-evaluated, recognising the processes of conversion and transformation within the discipline.[111] This reading of the book also emphasises the potential for a representation that 'does not point inward, toward architecture's interior history as a discipline, but rather turns outward, signaling possible relations of matter and information'[112]; it does not represent but rather constitutes a new type of reality that introduces architectural research into a field of actualization.[113]

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106 Wood, "Drawing the Line."
107 Somol, in Eisenman, *Diagram Diaries*, 23.
108 Somol, in Eisenman, *Diagram Diaries*, 24.
109 Rosalind Krauss writes: 'As distinct from symbols, indexes establish their meanings along the axis of a physical relationship to their referents. They are the marks or traces of a particular cause.' Krauss, cited in Pérez Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, 448, note 73.
110 Jane Rendell writes that recent explorations into diagram argue for visual practices that are temporal as well as spatial. Jane Rendell, "Seeing Time/Writing Place," in Frascari et al, *From Models to Drawings*, 185.
111 Frascari, in Frascari et al, *From Models to Drawings*, 1.
112 Allen, *Practice*, 50.
113 Vyzoviti, *Folding Architecture*, 9.

Altering the 'apparatuses of representation'[114], from A1 presentation sheets or reproduced images within publications to artists' books, allows a different reading of the drawings. Drawings made using alternate methods, such as embossing, cutting or scoring, have a strong relationship with their page: the page is a site for the drawings *and* is integral to the creation of the drawing. No longer are the drawings able to be placed within the page to suit the graphic layout; rather they are 'embedded' within the page in a particular way. The drawing as reproduced image within a publication does not acknowledge the potential, symbiotic relationship between the drawing and the page's paper. The edge and the materiality of the paper are essential to the reading of the drawing. In treating the line differently, the actual drawing is brought closer, it is not seen as a transparent screen between idea and architectural built object.[115] These drawing methods give a certain conceptual character to the line, the result being a slippage of the line's power: there is no linear path through the line itself. As the line slips, the page comes forward. The drawings interact with the page edge and disrupt the page as frame. With some, the page is eaten away during the reading of the book, highlighting the delicacy of the materiality of paper.

The actual page is not merely a surface upon which the ink is applied, nor is it a frame to be held in one's hand. The page then ceases to be a neutral surface of support and becomes instead 'a spatially interacting region.'[116] The materiality of the page has a greater presence. The physicality of the page allows the turning of the page, and, hence, the surface of the reverse side becomes part of the drawing. The three-dimensional quality of paper itself is ignored by conventional documentation, as drawings are predominantly seen as two-dimensional representation. In artists' books, the page becomes a site, and the book 'a sequence of spaces'[117] whose turning pages offers interiority, and allow the book as a site for architecture to be explored. Rather than drawings considered, and presented, as ancillary components able to conjure up the absent work, the drawings within artists' books provide a material presence of architectural drawing. The potential of the drawings then, is in their presence, not their likeness.[118] John Whiteman's description of the drawings of the architect Ben Nicholson is relevant: he writes that they 'bring energies into our presence, and by the device of the drawing itself makes them operative in our presence.'[119]

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114 Ingraham, in Kahn, *Drawing Building Text*, 65.
115 Sarah Treadwell, "Focus: Paper Realities," *Architecture NZ*, issue 199701, January–February, 1997, 83.
116 Steve McCaffery and bpNichol, "The Book as Machine," in *A Book of the Book*, 21.
117 Ulises Carrión, "The New Art of Making Books ," in *Artists' Books: A Critical Anthology and Sourcebook* ed. Joan Lyons (Rochester, New York: Visual Studies Workshop, 1985), 27.
118 Frederica Goffi, "Architecture's Twinned Body: Building and Drawing," in Frascari et al, *From Drawing to Models*, 89.
119 John Whiteman in reference to Ben Nicholson's drawings in Ben Nicholson, ed., *Appliance House*, (Cambridge, Massachusetts: MIT Press, 1990), 8.