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'The Flow of Life': Photographing Architecture as Populated Spaces

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A thesis submitted in partial fulfilment of the
requirements of the Manchester
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Abstract

Many critics have highlighted the gulf between the experience of architecture and its representations via photography, suggesting a more humanistic and temporal portrayal. My research questions whether, in pursuing alternatives to conventional, commercial architectural photography, a more dynamic view can be revealed, one that is closer to the experience of encountering the built environment: episodic, temporal and in flux.

I believe temporality and motion are indicative of the life of a building: both habitually omitted from traditional commercial representations. Practical and conceptual challenges directed me to techniques depicting 'still' and 'moving', that intersect with several of photography's discourses: the evidential value of images constructed over time, the perception of movement in still photography and negotiations between description and creativity.

My methodology is an empirical investigation drawing on principles of the scientific analysis of motion (chronophotography): interpretive, yet with evidential rigour. This allies to Henri Bergson's concept of duration, Futurism, Cubism and cinematic animation, whence I take the portrayal of motion and multi-point perspectives in still images.

By identifying examples from painting and illustration, I reveal a temporal approach, building up images over time, utilising observation, interpretation, editing, iteration and presentation. My subject matter is limited to what is found and what appears during each session; from this *bricolage* of serendipitous events selections are made throughout the practice's reiterative process. I argue the case for appropriating the artist's licence to interpret, producing an abbreviation of a longer period while remaining informative. I challenge Kracauer's contention that the true ability to depict the city is exclusive to cinema, by using a static medium to represent ever-changing landscapes populated by transient characters in ephemeral scenes.

My practice bridges the gap between architectural photography and the 'photography of architecture'. I identify two anomalies that inform the practice: firstly the difference between mainstream architectural photography during the inter-war period and concurrent, vibrant, animated representations of the city in film and painting. Secondly, my case studies illustrate differences between architectural photography and visual representations in other media (CAD-generated images, architectural models and sketches); the animated nature of the latter negating the notion of commercially-driven work being necessarily objectified, pristine and sterile.

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I am indebted to Patrick Wright, who helped to turn my dyslexia-induced phobia of writing into far less of a problem than previously (it is still a work in progress). Rose Nelson (MMU Learner Development Service) has provided sterling support for my disability issues: above and beyond anything I could have expected of her role. Poet Jen Hadfield and journalist/novelist William Shaw gave outstanding encouragement to a non-writer at a week-long residential writing workshop in 2013.

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Dedicated to the memory of my friend Ray Townend (1934-2016): The best father-in-law I could have hoped for.

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Preface

My background includes a long career in computing, after which I joined The University of Manchester as a specialist in digital imaging, later working in the fields of record photography (architecture, art galleries, museums and archaeology) for academic departments and cultural institutions. During twenty-three years of professional photographic experience I have recognised the nuances of record photography, as a sub-genre incorporating interpretation and representation. I have also encountered ways in which the conventions of architectural photography constrain the possibilities for its interpretation and are prescriptive with respect to architecture's visual representation.

In parallel with this photographic career my personal artistic practice (including my Masters degree) is in the field of documentary photography: personal explorations to find 'the reality around you that might have universal meaning' (Vegue 2015, p 45). It was from the disparity between my professional and personal work that the ideas for this project originated: to form a hybrid between the two, borrowing from both areas, creating architectural photography closer to the 'lived experience', responding to critics' calls for change in the visual representation of architecture. This research has been an opportunity to pursue, in a more formal and academic manner, an investigation into possible forms of representation, overlapping the discourses of photography and architecture.

This thesis' practice has evolved over five years to become a compromise: one wrought between experimentation (an reiterative exploration of 'what is possible'), retention of the basis of 'professional' architectural photography (to provide an 'alternative' that is viable as 'professional'), aesthetics (avoiding 'fine-art', yet constantly aware of the necessity to engage the viewer), the rigour of representation (an omnipresent factor in seeking an overt and honest 'reality'),¹ and the fascination with how decisions made in the creation of images can alter viewers' perceptions. The developing practice had many influences – the existing field, critiques of that field, interpretations accumulated over time (as seen in painting and drawing), the comparatively dynamic commercial representations of architecture in other media, the challenge of producing temporal representations via (still) photography and the view of architecture from a 'human' level. Most of these factors are connected to each other via such themes as representation, modernism, temporality, chronophotography and of course their influence on my own practice.

¹ John Tagg's 'burden' of representation (Tagg 1988).

The properties that I have included within my practice are rarely seen in isolation, therefore there is often considerable overlap between them. The inclusion of people, the formality of professional architectural photography (or of cross-section, plan and elevation drawings), temporality, forced or flattened perspectives, weather, traces of movement, the fourth wall, series and pentimenti cannot always be separated in any meaningful way. While the influences on my view of architecture are not discrete, writing this thesis has demanded separating them into paragraphs and chapters that reflect the main areas of influence. That has made the task of stretching the research into the linear arrangement dictated by its textual form extremely difficult, as they form a web of interconnections rather than a hierarchy. I acknowledge that this imposes a compromise between illustrating these interacting influences – each contributing to the contextualisation of the built environment and also affecting each other in myriad permutations – and the untangling and stretching out of this web into some sort of order, as dictated by the linear nature of writing.

Therefore the thesis, with the practice at the centre, has a structure that has been likened to a vision where these influences form the four sides (representation, agency of author to interpret, temporality and other people's practice), dictating the four chapters, while the final chapter (my practice) fills in the middle ground, connecting the influences and completing the picture.² Whilst possibly leading to a lack of clarity in the written form, the interconnection of these influences – and the unanticipated and therefore (surprisingly) serendipitous connections that they formed – has proved to be a strength of their influence on the practice. This in turn has provided a far more complex, yet cohesive stimulus to the practice.

My original idea was to find a single form of practice that would satisfactorily answer the research question, fulfilling most of the criteria necessary to provide a compromise between architects' requirements, commercial needs and my own desire to form a less life-less and more 'realistic' view of my experience of architecture. This naïve aim was eventually replaced with the more realistic aspiration to provide a range of alternatives: some of which will undoubtedly satisfy some people and (I expect) none will satisfy everyone.

² One person suggested a jigsaw puzzle with sides completed, where the infill of the centre revealed the complete picture.

Introduction

Professional architectural photographers in the commercial arena produce images that are, of necessity, commercially oriented. Very few of these are regularly commissioned to make work that is more insightful: abstract, documentary or conceptual. Photographers rarely explore the reality of the temporal ‘life’ of buildings, the lived experience.³ For those fine-art practitioners who make imagery where architecture is the subject, this work is, at best, *about* architecture: this is not, nor is it intended to be, an alternative to commercial photography, or to be revealing about the function and use of the built environment. My practice has borrowed concepts from fine art photography, and to a lesser extent scientific photography, to inform architectural photography, sited in the gap, or overlap, between these three fields. I align the practice between the more creative photographers of the commercial realm and the fine-art practitioners who produce images where the subject is architecture. Between commercial and fine art, the resultant practice is also across both camps, both audiences, both routes of dissemination.⁴ Yet some areas of the practice will only appeal to one side or the other. Ideally it could have widespread appeal such as the work of Andreas Gursky, Iwan Baan or H  l  ne Binet, but the nature of the methodology and resultant practice produces experimental results: ones that satisfy conceptual aims and the research question – and to an extent the critics’ calls for change – without being distilled into a single mode of practice or production, for a specific audience.⁵

The original aims were for a practice that would produce these results *and* be a panacea for architectural photography. This was progressively narrowed to produce images that take on board the original concept of temporality and populated spaces, while offering a concept that could stimulate debate and further research; research that could include measurement of flow numbers, direction and speed. Ultimately the criteria for the practice are ‘does it answer – at least in part – the research question [see page 3], and does it respond to critics’ calls for change?’ My practice draws from several influences, from different eras, as noted in the thesis. As such it does not fit neatly into the chronological compendia of architectural photography as the latest entry.⁶ It is sited

³ See page 4 within ‘Terminology’ for my definition of the ‘lived experience’ as used in this thesis.

⁴ See Chapter Five and the Conclusion for an evaluation of how different forms of the practice suit each route.

⁵ Partly due to limits of research time and the word limit, but also to increase the range of possible alternatives.

⁶ For examples see Elwall (1994), Pare, Inbusch and Munsterberg (1982), or Caiger-Smith, Chandler and Abrams (1991)

in parallel, selecting appropriate influences from different eras, aiming at a conceptual approach that embraces temporality.

The production of this project at this time is not accidental; it has been formed by the culmination of my own interests and skills at the time of its inception. What is now (technically) possible is also a result of the technology available and the audience's, the public's, assimilation of visual technologies, their 'visual literacy'.⁷ Many critics have highlighted the gulf between the experience of architecture and its representations via photography, suggesting a more humanistic portrayal 'in order to catch another layer of reality and not to render the real idealistic' (Meireis 2012). The existing academic field draws attention to this anomaly, whilst offering little in the way of alternatives. Pragmatically, there has been a paucity of research of just how alternatives might be produced and of what could be gleaned from these alternatives.⁸

This thesis started as a practice-led project to formulate new forms of photographic representations of architecture. It has led to a broadening of my own practice questioning how I can convey dynamic environments through a static medium, a challenge that has guided the practice through what were, to me, uncharted areas – from nineteenth century chronophotography, along desire paths, to the simulation of a 'condensation' of time. The practical and conceptual challenges directed me to combinations of techniques and ideas that lay between 'still' and 'moving' images. Temporality and motion are two aspects I believe to be indicative of the 'life' of a building. They are also the two aspects that are habitually omitted from traditional commercial representations. This exploration on the ill-defined boundary between stills and cinema intersects with several of the discourses surrounding photography's medium specificity (in the first three chapters).⁹ Although much has been written on the subject of photography, defining its specificity has always proved a controversial task. Photography's offspring – cinema/video and the more recent digital technologies – have further complicated these discourses. Mark Howarth-Booth drew attention to the critic Lady Eastlake's pronouncement that photography was a 'new form of communication between man and man [sic] – neither letter, message nor picture – which now happily fills the space between them' (Hockney and Haworth-Booth 1983, p 2), which places

⁷ For a more in-depth account of this topic see Wise and Koskela's *New Visualities: New Technologies* (2013)

⁸ Not addressed until two recent practice-led PhD theses: Kate Mellor's 'Do not refreeze: images of architecture and photographic temporality' (Mellor 2015) and Marc Goodwin's 'Architecture's Discursive Space: Photography' (Goodwin 2016). I will address these theses later: in particular the similarity of our starting points, but the differences in their outcomes.

⁹ Drawn from fine art practices and cinema theory, this is increasingly referred to as still:moving (or still|moving) (Beckman & Ma 2008), or photography's 'expanded field' (Baker 2008).

photography between these communications and also separates it from each of them. Howarth-Booth also quoted photographer and critic Jabez Hughes' three 'orders' of categorisation of photography: mechanical photography, art-photography and high-art photography. The first describes 'simple recordings' (a topic I shall return to later). The second is photography where the artist 'determines to infuse his mind into them by arranging, modifying or otherwise disposing them, so that they may appear in a more appropriate or beautiful manner than they would have been without such interference' (Hockney and Haworth-Booth 1983, pp 2-3).¹⁰ Hughes' third order, that of High-art photography, referenced in particular constructed tableau images made from multiple negatives.¹¹ This was defined as photographs that 'aim at higher purposes than the majority of art-photographs, and whose aim is not merely to amuse, but to instruct, purify and ennoble', denoting the photographer's agency (Hockney and Haworth-Booth 1983, pp 2-3). While I do not claim to 'instruct, purify and ennoble', this description acknowledges intention, conceptual thinking and applied technique on the part of the photographer: all aims with which I do concur.

The difficulty of finding a balance within photography between the descriptive and the creative has a long history, one that relies on the varied perceptions of the viewer and the intention of the photographer and/or editor. It is within these problematic areas – areas that still defy agreed definitions and boundaries – that I locate my research and practice: a form of communication at once both descriptive and creative, between still and moving, to represent and interpret, between Lady Eastlake's 'message and picture'.

My research question is whether, in pursuing alternatives to conventional, commercial architectural photography, a more dynamic view can be revealed? The aim is that these views show aspects of temporality and movement (as a specific indicator of temporality), providing a more experiential interpretation [see 'Terminology' below] of the built environment, in direct response to critics' calls for change, as outlined in chapter one.

All parts of the final practice [indicated by (p)] accrue moments (exposures) from different times and condense these together. In chapter two I argue the case for the similarity between this process and that of drawing and painting, as an accumulative process with similarities to the experience of remembering and/or recording fleeting glimpses. This is further analysed in chapter five in regard to how we see, building up a

¹⁰ Haworth-Booth refers here to Beaumont Newhall's *Photography: essays and images* (1980).

¹¹ A controversial form widely circulated in this period. For example Oscar Reijlander's 'The Two Ways of Life' (1857) and Henry Peach Robinson's 'Fading Away' (1858)

composite picture of the world around us. Thus the research in these chapters argues for a connection between the experience of architecture and the experience of seeing and remembering, by contrast with the image of architecture portrayed within a single, brief exposure.

Terminology

Henceforth (unless specifically stated otherwise) I will use the term 'conventional architectural photography' to refer to conventional, commercial, architectural photography: the practice that is prevalent in the architectural press and in advertising. I extensively refer to 'practice' within the thesis by which I am referring to my own practice, produced for this thesis, unless specifically stated otherwise. I refer in many places to the aim of the practice as revealing a more 'realistic', experiential or 'meaningful' representation of architecture. By the use of these expressions I am referring to images of the building(s) *and* other contextual subjects.

As Jeremy Till suggested, viewing the everyday is a commonplace experience, so common that it can be overlooked unless observation and awareness conflate:

Start with what you know, what you see, what you experience; start with the everyday; [...] put aside your clock and look for all those other aspects of time as lived [...]; the linear, the cyclical, the instant, the memory, the event, the ritual. Lived time; you will find it in the streets, you will find it in the everyday (Till 2009, p 96).

Generally the indicators I use to illustrate the temporal flow, 'everyday life' as it unfolds are people, as specified in the thesis' title [populated spaces]. I will assess photography's links with 'reality' in chapter two, but note here Kate Mellor's observation that 'photography's relationship with the "real" invites constant renegotiation' (Mellor 2015, p 28), it being an ever-changing scenario. It is a relationship that is further 'analyzed through critically reflective artistic practice' (Mellor 2015, p 29). Particular approaches within the practice (such as the panoramic 'joiners') lend themselves to depict the experience of moving through spaces, along or around buildings: a series of temporal actions that reinforces the sense of 'flow'.

The terms 'commercial', or 'mainstream' architectural photography refer to the majority of examples seen in advertisements, the architectural press and books: routinely devoid of life (or sparsely populated), isolated from their context, concentrating on form, more than function (this is further defined in chapter one). In chapter two I analyse

architectural photography's status within 'record photography'. This is the term used in professional photography for the sub-genre that records objects and scenes. It predominantly refers to photographs taken for vocational and/or scientific reasons where the objective recording of information is the primary intention. Examples include reproductions of artefacts and the preservation of information: within art galleries, libraries, museums, archaeology, archives and forensic (legal) fields.¹² I use the term CAD to refer to computer-generated visualisations (or 'renders'), rather than the specific (design) meaning of virtual, three-dimensional models, or their generation by software packages.

Scope

In my research into the current field I am primarily looking at the phenomenon of the conventions of commercial architectural photography in the U.K., although I include references to other countries that share a similar convention (such as the U.S.A.). Other areas have similarities though many have differences, not least of which is a wider range of representations.¹³

The historical research for the project looks at representations and modes of perception from some of the earliest examples of artworks that depict temporality and motion. Architectural photography is primarily explored from the 1920s onwards, as this was the point from which most of the conventions for its current practice were established. Inspirations for ideas and techniques are drawn from photographic practices across the whole of photography's history. As the thesis is written in English, I have translated American-English quotes into English for consistency of spelling. All other translations acknowledge the translator (as mediator of the text).

I am not attempting to document the enormous breadth of fine art practices whose subject is architecture, as most of these do not engage with the same concerns as this project. The exceptions that I do reference are those examples that have a particular resonance with the aims of my research question: those that offer insights into how the lived experience of architecture can be represented in still images, or those (not

¹² For a detailed analysis of the uses and implications of record photography see John Tagg's *Burden of Representation* (Tagg 1988).

¹³ Other European countries generally display a greater variety of forms of architectural photography. In particular they are less fastidious at excluding people within their images. This is based on personal observations throughout the period of research of U.K. based architectural journals compared to *L'Architecture d'Aujourd'hui* (France), *L'Arca* (Italian), *El Croquis* (Spain) as well as books: (D'Annunziis, 2000), (Mack, 1999) and (Nerdinger 2011)

necessarily related to architecture) from which I may borrow practical techniques that will help me to convey these concepts.

Although my practice may document people within the built environment, it would be beyond its scope to further analyse where these people are going and why, or how they move, thus leaving aside the perspectives of the disciplines of phenomenology, psycho-geography and anthropology. Cross-cultural comparisons in the representations of architecture, in the sense of analysing why those differences occur between different countries, would also be beyond its scope.

Photography was chosen as the medium for the practice as it is the same medium to which an alternative is sought. Whilst I draw from many other disciplines, it is primarily from the areas of photography and its related disciplines (notably cinema) that I take much of my inspiration. With practice that utilises time-based concepts, movement and (in some cases) multiple viewpoints, the question arises as to why I am not using film/cinema for my practical experimentation. Film studies of architecture already exist and show the properties I am interested in representing. Whilst film can show those properties (elapsed time, inhabitation, movement: the *use* of the spaces), they do not summarize the accumulated view over time, except via the (inherently unreliable) memory of the observer. Also film is not a *direct* alternative to architectural photography.¹⁴ Time-lapse films do offer a more concentrated viewing of actions over time, but still rely on the accumulated memory of the viewer and, I will show, accumulated still images offer the possibility of the detailed scrutiny that moving film cannot, as well as the editing of selected moments that we would expect from a directed film.¹⁵

The practical challenge is to represent those properties within the confines of the existing medium. I felt that the use of the same medium provides the direct alternative, comparable with existing forms of architectural photography, which I seek. The use of still photography also allows the accumulation of observations in one image: analogous with statistical representations, I am visually summarising 'data' (such as presence and movement through, or around buildings) in a similar way to how a graph or chart represents an overview of statistical data in a single, visual, condensed form. The resultant images show that which can be seen through observation over time, but may not be readily appreciated or perceived en-masse. A result of the choice of photography

¹⁴ Although video is used commercially as an occasional supplement to stills.

¹⁵ Not an inherent property of time-lapse as they compress continuous takes; for time-lapse (partly) of cities and workers, see Ron Fricke's *Chronos* (1985), and *Baraka* (1992). Fricke was also the cinematographer for Godfrey Reggio's *Koyaanisqatsi* (1982).

is that an essential property of the medium stillness also allows contemplation, reflection and examination of details that might otherwise be overlooked.

Methodology

Research of architectural photography from historical and theoretical viewpoints has flourished in the last twenty to thirty years. I draw on this research to establish the background to the field within which I base my research, my motives and the starting point for practical experimentation. As this is a practice-led thesis, rather than expanding this research with yet more ideas of what is the nature of architectural photography and why it is like that, I have chosen to weight the thesis towards traditional empirical methodology, this is via observation, design, testing and evaluation to explore a range of alternatives that, in turn, generate areas for discussion and for further research. The nature of these is in the spirit of the pioneer of the scientific analysis of motion, the French physiologist Etienne-Jules Marey (Braun and Marey 1992). Marey's methodology utilised photography to reveal aspects of movement that cannot be seen by the 'naked eye', within frameworks of space and time. Common to most photographic practice, the practice's subject matter is limited to what is found and what appears during each session, not the pure creativity on a blank canvas of an abstract artist. From this *bricolage* of serendipitous events selections are made throughout the reiterative process of the practice.¹⁶ This strive for revelations facilitated by photography is supported by the later writings of Lazlo Moholy-Nagy, who asserted that as photography can 'disclose more than mere mimetic recordings[,] this is the area that should be explored through photography' (Moholy-Nagy, Wingler et al. 1968).¹⁷ Vilem Flusser's observation of society's return to visual communication, as it starts to supersede the textual, is increasingly true since the advent of digital technologies and the spread of image-based communications that these have facilitated (Flusser and Von Amelunxen 2000). This is a viewpoint to which I will return to illuminate reflections on perceptions of the practice.

I do not apply a theoretical model across the entire thesis, although theoretical concepts of the experience of lived time recur throughout. The contextual background is informed by connections within modernism and representations of temporality in art, informing the practice and its supporting contextual research. My own practice and reflections direct the later analysis, aided by the observations of others.

¹⁶ Almost two hundred sessions produced a total of 12,426 exposures from which the final practice was distilled.

¹⁷ Over and above its use for recording and aesthetic purposes.

Within the thesis I am utilising a particular notion of time/temporality, previously described as 'experiential'. Recognition of the ever-changing nature of experience has a long history, the philosopher Heraclitus recognised this idea in the first Century B.C.E., when he said "everything is in flux, and no man ever steps in the same river twice" (Friday 2006, p 45).¹⁸ The experiential view lends itself to non-linear representation. Two writers recur in the thesis, although the thesis is not based on their writings. Henri Bergson's concept of duration (*La durée*) (Bergson 1984) appears in the first three chapters, linking chronophotography, Futurism, Cubism and early critiques of cinema. Although this connects aspects of the thesis, this was not planned or designed, as these connections were serendipitous. In any case the basis of the practice in its discontinuous recording, indeed in its medium of photography, separates it from Bergson's duration. I also draw on Siegfried Kracauer's observations of photography, cinema and the city including his term 'the flow of life', from which I take part of my title (Kracauer 1965, p 71). Kracauer described the ability of cinema, over photography, to show temporality and movement. I see this as the challenge of the practical elements of the thesis: utilising a 'still' medium to portray Kracauer's 'flow'. However, this is not intended to connect the thesis to any analysis of the term 'flow', merely to note Kracauer's eloquent descriptions of movement and temporality. These notions of representing time intersect with discourses around temporality in the medium of photography, a medium variously described as the capture of the 'here and now', as a frozen moment of time from the past, or as the 'folding of time itself' (Graham 2010), and a concept I return to in chapter five.

Because of the empirical nature of the practice and the lack of an overall precedent (practical or theoretical) on which to base the research, I have broken with the traditional theoretical structure of a doctoral thesis in that there is not a separate literature review. Each of the first three chapters reviews literature where appropriate and chapter four (and to some extent chapter three) serves as a review of others' practice, as well as my own. Existing scholarship provides the historical analysis of architectural photography and its more recent critiques. They provide the field in which I base my research and motivation by way of identifying a gap in the practice. I am not aiming to add to either of these, merely to provide practical results that offer answers to their critiques of the status quo.

¹⁸ Although it was unknown at that time, everything from nuclear motion within atoms, to the Milky Way is constantly in motion.

Many of my images for this thesis show large areas with people who are necessarily quite small in the frame. As such it is difficult to see the details of these images in horizontal orientation on A4 paper: this being particularly true of the (panoramic) collages. Therefore there will be a viewing at the beginning of the viva voce of a selection of my practice as large prints.¹⁹

Chapter summaries

Chapter one

The first chapter is an objective view of where architectural photography is located and where my own representations might usefully be placed. From my experiments I show how framing and perspective are reliant on distance, scale and angle of view: factors that can be chosen to show a dynamic or a flattened perspective. The former is a technique that recurs in architectural photography and I argue that this is a foundation of the dominant style that can be altered and manipulated. In this part I draw from the historical analyses of architectural photography by Robert Elwall, as well as from Pare (Pare, Inbusch et al. 1982) and Busch (Busch 1987). This creates my starting point for comparisons of alternatives throughout the practice. The chapter is structured around two representations of 'the city': architectural photography and representations of the city in other media.²⁰ In the conclusion I analyse of the scale and visibility of the resultant practice, determining its suitability for various modes of dissemination.

The first strand developed a distinctive style dating from the modernist images of the 1920s, which has been dominant for over ninety years. I examine recent critical discourse [especially by Beatriz Colomina (Colomina 1996) and Claire Zimmerman (Zimmerman 2008, Zimmerman 2014)] that traces the origins of this style in modernism, and its influence on architecture, producing a symbiotic relationship between architecture and its photography, as part of the influence of mass media heralded by technological advances at the start of the twentieth century. I then critique this loop: architectural design aimed at photography, then directs architecture, which is disseminated by photography, further reinforcing the style.

I focus on two aspects of this style: the absence of people in these images and the lack of signs of movement or temporality. As Henry Plummer noted, 'the experience of architecture is about movement and yet it isn't shown' (Plummer 2016). I trace the

¹⁹ The figures that are used to illustrate my practice in this thesis can be viewed here: www.insightimages.wordpress.com/thesis-illustrations-of-practice/

²⁰ These representations are drawn from (approximately) 1910 to the mid-1930s.

causes of this style through research into the design of modernist buildings, early practitioners and its perpetuation by publishers.

Recent exhibitions of architectural photography, dominated by fine-art photography help to identify the differences between architectural photography and the photography of architecture: a space that I identify as an opportunity to locate my practice drawing from both the predominant style and fine art. I summarise occurrences of alternatives within mainstream publications: documentary and humanist photography. I draw extracts from critiques by Szarkowski, Elwall, Picton and Lahiji, all of which express dissatisfaction with the status quo. I conclude that while there have been documentary and humanist breaks with the mainstream style, that style's persistence has generated criticism, but I have not found any practical attempts to test ways of introducing temporal, populated views within the structure of the mainstream, save for the two theses noted earlier (Mellor 2015 and Goodwin 2016). The phenomenon of the heroic, sculptural 'starchitecture', criticised as the epitome of style over substance, concludes my examination of the state of architectural photography and its relationship between 'human' connections and temporality.

In the second strand, I briefly survey changing perceptions of time, motion and the city, drawing parallels between ideas, movements and concepts that flourished during the period from 1910 to the mid-1930s, underlining alternative views of the city. These changes were exhibited in works by artists such as Futurists, Vorticists and graphic designers. In particular, I draw on dynamic and temporal visual representations that are in direct contrast to the concurrent style of architectural photography. By analysing representations of the city in film, such as the early 'city symphonies', Neo-realism, and time-lapse, I identify an intertwined, informal, and chaotic flow that offers interesting possibilities for representation, but appears difficult to show via (still) photography.

Chapter Two: Drawing with light

Chapter two proposes a compromise between formal, professional photography and the more liberal, creative fine art depictions. I start by identifying architectural photography in the public consciousness as being within the sub-genre of 'record' photography. I further relate this back to the traits of photography's medium specificity: indexicality and its 'truth claim'. I survey the early impressions of the medium to see it as it was originally viewed, before the current immersion in photography, to gauge the authority that photography carries. I make the case for populated photographs, to show buildings in use

as being necessary for the discourse surrounding the building's design and its effectiveness.

I draw parallels with other record photography, highlighting how little scholarly research there has been into these areas, as sites of representation. I explore the position of photography as a 'realistic' medium, using case studies to evaluate the differences between commercial representations of architecture via photography and those of other media: CAD renderings, models and sketches (all usually dynamic and populated).²¹ Through these comparisons I show the anomalous differences between photographic and non-photographic images, the animated nature of the latter negating the notion of commercially driven work being necessarily objectified, pristine and sterile. I also demonstrate the effect of photographing architectural models, as they then exhibit traits of architectural photography (as noted in chapter one).

Showing examples from natural history and archaeological illustrations, I further argue the case for appropriating into my practice the artist's licence to interpret, producing an indication whilst remaining informative. As natural history illustrations can be representative of a whole life cycle, they are temporal, accumulated, edited and considered: all properties I invest into my practice. Identifying examples from painters of urban and industrial North West England, I suggest their humanist depictions created *genius loci* that built up images over time, utilising observation, interpretation, editing, presentation, iteration and representation. I label this compromise a negotiated interpretation, one that compresses an extended period to produce an interpretation of what was observed, without fictional creations. I suggest the need to exercise caution when referring to record, representation or indexicality in respect to photography.

Chapter Three: Representations of temporality and movement in photography

In this chapter I explore techniques that convey temporality and/or movement within photography. I start with an evaluation of chronophotography – the de-construction and re-construction of movement by photography – to reveal what the eye cannot see or appreciate, relating this to Walter Benjamin's 'optical unconscious' (Duganne 2015, p 98). Exploring chronophotography's pioneers who employed multiple cameras, multiple exposures, multiple flashes, or combinations of these techniques, I evaluate the contribution of Etienne-Jules Marey. Marey's experimental/scientific ethics informed my own methodology – interpretive yet with evidential rigour – especially by contrast with

²¹ Comparative examples of all four media from recent developments in Manchester.

another chronophotographer, Edward Muybridge. Chronophotography's techniques compressed time-scales, indicating movement over an extended period, using only an accumulation of still images. In turn, this representation of movement (and its previously unseen revelations) influenced a generation of artists towards a new appreciation of time and motion, to show movement in static media. Chronophotography led directly to the invention of cinema and it is to cinema's animation effect that I turn in order to appraise the different effects of motion as viewed in static media and cinema, which instils the perception of movement.

It is through the comparisons with cinema that examining medium specificity has produced the most fruitful areas for practice. Photography and film are always defined by comparison with each other – a contrastive concept. Therefore I principally draw on two recent publications to aid analysis of the perceptual readings of such imagery, namely Beckman and Ma's notion of 'still/moving' (Beckman and Ma (eds) 2008) and Green and Lowry's study of 'stillness and time' (Green and Lowry (eds) 2006). These explore the indistinct boundary between still and moving images, highlighting the difficulties of representing time and movement in photography, and how these have altered in the era of digital culture. The writings of Siegfried Kracauer were particularly useful to rationalise this comparison. As previously stated, I set up Kracauer's comparisons between photography and cinema as a challenge for my practice: to use a static medium to represent a dynamic, ever-changing landscape populated by transient characters in ephemeral scenes.

The erosion of traditional boundaries between photography and moving images – the convergence of media into what George Baker describes as photography's 'expanded field' (Baker 2008) – has produced a critical discourse allied to artistic experimentation. In turn this contextualises my research area and the audience's acceptance of my techniques are tempered by their use, and agency of digital media.

The chapter concludes with an appraisal of the changes in perceptions of photography after the advent of digital media and how this has changed the role of the artist's agency in delivering 'realistic' representations. These areas of research are later used to support the decisions made in my practice areas to assess techniques and to help reflect on their perception and acceptance.

Chapter 4: Exploratory practice

In this chapter I explore practical techniques. Some are my own experiments, but the majority are by other artists (from many media) that convey temporality and/or movement. I assess which properties of photography I might combine with ideas and techniques to produce alternative representations. In the first half are techniques that helped to contextualise and to frame my practice, establishing its parameters. I start with an appraisal of the insights that can be gained from some examples of (mainly) recent technology that illustrate aspects of motion, temporality, altered perception of scale or multiple perspectives. These provide a framework for a consideration of temporality in photography outside of the normal practice. Next I review artists who use very long exposures (measured in months), or superimposed, layered images of the same site, thereby accentuating temporality.

In the second half I concentrate on concepts that are included as part of my practice: whether prosaic, such as the temporal dimensions of weather and light, or more technical aspects such as digitally blending together exposures from different times. I also consider the effects of moving the camera, comparing this to cinematic tracking and framing techniques, including breaking the 'fourth wall', drawing attention to the presence of the camera as mediator.

I move onto a more formal organisation of my images, relating them back to traditional architectural photography and drawings – by applying the constraints of elevation, section and plan views – to establish regularity across different sites, clarifying the techniques used. I briefly cover images that depict movement, without the presence of people, such as desire paths. I conclude with the effects of multiple exposures – accumulated together in the same frame – on the perception of temporality and movement.

Chapter 5: Practice driven critiques

This chapter is a series of analyses of the compromises made between different forms of representation, each displaying certain properties to contextualise buildings within a dynamic environment. The practical techniques are quite different, yet the ultimate products have distinct similarities. I investigate the evolution of each of these styles and its contextual research in more depth than in chapter four. The first explores temporal images made by compositing multiple shots on single frames – each exposure capturing aspects of the movement of people within the framed space – the timing, selection and

editing of these being an intrinsic part of their construction. The digital methods I use create a seamless single image that is a factually accurate reflection of what was seen, yet acknowledges my selection of individual moments for each element of that scene. I develop this technique towards both plan views and the multi-roomed, and/or multi-floored views of sections and façades. The second technique illustrates superimposed images formed by multi-layered planes, referencing similar concepts shown in cinema, an extension of the previous sectional views.

The third technique uses collage techniques that layer individual images into a patchwork of individual scenes, accumulated into an impression of the wider view. The movement of the camera allows multi-point perspectives, yet despite its analogue origins, it has broad similarities to the first (digital) technique. This technique draws heavily on contextual research around David Hockney's experiments and interviews during his 'joiner' period (mainly in the early 1980s). The unconcealed signs of the image's construction indicate that they are accumulations of separate exposures from multiple points in time. This emphasises the temporal nature of these collages, while also questioning the viewer's perception of space, perspective and narrative.

Chapter One

The Craven Image: A Bifurcation of Representations

This chapter explores two aspects of modernism: firstly the relationship between architecture and its image as disseminated through photography and secondly, by contrast, other representations of the city in visual media of the inter-war period.

The distinctive style of mainstream architectural photography started in the 1920s and has remained relatively unaltered, except for the change to colour photography: a longevity that is both incongruous and exceptional. In the viewer's consciousness photographs replace the building. As Beatriz Colomina concluded, 'the *outside* [of the building] is a photographic image. The mask is first and foremost a picture' (Colomina 1996, p 31). As Pardo and Redstone have argued '[traditional] architectural photography does little to articulate social space' (Pardo, Redstone et al. 2014, p 20). The isolation of modern architecture from its surrounding context – both at the design stage and in terms of how it was photographed – were contributing factors, as we shall see. I will examine those origins, the persistence of that style and critics' calls for change as the starting point for my practice. By contrast, the second aspect of Modernism is a consideration of other representations of the modern world during that period, such as graphic design, painting and cinema. These forms collectively represented the dynamic world of cities and transport. In chapter three I will explore how I can use the (still) medium of photography to convey the temporal dynamism portrayed by these artists

The conventional form

To research how the conventions of commercial architectural photography represent architecture and the factors that have resulted in these conventions, I draw from the historical analyses of Robert Elwall, as well as from the accounts of twentieth-century photographers in Pare (Pare, Inbusch et al. 1982) and Busch (Busch 1987). This created the basis for comparisons of alternative representations throughout my practice. It would be easy to contend that it is the act of photographing buildings – an image is one step removed from first-hand experience – that objectifies architecture, but the background to the objectification of buildings and the systems at work are far more complex. The first act is framing, as Robert Campbell concluded:

photography has been a bad influence. [...] The essence of photography is

the act of framing. With your viewfinder you put a frame around something, isolating it and giving it a special importance while suppressing everything outside the frame. Photography, in other words, is the removal of context (Busch 1987, p 89).

I examined the creation of mainstream commercial architectural photography's visual style, through a practical experiment, to demonstrate how the image is controlled to produce a stylised and repeatable commodity. Figure 1 shows two views of the same building: the first uses a forty-millimetre lens (replicating the human eye's angle of view). The second is more typical of a building photographed in modernist style of the 1920s, which was taken from a much closer distance. The changes from the first to the second include horizontal lines being represented by steeper angles (becoming more diagonal), the height of the building appearing to increase (relative to its neighbours), obstructions and distractions in the foreground and mid-ground are increasingly excluded and the building's background has a higher proportion of sky than previously. From a higher viewpoint there would be less obstructions to the view, due to street furniture and other clutter such as lamp-posts. The inclination of the roofline indicates the forced perspective that this change in distance has incurred, which is an accurate indicator of the photographer's proximity to the building. This change in perspective is a result of the change in position, and not, as is commonly misunderstood, a feature of the wider angle lens. In fact, the perspective of the building would be identical in two images taken from the same position with different lenses; only the magnification and the area framed would alter. The images in this exercise demonstrate some of the basic origins of the style, such as its angle of view, direct lighting, high contrast, proximity, isolation, good weather, a paucity of people and, most noticeably, a stilled image without signs of movement or temporality. These images are – for preference – clean and uncluttered, abstracted from reality because, as Stephen Parnell wrote 'the detritus of city life transforms the surreal into the everyday' (Parnell 2016). Originally, this 'cleanliness' would have been achieved by retouching the negative or print, whereas



Figure 1: D Trillo, *Two Perspectives, Fred Perry House, Stockport* (2013)

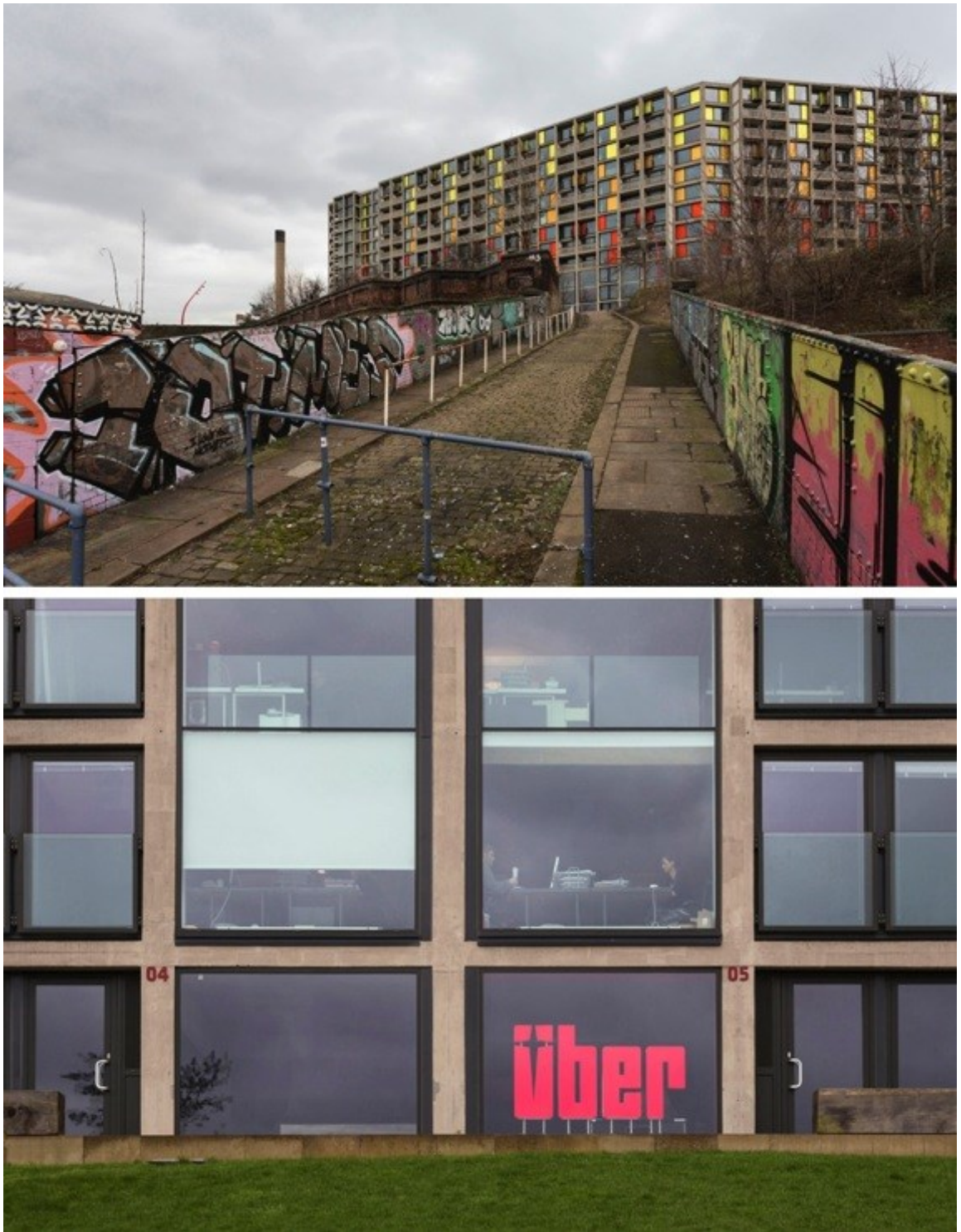


Figure 2: D Trillo, *Park Hill Flats, Two Perspectives*, Sheffield (2015)

'digital retouching' is now a standard component of a photographer's workflow. All of these properties of the image are due to choices made by the photographer. Lens choice and camera position affect spatial ratio, perspective and the perception of two- or three-dimensions. The greater the distance from the subject, the narrower the angle of view can be: this produces a flattened perspective, reducing the ratio of ground as compared to building and is less engaged with the foreground.

Elevations and sections appear more two-dimensional, people are smaller and appear reduced in scale when next to a building. This can be altered by varying the magnification of the subject: In Figure 2 *Park Hill Flats, two perspectives, Sheffield* the first image uses a wide angle lens to shoot most of a large complex. The second uses a narrower angle of view to shoot a detail, as well as being much closer, producing a far more flattened perspective.

To see the effect of proximity, compare the two images of the Brooks Building: Figure 3. In the first the people are closer, larger in the frame and more dominant in the image. In the second they are far smaller, restricted to a narrow strip, appearing less significant. Closer and wider views, shot at the 'human level', make people more prominent, although perhaps detracting from the building.

Figure 4 shows three images of a view inside the Benzie Building, MMU.²² The first shows the widest view, foregrounded by stairs and a student. The second uses a longer lens to isolate the room as a bright box framed by a darker wall. The third uses the narrowest angle of view to detach the room, without context, the perspective appearing more flattened than previously. The actual angles of the room's perspective are unchanged, as the camera's position has barely moved, yet the different crops yield substantially different levels of context, contrast and diverse emphasis on the people in the room and the reflections in the windows. I have attempted to rationalise the different options available – distance, scale, angle of view and so on, in the tables in the two appendices.

²² The Benzie building at MMU (Fielden Clegg Bradley Studios 2014) was used extensively as a site for practice. This was due to access provided by the atria and, in part, due to the design remit to facilitate physical and conceptual interaction between students in its vast open areas (by contrast with its predecessor's compartmentalized spaces; largely small rooms off corridors).



Figure 3: D Trillo, Brooks Building, MMU, *Two perspectives* (2015)



Figure 4: D Trillo, *Benzie Building, MMU, Three views* (2013-2016)

(Un) Populated spaces

Although positioning the camera, choosing the lens, framing and ‘cleaning-up’ a shot might contribute a large portion of this style; it is the absence of people that has caused concerns amongst certain critics.²³ In part this can have economic reasons, because the fashions of clothing hairstyles and cars can quickly date a picture. As Joseph Molitor put it, ‘until architects stop using the same photographs of a building for years and years and are willing to have new and up-to-date photographs taken when needed, we probably shall not see many people in pictures’ (Molitor 1976, p 149). Yet if economics and longevity were the only motives it would be reasonable to expect to see some people included, if only fleeting silhouettes. For many, the inclusion of people distracts from the architecture and even selected and posed people can often look unnatural (Busch 1987, P 92). Writer and critic Gerry Badger summed up the prevailing feelings for many architects as, ‘people litter buildings and mess up the architect’s idealised vision’ (Badger 2014, p 37). Bernard Tschumi points out that ‘this is the usual condition, [...] such that the order of architecture remains unviolated by the differing order of social activities, [Tschumi asks] do architectural photographs ever include runners, fighters, lovers?’ (Borden 2007, p 66). Borden also noted Jeremy Till’s contention that this is an ‘explicit attempt to erase those elements of time that challenge architecture’s authority [of] ‘...a history, in which architecture is seen to be a stable power, existing over the dynamic forces of time’ (Till 2000, p 286).

Some photographers are more adventurous and can see reasons for including people: ‘a person shown in a photograph will [...] be a point of visual focus and serve as a yardstick, compensate for large, uniform areas, or act to grab attention in a busy environment’ (Heinrich and Bielefeld 2009, p 43). Others can see the current trend for people included in certain categories of buildings as support for the notion of the space in use; Steve Rosenthal ‘encourages the use of people in photographing spaces [...], where they are considered ‘essential’ to the context e.g. a school or a shopping mall’ (Busch 1987, P 92). For certain building types such as these, inhabitants appear to be included in a more natural, less posed way with increasing frequency. I have found that people are expected in images taken inside art galleries, as the curator and exhibiting artist(s) prefer the exhibition to appear popular, not empty. It is normally only for specific concerns such as this that ‘populated’ images are requested. This still leaves us a long way from populated architectural photographs becoming the norm: few architectural

²³ See pages 2, 9, 15, 26, 34-35 and 33-38

photographers have followed the lead of Peter Aaron's photographs, where 'the human form is not the mundane distraction it might easily become, but a more lyrical visual anchor or focus' (Busch 1987, p 52), fewer still include more than a two or three people.²⁴

Origins of the style

The origins of this style of photographing buildings and its lack of people have been laid firmly at the door of the early photography of Modernist architecture.²⁵ As Wolfgang Hoyt argued, 'I think one of the great problems with modern architecture was that much of it was designed in a vacuum and didn't really pay attention to its context. So [...] it had to be photographed in a vacuum too' (Busch 1987, p 33). The origins of this style and modernist architecture were concurrent. As Parnell and Badger indicate, these images are still routinely idealised. This is achieved via specific techniques, many of which are simple to produce and easily replicated.

Architectural photography became a 'highly refined and consistent technical procedure' (Pare, Inbusch et al. 1982, p 12), whose traits can be traced back to (amongst others) New Objectivity photographers such as Werner Mantz and Lucia Moholy – who favoured 'facticity and empathy with the design process over interpretation and wider cultural significance' (Borden 2007, p 59). Of particular significance are Moholy's influential photographs of the Bauhaus Building, Dessau, Germany.²⁶ They distinctively captured high contrast forms, where horizontal lines became diagonals, due to skewed camera angles and wide-angle lenses. This proceeded to inspire 'an idealized architecture that scarcely existed in material form' (Carullo 2013, p 450).²⁷ Claire Zimmerman identified traits that were deemed desirable in this period as including 'approximation, exaggeration and intensification' (Campbell 2014). In Britain a similar style was evident in the 'dazzling photographs supplied by Mark Oliver Dell and H. L. Wainwright' (Elwall 1991, p 63) (*The Architectural Review's* official photographers from 1930 to 1946), whose images were 'always graphic in impact and sharp in every detail, [...using] dramatic lighting and camera angles' (Harris 2001, p 21). Although now seen as controversial, they retain their impact: as Elwall wrote, 'their glass-hard images leap from the page with irresistibly seductive power' (Elwall 1991, p 63). Elwall censured Dell and Wainwright's approach because 'their dramatic, graphically taut style, ignored landscaping and emphasised modernism's abstract forms. Furthermore, in anticipation of today's

²⁴ Rosemary Hawker makes a strong case for the inclusion of people in architectural photographs (Hawker 2013).

²⁵ Starting circa the early 1920s.

²⁶ See Jeannine Fiedler's *Photography at the Bauhaus* (1990) for a critical review of photography at the Bauhaus.

²⁷ Note that Walter Gropius claimed Moholy's Bauhaus images as his own: hear (Greenspan and Schuldenfrei 2016).

complaints, [it] was criticised for undue flattery of its subjects and a lack of humanity’ (Elwall 2004b, pp 23-24). In this way Elwall linked Dell and Wainright’s popularisation of their particular style of photography with current photographic practice, establishing a thread that connected the selling of ‘modernist architecture to a hostile profession and public’ in the 1930s, to the still current notion of the ‘treatment of the building as an individualised monument’ (Elwall 2004b, p 23).

<http://architectuul.com/architecture/house-14-15-of-weissenhof-estate>

Figure 5: Landesbildstelle [Photo], *Weissenhof Estate, Stuttgart*, [Ludwig Mies van der Rohe] (1927)

A feature common to many modernist buildings, yet often overlooked, is that they were often finished in plain concrete or render: either light in tone, or painted white, which produced a high contrast image in sunlight [Figure 5]. Mark Wigley explored the connections between fashions, clothing and modern architecture, deducing that modern architecture’s white walls were ‘worn as a garment’, emphasising fresh, spotlessly clean design (Wigley 2001). The light walls also helped to isolate the building’s mass from any encroaching, soot-stained, older, city buildings, while their contrast was further increased by using orange or red coloured filters in front of the lens to darken blue skies.²⁸ Abram Games encapsulated this distinction between the old and new in at least three of the ‘Your Britain: fight for it now’ series of propaganda posters he produced during World War Two. Hovering in an isolated space of greenery, or sunshine yellow, Games juxtaposed old, dirty, disease ridden buildings (in this case ruined, bombed-out, structures), against clean, white, modern facades [Figure 6]: the contrast could hardly have been greater.²⁹

²⁸ The use of coloured filters to darken opposite colours is only possible in black and white photography.

²⁹ The poster in the upper image was in fact never distributed, having been censored by Winston Churchill (Borden 2007, p 72).

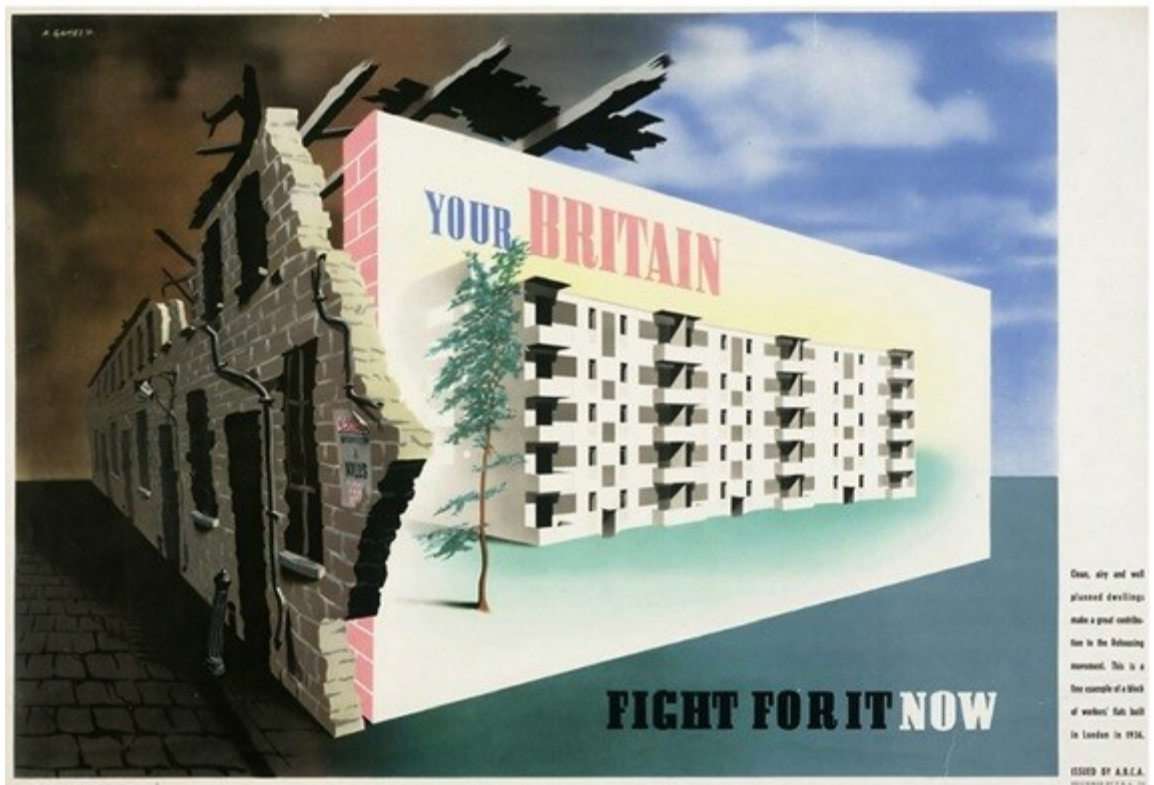
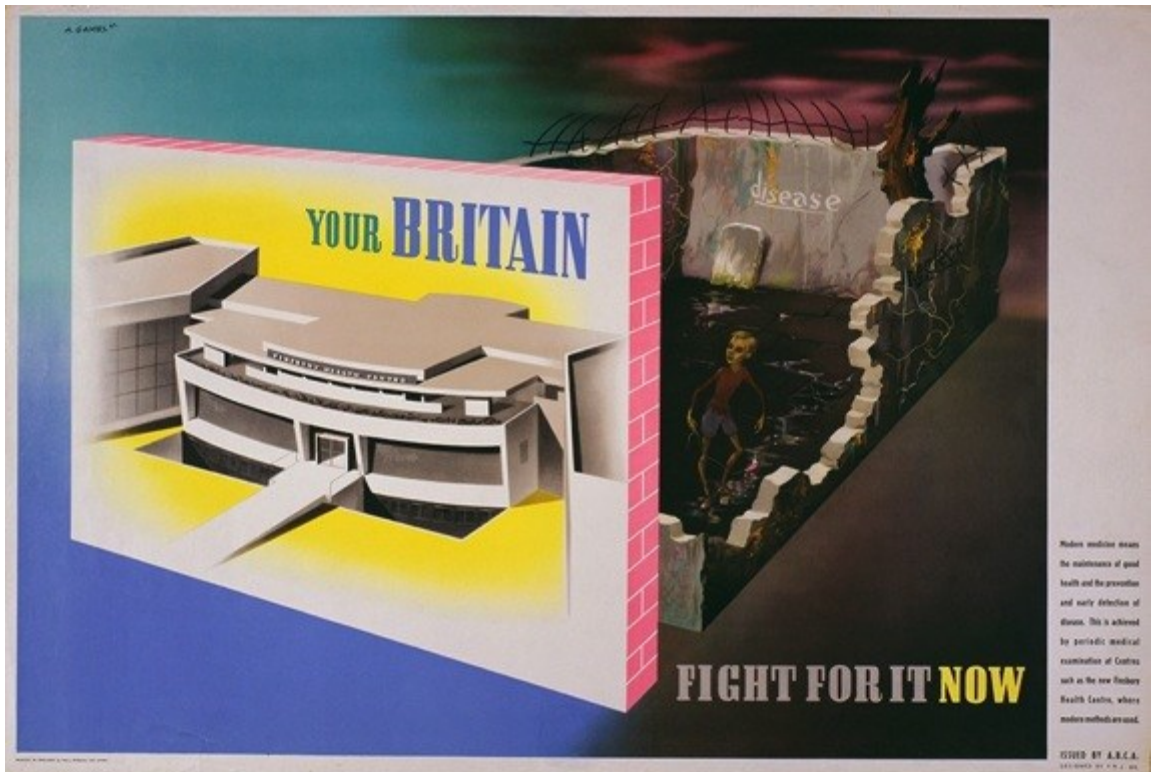


Figure 6: © Abram Games, *Your Britain: Fight for it* [two examples] (1943 top, 1942 bottom).
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 top © IWM (Art.IWM PST 2911), bottom © IWM (Art.IWM PST 2909)

The space in between

That early modernist images are visually similar to today's images is an anomaly, yet these images follow a set of 'rules' that can be challenged, a set of conditions that could be supplemented by adding strands to contextualise the scene. What I advocate is 'a

balance between precise visual transcription and interpretation' (Busch 1987, p 71), a bridge between photography of architecture, and architectural photography. The first is typified by fine art, post-modern, conceptual or documentary projects. The second is the commercial, isolated, 'glass-hard' style, perpetuated since modernism. Photography of architecture has many other functions, but these two are outward facing: aimed at dissemination to the public and/or trade publications.³⁰ 'Photography of architecture' is visible in exhibitions such as *Constructing Worlds: photography and architecture in the modern age* (Pardo and Redstone 2014-2015). As Hugh Campbell noted of this exhibition, 'of the eighteen photographers, only three are 'architectural photographers',³¹ the remainder oscillate between fine-art, journalism and all points in between (Campbell 2015, paraphrasing p 155). So although there is a desire to exhibit original and interesting interpretations of architecture, curators must inevitably draw from outside of the profession to do so on this scale.

Although exhibitions such as these aim to chart the field of architectural photography, the results are invariably a collection of those few who err to the more abstract and creative side of architectural photography, or – for the majority – those who would not be classed as architectural photographers, but whose subject matter is architecture. Campbell usefully delineates the first as when 'architects use the photographic image to depict buildings (photography serving architecture); [whereas] at the other end are those which consider how photographers use architecture as subject matter (architecture serving photography)' (Campbell 2015, p 152). The architectural photographer's agenda is mainly within architecture, whereas the latter's agenda is directed towards exhibitions, books and fine-art print sales.

For me, this division is an important one to define; not to pigeonhole or to suggest limitations, but to emphasise that this space exists between the two. This gap is critiqued in conferences such as *Still Architecture: Photography, Vision and Cultural Transmission* (Iuliano and Penz 2012) and *Building with Light: The Legacy of Robert Elwall* (Carullo 2014).³² It is also evident in the exhibition *Constructing worlds: photography and architecture in the modern age* and written about in its catalogue (Pardo, Redstone et al. 2014), and in *Shooting Space: Architecture in Contemporary Photography* (Redstone 2014). This gap is also the field within which I site my practice.

³⁰ Other, 'process' images are largely for use within the construction phase (by architects, structural engineers, suppliers and builders). In chapter 4 I will examine fine art practitioners relevant to my practice.

³¹ Campbell named Hervé, Binet and Schulman. I would include exhibitor Luigi Ghirri as an 'architectural photographer'.

³² Also of note was the 2015 conference *Photography and Modern Architecture* (Trevisan, Maia et al. 2015), which was concerned mainly with the relationships between photography and modernist architecture.

Alternative styles of architectural photography

Examples of exceptions that have occurred in this gap, *within* mainstream architectural discourse, can be categorised as being within journalistic and/or documentary genres. They illustrate alternative visions that attempted to bridge this gap, and I note them here as they informed my practice, helping me to define the boundaries of what I would include, of how far I would go into journalistic or documentary genres.

For the September 1961 edition of *Architectural Design*, Roger Mayne photographed new architecture in Sheffield juxtaposed with ‘everyday people going about their business’. This was a technique ‘he started at Southam Street in the 1950s³³ and this style was used by the Smithsons³⁴ to illustrate their Urban Re-identification grid at CIAM 9’ (Parnell 2014, p 100).³⁵ ³⁶ This departure from the usual constraints of architectural photography gained little traction amongst commercial photographers. A photographer who included a more human view of architecture in America was John Szarkowski.³⁷ His portrayal of Louis Sullivan’s designs in *The Idea of Louis Sullivan* (Szarkowski 1956) allowed a ‘sense both of the intricacies of the buildings’ design and, crucially, of their histories as buildings – what Szarkowski calls their ‘life-facts’, [...] constantly enhanced by the little human dramas being played out in and around them’ (Dyer 2001). Figures 7 and 8 illustrate two of Szarkowski’s images of *The Schlesinger Meyer Building*, Chicago, circa 1954 [designed by L. Sullivan 1904]. Both are shown, as would normally be seen, on a busy day in downtown Chicago, the latter displaying the extended blur of moving figures, which were composed to feature prominently in the foreground.

<http://www.artic.edu/aic/collections/artwork/54620>

Figure 7: John Szarkowski, [overview] *Schlesinger Meyer Building* (L. Sullivan 1904), Chicago (circa 1954)

<http://www.artic.edu/aic/collections/artwork/54594>

Figure 8: John Szarkowski, [street level] *Schlesinger Meyer Building* (L. Sullivan 1904), Chicago (c. 1954)

³³ In the Southam Street series, North Kensington, London, between 1956 and 1961.

³⁴ Architects Alison Smithson (1928-1993) and Peter Smithson (1923-2003).

³⁵ *Congres Internationaux d'Architecture Moderne*, Aix-en-Provence, July 1953

³⁶ I have discovered Nigel Henderson’s images were used on the grid: it is not clear whether Mayne’s images were used, or whether Parnell means that the images used were similar to Mayne’s.

³⁷ Szarkowski was later a writer, critic and curator of photography at MOMA, New York

Although short-lived, probably the longest break with conventional photography in the mainstream architectural press was *The Architectural Review's* 'Manplan' series (Richards 1969-1970). Manplan abandoned the modernist, isolated, heroic style for a gritty, largely 35mm, documentary style, as typified by images such as Figure 9 Tony Ray-Jones, *Pepys Estate (above) and Thamesmead (below)*, London, (1970) and Figure 10 John Donat's *Why does it never rain in the Architectural Review?* Boots, Nottingham (1968). Not only do these images show people, they are foregrounded, drawing the eye to the neighbouring landscape, balancing it with the buildings that inhabit what is almost a background role. A recent review of Manplan called its 'radical use of reportage to document how buildings are used, inhabited and appropriated [...] an attempt to expose the bleak realities of human experience and dislodge architects from their pedestal of smug self-regard' (Slessor 2015). Although the series only lasted for eight themed issues, Manplan was 'brave, ahead of its time [and] hard-hitting' (Parnell 2014): for the style of its photography and subject matter, but even more remarkably because they filled the pages of a prominent architectural publication, for an extended period. The photographers commissioned reads like a list of the avant-garde of documentary photojournalists of the day.³⁸ Typical of the approach of these photographers, Donat – who 'lambasted the ponderous predictability of conventional architectural photography' (Elwall 2004a, p 190) – stated that he looked for 'an experience of a slice of time in the life of a building' (Elwall 1994, p 97), an expression I have kept in mind whenever I have been reviewing my images. Donat associated the life with the building, and defined the temporality of his images as bounded within a 'slice', the duration of which was defined by the length of his visit.

<https://www.architecture.com/image-library/ribapix/image-information/poster/pepys-estate-deptford-london-children-playing-on-a-raised-walkway/posterid/RIBA15752.html>

<https://www.architecture.com/image-library/ribapix/image-information/poster/children-playing-by-the-lake-at-thamesmead-greenwich-london/posterid/RIBA2666-15.html?Action=Cookie>

Figure 9: Tony Ray-Jones, *Pepys Estate (above) and Thamesmead (below)*, London, (both 1970)

<https://www.architecture.com/image-library/ribapix/image-information/poster/boots-head-office-the-d90-west-building-beeston-nottinghamshire/posterid/RIBA3828.html>

Figure 10: John Donat *Why does it never rain in the Architectural Review?* Boots, Nottingham (1968)

³⁸ These included Patrick Ward, John Baistow, Tim Street-Porter, Tom Smith, Tony Ray-Jones, Ian Berry and John Donat

These alternative views were sporadic and have never fully become part of mainstream representations. The frustration with the return to idealised views – a ‘commodity fetishization’ (Picton 1979) – led to grumbling disquiet amongst those who felt that architecture deserved a more realistic representation. Highly regarded as a researcher and critic of architectural history, Robert Elwall’s analyses of the intricate relationship between photography and architecture produced many critiques of ‘the prevailing photographic orthodoxy of unpopulated, forever-young buildings’. Elwall commented that ‘its detractors argue that these images are unreal and narrow in vision, [...] focusing too much on the building’s fabric and not enough on its context and its intended use (Elwall 2004b, pp 22-23). Photographer and critic Tom Picton encapsulated these concerns when he described architectural photography as ‘the craven image, a lifeless piece of flattering deception foisted on an unsuspecting public by an unholy alliance of architect, photographer and art editor’ (Elwall 1991, p 63). My practice seeks to redress this balance towards a less lifeless form, and with the minimum of deception.

Picton’s article is certainly not the only critique of the use of photography in architecture during this period, but it is probably the most vehement of those appearing in the press. These critics were ‘registering an increasing distrust at the ‘unreality’ and ‘sterile perfection’ of the architectural photograph as a mode of imagery systematically complicit with an aggressive corporate colonization of urban space’ (Lahiji 2011). What are absent from these representations are references to the function of the spaces within and between them – this would challenge functions that were the primary purpose for their construction. The damning critiques set the tone for the calls for change, yet they do not contribute any propositions as to what an alternative might be.

The vast majority of current architectural photographs still objectify buildings out of context, retaining a formality that offers little in the way of originality or creativity. However, a curious anomaly is that a few of the most sought after photographers do not adhere to the mainstream outlook, but are courted by some of the ‘star’ architects. Hélène Binet shoots predominantly on black and white film, concentrating mainly on small sections of buildings, or details: Figure 11. Her great skill is in drawing attention to pattern, shape and in particular to the play of light on surfaces. Despite being a niche style, her approach has proved very popular.³⁹ By contrast, Iwan Baan’s style is closer to the documentary tradition than any other leading photographer in this field. He has consistently included people in his hand-held compositions, shooting at the human level,

³⁹ Binet is particularly associated with Daniel Libeskind and Zaha Hadid.

as he is ‘fascinated with space, how the spaces are used and sometimes taken over by their users’ (Esterson and Baan 2014). Baan is also commissioned by famous architects,⁴⁰ and shoots vernacular architecture and ‘unplanned’ habitation across ‘Third-world’ countries, such as his documentation of the inhabitants of the abandoned Torre David in Caracas, Venezuela (Etherington 2012): Figure 12. Both Baan and Binet produce distinctive alternatives to the mainstream and yet are commercially successful. The former’s largely abstract, black and white and unpopulated photographs are the polar opposite of the latter’s colour, informal and humanist approach. Although I see it as an encouraging sign that such alternatives are successful, indicating a more receptive attitude, these practitioners occupy only a tiny fraction of the current field.

<https://archinect.com/news/article/118971699/the-2015-julius-shulman-institute-photography-award-goes-to-h-l-nebinet>

Figure 11: *Koluma 1* [Zumthor], H  l  ne Binet (2007)

<https://www.theguardian.com/artanddesign/2015/mar/12/iwan-baan-best-photograph-tower-of-david-venezuela>

Figure 12: *Gym, Torre David*, Iwan Baan (2014) (bottom)

By way of moving this discussion closer towards my chosen goals, I cite Iain Borden’s critical overview of the use of photographic imagery within the academic practices of teaching and publishing architectural history (Borden 2007). He suggests several practical changes, as the use of images is ‘not a closed subject’, to produce more meaningful interpretations. Seeing the value of the life of the building as potentially being visible, Borden asserts that buildings should be shown

...in use, with people in them in particular, [to] suggest that they are embedded within common human history – and thus that buildings are not static art objects, ...buildings are neither fixed in time, nor are they atemporal things. Rather they are part of social reproduction, part of the way people live their lives, of the way cities evolve, part of the way architecture itself changes; and so to bring out the meaning of this role, we need to bring out the temporality of architecture as it is imaged (Goodwin 2016, pp 26 and 56). Borden argues that the inadequacy of architectural photography impacts not only on architecture’s role as social record, but as the means of interpretation of architecture, crucial to its discourse,

⁴⁰ Such as Hadid, Koolhaas and Herzog & de Meuron.

suggesting the inclusion of people and temporality as solutions to both (Borden 2007, pp 58, 66 and 67).⁴¹

Kate Mellor's doctoral thesis (Mellor 2015) also addresses the temporality of architectural photography. She investigates the effects of digitization on how photography is perceived to 'address questions about temporality in images of architecture [at] ...the intersection between architecture, photography and the image of landscape' (Mellor 2015, p 31). Her thesis 'aims to develop more diverse, pluralistic representations of architecture that reconfigure its relationship to time, photographic experimentation [thereby] becomes essential to the structure of the *bricolage* in the thesis' (Mellor 2015, p 53). This imagines photography as 'a process of encounter, of "what happens?" rather than flat spectacle, aiming to dismantle the temporal stasis that characterizes standard depiction' (Mellor 2015, p 311). Both Mellor and I can see a clear link between 'The image of architecture as frozen monument [and it being] supported by the idea of photography as frozen moment' (Mellor 2015, p 305), the latter being explored and critiqued in Chapter Three.

Although this starting point is similar to my own there are clear differences in approach and in outcome.⁴² Mellor disregards other forms of visual representation beyond photography, as photography is 'evidence of successful realization' (Mellor 2015, p 54). I however find the question of why these visual representations are so polarised as being an essential element to understand the ways in which photography mediates architecture differently from other media.

Other differences are that the populated (or not) image issue is not addressed, nor is movement considered as a quintessential component of temporality.⁴³ Her practice is layered images, which obscure what is shown, its informational aspect. What is shown via that particular construction other than a temporal turn? This practice is similar to Vionnet and Khan's work (which we both cite), although restricted to two exposures per image for most of the practice. Only for one sequence – Oscillations (2009-2012) (Mellor 2015, p 297) – are several exposures superimposed in each frame. These exposures are taken from different days, photographed *en passant*. As with Khan and Vionnet's work the direction is conceptual and aesthetic, not a direct response to the orthodoxy that is being critiqued. The disclosure of evidence is not a priority despite the statement that

⁴¹ I address how this might be possible in the next two chapters. See also Derek Judson's thesis *Beyond Space? Exploring the Temporality of Architecture* (2011)

⁴² Mellor's stated aims are to address a) ongoing paradigms and temporal configuration in architectural photography, b) the relationship of architecture to the temporality of the everyday in standard and antithetical depictions, and c) changed ideas about photographic temporality post digitization (Mellor 2015, p 91).

⁴³ Mellor uses the term 'milieu' rather than specifying 'people' [for example (Mellor 2015, p 305)].

'repeated visual images discover different information to the single photograph' (Mellor 2015, p 114). I have preferred to concentrate on the agency of the author to select, edit and construct several images together, to reveal more than the temporality alone.

What is not explained in Mellor's thesis is why the subjects are all iconic or heroic buildings: If the principles of the concept and techniques are driving the practice, then how does the selection of buildings affect what is discovered?

Marc Goodwin views photography as 'architecture's space'. In his thesis he asks 'do images make buildings?' [And if so, how?] (Goodwin 2016, p x). This practice led his thesis starts with an analysis of the photographic content of the Finnish Architectural Review (ARK) from 1912 to 2012. Drawing the conclusion that there was a strong reliance on visual conventions, especially the use of blue skies, which were prevalent throughout. Railing against 'the blue and white of eternal summer', Goodwin decided that atmosphere – people, weather and light – were the topics to concentrate on. His practice was therefore directed towards exterior shots with white or grey skies to better represent the lived experience, as well as interior shots with people posed to induce atmospheric images, in a style he labelled as 'Archmospheres' to 'imply a fusion of architecture and atmosphere as the subject and substance of the body of photographs' (Goodwin 2016, pp xi and 2): Figure 13.

<https://www.dwell.com/article/this-blackened-timber-house-triumphantly-emerges-after-a-fire-58518581>

Figure 13: *Untitled*, 'Archmosphere' series Marc Goodwin 2016

The analysis of existing imagery is essential as a starting point, but the focus on the aesthetics of colour and weather leaves aside so much of the complex relationship between photography and architecture. Organising the images to be viewed in grids is a 'tool' he uses to see the overall effect of the chosen style, across many images: one Goodwin suggests has universal uses. The grids offer the same structure of repetition and collation as Bernhard and Hilla Becher's typologies of vernacular architecture, allowing observations and reflection on similarities and differences.

As a project that started with many similarities to my own, and the objective to 'critique and expand the relationship between photography and architecture', the outcome is very different. For me the chosen weather is an issue that is one part of the greater influence of commercial and synthesised representation. The people in Goodwin's images are static and appear posed, reminiscent of Julius Shulman's Californian images of the 1950s and 1960s, which is not a criticism, yet I was looking for more interaction

between participant and structure in this 'relationship'. Goodwin argues for the inclusion of people, to 'show, stage, [or] confront', but not the blurred 'smears' that indicate movement or temporality (Goodwin 2016, pp 26 and 56), without fully explaining why he shunned this approach.

Goodwin's pedagogical contribution to the research of architectural photography was an experiment whereby photography students worked as 'architectural photographers', including commissioned work and a resultant exhibition. This produces a valuable insight into the subject, by opening up the enquiry to those with a passion for the medium, but who are not restricted by the same conventions as commercial architectural photographers. What could be of greater value, would be a joint project with groups of architecture and photography students working together:⁴⁴ the former will inform the essence of the content, but without yet having assimilated all of the profession's conventions. The photography students would bring the ability to communicate in two dimensions, through photography (albeit limited at their stage of development). Together they could learn to communicate between the professions (a faculty that Goodwin points out is almost non-existent), exploring the different needs of both parties and the skills required to find solutions that satisfy both sides. I believe this would be valuable commercial, technical and conceptual experience for the photography students. I also believe that it would enable architecture students to gain insights into how buildings are, or could be, represented, what they want to communicate via this process and how the fusion of both talents can produce a vision that is greater than either could envisage alone.⁴⁵

Caught in a loop

Recent critical discourse traces architectural photography's dominant style, and its subsequent influence on building, as part of the influence of mass media from the 1920s.⁴⁶ As Walter Benjamin posited, the public's relationship with art was irrevocably altered by the mass mechanical reproduction of photographs (Benjamin 1935 (trans. 2004)). It was at this time that the 'image' of architecture grew to be disseminated more widely, both cheaper and faster than previously, as photographs.

For many observers that was also the time when buildings were conceived with the photograph uppermost in the mind: As Adolf Loos disparaged in 1924, 'there are

⁴⁴ Group discussions and interaction alternated with fieldwork in pairs (a participant from each discipline).

⁴⁵ See also page 35 'The current state', especially Arthur Drexler's comments in Busch (1987).

⁴⁶ See especially Beatriz Colomina (Colomina 1996) and Claire Zimmerman (Zimmerman 2008), (Zimmerman 2014).

designers who make interiors not so that people can live well in them, but so that they look good in photographs' (Colomina 1996, p 64). Beatriz Colomina views photography, along with other 'modern' representations of architecture, as 'the true site within which modern architecture was produced', arguing that photography has not separated from reality accidentally (Colomina 1996, flyleaf). In fact modern architecture is the product of mass media in general and photography in particular, produced by the combination of publishing and photography as Andrew Higgott has concluded (Higgott 2006): 'Buildings may be constructed on the building site, but architecture is constructed in the discourse' (Parnell 2016, p 6).

Contrary to the popular conception of 'modern' architecture being a technological change, 'modern architecture becomes *modern* not simply by using glass, steel, or reinforced concrete, as is usually understood, but precisely by engaging with the new mechanical equipment of the mass media: photography, film, advertising, publicity, publications, and so on' (Colomina 1996, p 73). I would add that this is the same time from which the then 'modern' and now extant conventions of the style of commercial architectural photography were adopted: buildings being regularly represented as iconic, lifeless, pristine sculptures, preserved at their completion, in isolation from their context, timed for '...when the final statement is achieved and the building [...can be termed] *photography ready*,' (Shulman and Gössel 1998, p 16). Thus architectural photography became no longer a reflection of a practice, but the direction of a discourse, so that 'the mind, the dexterity and the ability of the person with the camera can become the vehicle by which the image of architecture is transferred to the publications and people of the world' (Shulman and Gössel 1998, p 15): the photographic image directs the discourse not, as might be expected (or hoped), the other way round. There have been exceptions to what Valeria Carullo defined as 'the institutionalised type of architectural photography' (Carullo 2013, p 450), but a perusal of any commercial property sales and rental website, or much of the architectural press, will see little change from the 1930s.

As I alluded to earlier, layers of mediation create complex factors that affect this style. For example, Robert Perron has observed that a shift in the economics of architectural photography has altered the dynamics of the process, as 'in the past, the design press commissioned a photographer with due regard for his specific skills. But contemporary magazines are more likely to use photographs supplied to them by the architect' (Busch 1987, p 159 quoting Perron). Akiko Busch notes that a 'recurring question in the profession [is] whether the architect is consistently the most reliable

judge of his own work' (Busch 1987, p 159). This shift was in the 1980s, in addition to the 'loop', exacerbating the closed nature of the ritual, producing a 'new sense of space, one defined by images rather than walls' (Colomina 1996, flyleaf).

While these representations are questioned, there is a pertinent question that could be addressed here: if this static style is a modernist vision, why has it endured for so long, when other artistic and commercial representations have been continually evolving? This is not within the scope of this thesis, nor would answering it contribute to my practical research. The dissimilarity between how photography and all other media represent architecture is analysed in chapter two and artistic representations in chapter four: both of these have informed my practice.

The current state

Colomina's theories may explain why it is that architectural photography has stalled, save for the switch to full colour in the 1980s to 1990s. The 'style' is the result of the influence of the media, serving the media, rather than serving architecture as a discipline. One effect of this, suggested Arthur Drexler, is that 'photographs have been more real to architectural students, and more intensely experienced, than most of the buildings they memorialize' (Busch 1987, p 16). Imagine if you will, attempting to explain the function of a building, its plans to fulfil the goals of the design brief, or even the success or failure of that design. How could this information be conveyed when the only images available show the form and possibly something of the materials of the building, yet ignore the function of the design?⁴⁷ The discourses that develop the discipline of architecture are compromised in this 'loop of mediation'. If the 'three-dimensional and spatial character of architecture demands an imaging process that does more than replicate the surface of the object' Iain Borden has argued, then '...the process of interpreting and communicating architecture which necessarily involves images as an integral part of its operations... [should be] focused on the production of architectural history and the role of photography therein' (Borden 2007, pp 57-58).

Stephen Parnell sees it as symptomatic of a shallow discourse, recalling Martin Pawley's words, which called for an end to 'the cosy arrangement whereby more and more architectural magazines and vanity-published monographs clog letterboxes and bookshops with digitally cleansed images and wall-to-wall testimonials of praise' (Parnell 2016, pp 8-9). As Kracauer wrote 'In the illustrated magazines the world has become a

⁴⁷ I acknowledge that in some cases, advertising is the function of the building: as with 'show homes' or buildings specifically made for exhibitions.

photographable-present, and the photographed present has been entirely externalised’ (Kracauer 1965, p 433). By contrast with the care and skill expended on writing about architecture, their photographs are often ‘reductive’, particularly, and ironically in the ‘published book [:] at the precise moment in the production of architectural history at which its writers try to be their most learned and profound [...] such imagery is generally used in the most normative of fashions; ...somehow when architectural history is imaged in print it stops at the exact methodological level of description and identification that elsewhere so much is done to break through’ (Borden 2007, p 60). Parnell also voices growing concerns that our dependence on information from the internet reinforces our reliance on mediated imagery, which ‘our constant connection to screens means that we tend to actually prefer inhabiting representations of the world’ (Parnell 2016, p 6). These media are the primary means by which we see the world: selected, encoded, non-auratic and (inevitably) mediated.



Figure 14: D Trillo, *Guggenheim Museum, Bilbao, Spain* (2013)

Starchitecture

Critics have protested against the phenomenon of 'Starchitecture': the commissioning of internationally famous architects to design buildings with high visual impact to gain prestige, attracting commerce and tourism.⁴⁸ The impact of Frank O. Gehry's Guggenheim museum (1997) [Figure 14] contributed to a reversal of the fortunes of Bilbao, Spain; henceforth this phenomenon has been termed 'The Bilbao Effect'.⁴⁹ Although Modernism may be seen as a historic movement, Buchanan contends that Starchitecture is Modernism's 'sunset effect', as an 'exaggerated caricature of now obsolete characteristics of a waning era'. Starchitecture's 'current emphasis on exaggerated sculptural form' has 'a sort of energy and sculptural seductiveness'. The perceived problem is that the visual impact is all-important, an emphasis on form over function: thus reducing architecture that was 'once the encompassing mother of the arts', to 'superfluous spectacle'. Buchanan sees this direction as bypassing important issues, resulting in 'utter irrelevance to the urgent problems of our times [that they are] not technologically advanced, in terms of such things as resource efficiency and environmental performance' (Buchanan 2015), operating 'according to the logic of capital' (de Graaf 2015). It could easily be argued that the visual impact of these buildings colludes with the style of architectural photography to accentuate their iconic status. Criticisms of Starchitecture include many issues that compare directly with those of architectural photography: as 'anti-urban stand-alone buildings', with 'no relationship between the building and its setting', that they lack a sense of place and 'a liveliness that helps us relate to them', and that they 'arrogantly flaunt their refusal to defer to local context and its codes' (Buchanan 2015, pp 32-33).⁵⁰ Perhaps appropriately enough, ignoring 'local context' is echoed in the photography of these buildings. A recent phenomenon that resonates with my use of the recursive term 'loop' is the use of Instagram by Sir Norman Foster, to directly project his own commercial image (Howarth 2017).

The 'sunset effect' of modernism might be the end of the historical symbiosis between photography and architecture that produces buildings shaped for their image, but addressing that theory is outside this thesis' scope. It certainly appears to be the nadir of the spiralling effect of image reinforcing form, reinforcing image. This then

⁴⁸ These include Peter Buchanan's Empty gestures: Starchitecture's Swan Song (Buchanan 2015), Michael Sorkin's Starchitects are putting lipstick on a rash(er) of enormous pigs (Sorkin 2015) and Reinier de Graaf's Architecture is now a tool of capital, complicit in a purpose antithetical to its social mission (de Graaf 2015).

⁴⁹ Gehry has often been a target for criticisms of Starchitecture, as have Zaha Hadid and Rem Koolhaas.

⁵⁰ See also Meyer and Wiggin (2014) with reference to the complete disregard for local sensibilities by South Africa's top architectural practices.

presents the ideal time to speculate as to what form architectural photography could take to bridge the discourses of photography and architecture, to produce a more meaningful representation, as 'today so much of our urban fabric looks great in photographs but is unpleasant to live with' (Campany 2013). How I do that is explored in the next two chapters, but beforehand will look at alternative representations of cities that diverged completely from architectural photography.

Alternative representations of the city in the inter-war period

The next part of this chapter looks beyond architectural photography to other representations of the city during the early years of Modernism. In particular I intend to show how these representations, by contrast with architectural photography, employed certain techniques that conveyed a dynamic environment: generating ideas I exploited to develop my practice.

After the Age of Enlightenment and the Industrial Revolution modern life was increasingly measured in scientific terms. This was particularly true of the concept of time after the start of the railways⁵¹ and the working day being organised en-masse in mills and factories by employers, invoking a day governed by the linear time of the clock. By the late nineteenth century alternative views developed, such as those of seeing life as lived within experiential time – with thoughts flitting between conscious, sub-conscious and memories, or perhaps all three intertwined in different levels of consciousness as Sigmund Freud may have contended.⁵² Albert Einstein's theories called into question the accepted perceptions of linear time as being a concept that is only useful under conditions at a human level, not a universal physical property.⁵³ Time increasingly appeared to be merely a convenient way of measuring, synchronising and organising activities. It was Henri Bergson's concept of duration that fired the imagination of many writers and artists from its inception in 1909. Bergson contended that movement and perceived time could not be simply divided into convenient parcels of time, as the flow of time never ends. Our view of life as a readily compartmentalised entity was sufficiently challenged to stimulate creativity based on continuous flux. I will explore Bergson's influences in chapter three, particularly in relation to the differences between the photographic and the cinematic.

⁵¹ When all British towns and cities had to synchronise their time to facilitate the accuracy of the railway timetables.

⁵² See Freud's paper *Das Ich und das Es* [The ego and the id] (1923), which examines the conflict and interplay between id, ego and super ego and their varying levels of consciousness.

⁵³ In particular his paper *Zur Elektrodynamik bewegter Körper* [On the Electrodynamics of Moving Bodies] (1905): popularly known as the Theory of Special Relativity.

<https://racingcarsposters.com/vintage-car-racing-posters-and-memorabilia/reproductions/poster-reproductions/gran-premio-de-espana-1935-vintage-car-racing-poster>

Figure 15: Viejo Santamarto Acebo, *San Sebastian Gran Premio de Espana* [Spanish Grand Prix] (1935)

Other representations of that era attempted to convey the dynamism of cities by employing the symbolism of emerging technologies, principally those of transport and machinery: streamlined ships, trains and cars [Figure 15]. These bold, graphic designs show the influence of the photography of motion, depicting flow and speed (blur, repetition and multiple exposures), as was common within art movements such as Futurism, Vorticism and Expressionism.⁵⁴ Dynamic art forms such as these are examined further in chapter three, as is photography's role in influencing forms of visualisation that flourished during modernism. Pared-down, graphic representations expressed the spirit of the age – its buildings, transport, fashions and technology – encapsulated with the movement with which it is associated. Then, as now, the city was 'frequently interpreted as a metaphor for modernity' (Tormey 2013, p xx). Although painting and graphic design are static media, they managed to imply movement by choosing specific indicators of that movement: both simplified and emblematic. While these representations exhibit some of the characteristics of architectural photography, as mentioned earlier: isolated, wide-angle views, from close positions, producing forced perspectives with dramatic, diagonal lines of composition, they are set apart from the architectural photographs due to their inclusion of representations of movement. What is also captured in the paintings of cities by artists such as Umberto Boccioni⁵⁵, Robert Delaunay and George Grosz is a sense of the tumultuous, confusing and often disorientating experience of the 'modern' city: For example Grosz's *Tempo of the Street* [*Tempo Der Strasse*] (1918) and Figure 16, *The City* (1916-17).⁵⁶

<https://www.museothyssen.org/en/collection/artists/grosz-george/metropolis>

Figure 16: George Grosz, *The City* (1916-17)

An important aspect of the city that is beyond photography (and at that time beyond cinema⁵⁷) was the cacophony of sound that greeted the visitor. David Foster Wallace has called it 'total noise', the 'tsunami of information that constantly challenges

⁵⁴ Although Cubists also produced multiple representations within space and time, they rejected single-point perspective, showing subjects from multiple viewpoints.

⁵⁵ See for example Boccioni's *Simultaneous Visions* (1897).

⁵⁶ Grosz was a Dadaist influenced by Expressionism, Futurism and popular illustration.

⁵⁷ Sound recordings do exist however, as in the audio recording map of 1920s New York: Thompson (2013).

our human capacity to focus' (Wallace and Atwan 2007, p xx), which suggests a confusing, disorientating overload of information, totally opposite to the clinically cleansed images of architecture popular at the same time.

The world in motion

Although graphic arts offered a modern city reduced to minimalist simplicity, film was the burgeoning genre that for many captured its vibrant essence par excellence. The real state of a city's complex mesh of inter-relationships could only really come close to being comprehended through film's continually evolving scenarios. For Siegfried Kracauer, the modern city was uniquely manifested by cinema as 'not so much sharp-contoured individuals [...] as loose throngs of sketchy, completely indeterminate figures. [From which] ...an incessant flow of possibilities and near-intangible meanings appears' (Kracauer 1965 p 72). These depictions – Grosz's disorientating confusion, Kracauer's 'near-intangible meanings' and Virginia Woolf's 'bounding, careless, remorseless tide of the street' (Woolf 2013).⁵⁸ – are ones I have avoided: striking a compromise between including life on the street and careful editing and selection to produce a representation based on my observations.

Cinematic depictions of modern life grew from the early 'actualities' into a sub-genre known as 'city symphonies', produced at 'the meeting point of two tracks of modernism: the development of the cinema and the growth of urbanisation' (Hutchinson 2016). They started with Strand and Sheeler's *Manhatta* (Strand, Sheeler et al. 1921), which interlaced New York streets with Walt Whitman's poem of the same name. These films developed into ever more avant-garde constructions including *Berlin: Symphony of a Great City* (Ruttman 1927).⁵⁹ 'a symphonic film out of the millions of energies that comprise the life of a big city' (Ruttman, quoted in Hutchinson 2016). The most famous of these is Dziga Vertov's⁶⁰ *Man with a Movie camera* [*Chelovek s kinoapparatom*] (Vertov 1929), whose style is defined as Kinok⁶¹ established in Vertov's previous films and newsreels. Filmed in four Soviet cities over three years, it is a silent film, but without the usual inter-titles. The opening title sequence reads as if it were a manifesto for the Kino-eye genre: to show the reality of life without the 'fiction' of a script or dialogue

⁵⁸ Essay Oxford Street Tide (1932), reprinted in Woolf (2013).

⁵⁹ Contributing the word 'symphony' to the sub-genre's name.

⁶⁰ Born David Abelevich Kaufman: bother of cinematographers Mikhail and Boris Kaufman.

⁶¹ Kino-eye or Cine-eye: From Kino-oki – Cinema-Eyes. Also variously named Kinoglaz or Kino-Pravda.

This new experimentation work by Kino-Eye is directed towards the creation of an authentically international absolute language of cinema on the basis of its complete separation from the language of theatre and literature (Aitken 2013, p 602).⁶²

Six years earlier, Vertov's manifesto stated his aims – written as if attributed to the camera itself – as steering the viewer through the chaotic world,

I am in constant movement... This is I, the machine, manoeuvring in the chaotic movements, recording one movement after another in the most complex combinations. Freed from the boundaries of time and space, I coordinate any and all points of the universe wherever I want them to be. My way leads towards the creation of a fresh perception of the world. Thus I explain in a new way, the world unknown to you (Vertov 2000).

Cinema was charged with the ability to interpret without recourse to the traditions of time and space: the key to open this door to 'a fresh perception'. Not only was cinema a relative newcomer, in attempting to convey the 'modern' city, the symphony films in particular 'explored the artistic potential of a young medium' (Vertov 1994): Vertov's unconventional techniques included jump cuts, speeding up and slowing down, double exposures, split-screens, stop-motion animation, freeze frames, and an absence of actors – the only recurrent characters are the cameramen. At one point the camera turns through ninety degrees, depicting the vertically framed street flowing horizontally. Speculation as to whether this was accidental, a gimmick or conforms to an intentionally de-familiarising concept seems likely to be the latter: as Yuri Tsivian concluded, the people's shadows are walking upright across the screen. Echoing examples of Aleksandr Rodchenko's constructivist photographs,⁶³ this technique became known as a 'Rodchenko angle'. This same technique occurred (probably independently) in images by (former Bauhaus student) Otto 'Umbo' Umbehr, who thought that the shadows 'walking all by themselves' reminded him of the 'fantastic worlds imagined by Freud', one being titled *Uncanny [Unheimliche] Street* (Hutchinson 2016): Figure 17, Otto Umbehr, *Untitled* (1928). Hence Umbo subverted formal images of the street to focus on a different perception of the street: the ephemeral movement of people's traces, as highlighted by their orientation. Later genres, for example Italian Neo-realism, showed representations of cities as a chaotic, incessant flow, notably in Vittorio de Sica's *The*

⁶² Vertov's film was followed by several explicit homages, notably *The Man Who Has a Camera* (1933) created by Liu Na'ou (Zhang 2015).

⁶³ For example *Pedestrians (street)* (1928)

Bicycle Thieves [*Ladri di biciclette*] (Tsivian 2007, p 110). I have attempted to capture the vibrancy of this flow, without Vertov's self-conscious techniques, aiming for a natural representation.

<https://www.moma.org/collection/works/83932>

Figure 17: Otto Umbehr, *Untitled* (1928)

I have summarised the relationship between photography and architecture that produced a representation that is still dominant: Carullo's 'institutionalised' style. This style produced a self-perpetuating, recurring loop by its influence on the architecture it portrayed: the antithesis of 'an urban fabric built to fit the foot-borne human' (de Sica 1948, Mcleod 1963, p 280). This may have reached its nadir with the phenomenon of Starchitecture, but it is too early to tell. From Campbell's delineation of 'photography of architecture' from 'architectural photography', a space is defined that some photographers have attempted to occupy. The purpose of these attempts is best expressed by John Donat, whose work reflected his belief that 'because architectural photographs are a substitute for the experience of buildings for most of us, it is far more important for a photographer to recreate that experience through the lens than to take a few perfect and beautiful photographs' (Elwall 2004a, p 190). I have drawn parallels between ideas, movements and concepts that flourished during the early twentieth century, highlighting alternative views of the city – as dynamic and temporal – in contrast to the concurrent style of architectural photography. It is these alternative conceptions that generate ideas for my practice.

To repopulate the architectural spaces with the dynamism and awareness of temporality that was depicted by early Modernist artists is a challenge, especially in a still medium, but one that I shall address in chapter three.

Although the representation of architecture through photography appears to be simply 'taking pictures of buildings': it is a two-way process, where the imagery of architecture influences architecture. This relationship produces a sub-genre that is narrowly focused and highly mediated. To a greater or lesser extent, all photographs are constructions and mediations. However, commercial architectural photography is one of the most mediated forms of photography, while simultaneously appearing (at least to the general audience) to be a simple document: the 'miniaturization of the real' (Urry 2002a, p 128). The perception of the image is a topic I will explore further in the next chapter.

Chapter Two

Drawing with Light

In this chapter I will critique the ways that the medium specificity of photography has defined how its representations appear evidential, drawing comparisons between architectural photography and other uses of 'record' photography. I will also illustrate the disparity between architectural photography and other visual forms of representing architecture, using examples of recently completed buildings, arguing that its representation through photography is unique amongst these forms. This inconsistency will suggest much of the focus and the location of my practice. Once the field of research is defined, I will argue that when considering the credibility of photography, it is the direction, integrity and agency of the author that will determine the veracity of the resultant image, not the medium employed, or the processes involved. Drawing parallels with the interpretive, iterative, accumulative techniques of other visual media such as drawing and illustration, I then offer a different view of photography: not as a vehicle to make instantaneous and primarily aesthetic images, or documents, but to make marks and traces within the frame that illustrate movement and presence over time.

Record photography

The term 'record photography'⁶⁴ encompasses branches of photography that record objects and scenes. They are perceived as a simple act, produced without interpretation or creativity from the photographer. The perceived 'truth' of record photography is signified by the term itself, an act of recording that may be considered analogous to duplication or copying. Architectural photography is frequently assumed to be within this category, largely due to the ways in which buildings are photographed as objects in isolation, where the photograph performs a role as 'merely a surrogate for the building' (Roberts 1993, p 143).

In Elizabeth Edwards' article 'Photography's default history is told as art – it shouldn't be', she asserts that [other genres of] photographs have 'penetrated, entangled and perhaps defined almost every area of human endeavour that we care to name – medicine, industry, tourism, relationships, archaeology, social policy', rendering 'both the visible and invisible in certain ways that have shaped our world.' Edwards also refers to 'the photographic workhorses that have shaped ideas since the 1850s', adding that the

⁶⁴ As defined in the introduction (under 'terminology').

breadth of these alternative photographs, beyond ‘aesthetic discernment and expression’, has been ‘largely written out of gallery agendas’. An appreciation of these ‘other’ photographs, and their influence, goes beyond the ‘structures of the canon to explain the richness of photography’s contribution to the way we see the world’ (Edwards 2015). If recording and dissemination through photography has had such an enormous influence, that is not reflected in the level of research devoted to it. I would argue that this under-researched area of photography is overlooked *because* of the apparently simple nature of recording. Record photography clearly has a problem of visibility: it is often seen, but appears transparent. As Roland Barthes suggested, this is an inherent property of photography as ‘whatever it grants to vision and whatever its manner, a photograph is always invisible: it is not it that [which] we see’ (Barthes 1993, p 6). In my practice I am conscious of this effect and so provide clues as to the image’s materiality; its existence as a mediation.⁶⁵ We see *through* the photograph to the subject in instances where the content is the salient feature – when showing a photograph of children we might say, “these are my children”: the language used implying that we are introducing them in person.

Vid Ingelevics is one of the few researchers to address record photography, its context and its contribution to knowledge. Ingelevics challenges the perception of a lack of authorship, with particular reference to museum and art gallery photography. He sees photography’s mediation of information to the wider audience, including advertising, exhibition catalogues and exhibition displays. Ingelevics also brings to the fore a view of photography’s role in such institutions that is altogether deeper – the recording of the life of these institutions ‘behind the scenes’, seeing the photographic process and the photographers’ role as part of the life of the institution. Ingelevics’ exhibition *Camera Obscured: Photographic Documentation and the Public Museum* was the first to draw on the archives of the ‘in-house’ photographic studios of major public museums (Ingelevics 1997), for example the image shown in Figure 18, that reveals part of the life of the institution.

<http://www.retrograph.com/downloads/transfer-of-elephant-from-natural-history-museum/>

Figure 18: Photographer unknown, *Elephant delivered to the Natural History Museum*, London (circa 1930).

⁶⁵ The images are (initially) digital, hence the materiality is not literal: therefore I refer here to its perception as a photograph (by evidence of its production) provided within the image.

Reviewing Ingelevics' exhibition, Georgina Born considered that 'it argues that the photographic images sketch out a rich visual anthropology of public museums as social and cultural institutions', revealing 'the labour, artifice and construction in the practice of both museum and photographic representations' (Born 1998, p 223). Born can see the value of looking at record images objectively, acknowledging that they carry information that is relevant to the artworks or artefacts that they portray, beyond the image itself, as well as providing clues to the circumstances of their production and dissemination.⁶⁶ To see the mediation of photography as well as the subject portrayed emphasises 'the artifice of the exhibition space and the materiality of the exhibits' (Unknown 2014).

The value of these images goes far beyond what they show: they are the indicators of the processes at work that led to their production. This is just as true for architectural photography as it is for any 'record', or indeed any photograph. If the documenting of museum or archaeological artefacts – which could be regarded as the least authored form of record photography – can be appreciated as a mediated form of communication, then record photography carries connotations of its own mediation, uncovering a process far beyond mere duplication.

As recognised in chapter one, architectural photography is subject to many other factors governing its production such as the triangle of influences that consist of the photographer, editor and architect, as well as the different contexts in which they are viewed: in journals, magazines and advertising. This makes the distinctions between record and advertising (and between the different people involved in their production) difficult to determine, both for the photographer creating the image and for the image's audience.

The material culture of architectural photography can be easily dismissed too: curator Helene Roberts found great difficulty in identifying authors of architectural photographs in Harvard University's Fine Arts Collection. As an art historian, Roberts wanted to know details relating to the 'conditions of the making of photographs of works of art or architecture, and the conditions of the exhibition, sale, or dissemination of those photographs' (Roberts 1993, p 143). This is valuable contextual information for most works of art, yet it had not been recorded for 'record' photography (a problem Ingelevics often encountered in museums' photographic archives (Ingelevics 2009)). In recent times, photographic archives have been included within academic enquiry, this 'has given visual collections, especially collections of architectural photographs, a whole new dimension of

⁶⁶ Constanza Caraffa also explored the value of physical archives of museums, as a record of their photographers' oeuvre, contributing perspectives on photographs and their archives as material objects Caraffa (2012).

use' (Roberts 1993, p 143). This is an acknowledgement of these photographs as cultural artefacts: mediated, authored, and subject to changing styles, fashions and technologies of production. As such the methods employed may be seen as a product of their environment: as a commercial process wrought between differing agendas.

Frederick Bohrer's *Photography and Archaeology* (Bohrer 2011) is an investigation into the photographer's role in recording and mediating views of archaeology. Bohrer showed that this area of photography is far more subjective than other writers have previously acknowledged. He used case studies to highlight differences between representations of the same archaeological site when photographed by different photographers. The photographers' input is evident in their images: their photographs visibly demonstrate agency and authorship.

Eminent field archaeologist and photographer Eric Houlder asserts that sketching is still routinely used, in addition to photography, for explicitly interpretive qualities that allow the artist to emphasise their choice of the most salient features.⁶⁷ This is illustrated by a comparative pair of images of the same artefact, Figure 19, where the illustration reveals and interprets the indistinct images present on the carving.

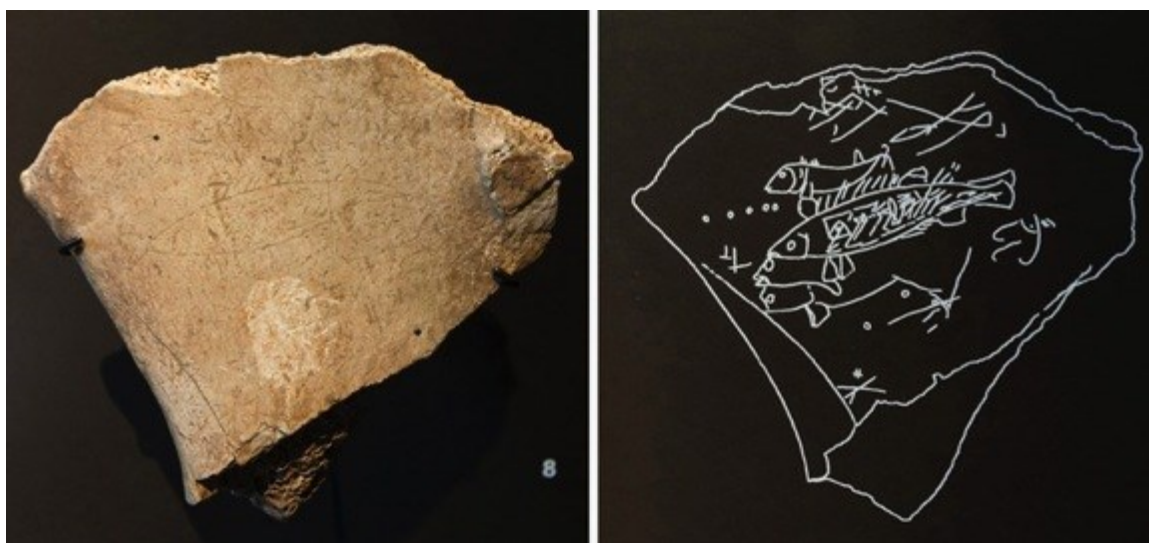


Figure 19: D Trillo, *Carved bone with interpretative drawing*, Neues Museum, Berlin (2014)

Simone Ridyard described architectural sketching as creating 'a tapestry of lines' (Ridyard 2015, p 11), underlining sketching's capacity to build a web of associations between different elements of a scene. Through the artist's agency, nuance and emphasis can be applied to different strands of the scene, as determined by the artist.

⁶⁷ Unpublished guide *The Origins and Philosophy of Site Photography* (Houlder 2009), sent privately.

The ability for non-photographic media to build up representations, as directed by the artist allows for this interpretation, which poses two questions. Firstly, why does architectural photography's dominant style represent, as Peter Aaron described it, 'the building as pure object, existing pristine in its own world' (Busch 1987, p 89) – as it has done for over ninety years? Secondly, is this not merely a way of producing a saleable object in what is (literally) the best possible light, as with any other advertising photograph? The first question has, in part, been addressed in chapter one: any further analysis or conjecture would be beyond the scope of this thesis. To answer the second question requires an appreciation of the medium specificity of photography, which has always been conventionally linked with indexicality. The alternative representations of architecture via other media are noticeably interpretative, rather than merely descriptive. I will return the topic of interpretation and drawing later, but for now I want to look more closely at photography's claim to 'truth'.

The perception of photographs as presenting reality

Photography is a medium that is perceived differently from drawing and painting as 'photographed images do not seem to be statements about the world so much as pieces of it, miniatures of reality that anyone can make or acquire' (Sontag 1977, p 4). The discourse surrounding photography's indexicality dates back to its invention. It has been widely documented and debated, but the arguments fuelling those debates do not affect my practice and furthering them would be beyond the scope of this thesis. I would argue that 'indexicality' is an over-simplification. That is to say that a photograph is *representative*, rather than objective (Bourdieu 1996, p 77). Kracauer asserted that the camera could uniquely 'record and reveal physical reality' (Kracauer 1965, p 28), but the claim for inherent reality or truth in the medium is far more complex. Suffice it to say, recent considerations of the indexical nature – the 'truth claim' – of photography take a more pragmatic stance. These are typified by Tom Gunning's statement that photography contains a degree of 'visual accuracy and recognisability' to describe 'the manner in which indexicality intertwines with iconicity in our common assessment of photographs' (Gunning 2004, p 41). This suggests – paraphrasing Barthes' stance on photography's ability to fix time – that there is always an element of the 'that was there, then' within a photograph, but the photographer's input must also be acknowledged.

Nina Lager Vestberg suggests that photographs have a life of their own from the point at which they are taken – that of the photographic *object* (Lager Vestberg 2008, p

53). Additionally, I would argue the case for the start of a photograph's life as being from its conception, that is from the point at which it is first planned or imagined. The photographer's intention, the image's creation, the physical entity and the image that it conveys are linked: even if they are considered separately, they are always linked as different components of that photographic object. Whatever resemblance is perceived or claimed, in the case of photography this can only be a two-dimensional representation of a three-dimensional reality, lasting for the duration of the exposure. Thus it is a limited vision of reality, rather than an experience, or a reproduction of it. In certain fields the indexical nature of photography suggests an authenticity that would be disrupted by manipulation, unless this is overtly acknowledged: journalism, natural history, forensic science and archaeology are areas that rely on fidelity of reproduction to communicate 'evidence' to the viewer.

Even without post-production manipulation, information is carefully edited by other means.⁶⁸ My practice is intending to utilise these 'manipulations' allowed to architectural photography, not intended to deceive, but to form interpretations that represent moments witnessed, yet leave marks of the processes involved so that their construction is not hidden. Photography shows what was there, at a specific time, in a specific place; in Steve Edwards' words it bears 'a sign that shows a causal relation to its model or object' (Edwards 2003, p 31). It is unreliable as an indicator of what else was there, what may have been seen from a different point, or a different direction. It does not tell us what is there now, as we view an image, or what was there at any other time apart from its inception. C.S. Peirce 'demonstrated that the indexical sign was less to do with its causal origins and more to do with the way in which it pointed to the event of its own inscription' (Green and Lowry 2003, p 48). The photograph therefore relates to something of its own making: sometimes indicating more about the maker than the image can convey about what it shows.

Non-photographic representations of architecture

Any claim that architectural photography is objectified, idyllic and utopian rely for their explanation on the role of advertising: that they cannot show anything other than their best possible face, as it is an image intended to promote the building. As photographer Richard Einzig stated, architectural photographers are 'in the public relations business' (Elwall 2004b, p 25), photographing buildings just as advertising photographers

⁶⁸ For example camera position, lens choice, lighting, timing and the tidying of sites

photograph boxes of soap powder, with an equivalent regard for representation. What mainstream architectural photography lacks is a 'complementary viewpoint that considers buildings less as drawing-board creations and more as living organisms transformed through use' (Elwall 2004b, pp 25-26). This notion of the market dictating the photography towards an unrealistic vision would appear to have credibility, if it were not for the fact that other visual representations of architecture are routinely shown as populated, contextualised environments: as I will illustrate below. They are environments that indicate how the building might be used and how the design could dictate its use.

Models

Photography is one of several forms of representation of the built environment, but it is ordinarily the only form that is commissioned at the point of a building's completion, when the building is finally a reality, when it is 'photographer ready'. By contrast, architectural models are integral to the design process, widely used in architectural practices. Models can evolve as tools for visualising form and space, when the building 'exists as a little-known, abstract and fuzzy entity' (Yaneva 2009(b), p 21). At the same time the building also has a second presence, 'a well-known, concrete, and precise object, ...a bunch of elaborated models [presentation models] and a schematic diagram' (Yaneva 2005b, referenced in Yaneva 2009(b), p 21). These 'elaborated' models are often animated, with figures and vehicles, to represent a vision of what is to come: the building in use, after completion and handover to the client.



Figure 20: D Trillo, *Hacienda model* (model made by N. Hardy) (2014)
and

https://en.wikipedia.org/wiki/The_Ha%C3%A7ienda#/media/File:Hacienda06.jpg

Ben Kelly (architect), *Hacienda club interior* (circa 1986)

Enveloped within their imaginary scenarios, buildings in model form are photographed for further dissemination, utilising carefully staged lighting to replicate daylight, often with backgrounds imitating skies. When photographed in specific ways – to replicate human-scale lines of sight and angles of view – an accurate model of a building can appear uncannily similar to images of the actual building.

Figure 20 is my photograph of Nick Hardy's 2013 model of the Hacienda club (Manchester, UK), below which is Ben Kelly's archival picture of the (now demolished) building. As Christian Hubert commented, such photographs can appear 'virtually indistinguishable from photographs of buildings', recognising that 'the intervention of another form of [...] representation – namely photography – reinforces the claim to verisimilitude' (Higgott and Wray 2012, p 179). Thus another layer of interpretation, mediated by photography, can be added to the (already) 'elaborated' model, substantiating Hubert's claim that 'the model purports to *present*⁶⁹ architecture, not represent it [...], on the border between representation and actuality' (Hubert 1981). In

⁶⁹ My emphasis.

this context, photography is seen as lending veracity to another medium, not a further dilution of reality by adding an extra layer of mediation.

When compared to two-dimensional images, the unique property of the model is that the viewer can choose their position around it, to view in a specific direction and imagine the building that is depicted. These views, as inspired by its surrogate, invest an agency in the viewer that is not afforded in drawings, photographs or films.⁷⁰ An architectural model offers choices unavailable elsewhere, one that ‘allows you to perceive qualitative things’ (Dunn 2015). The building viewed in model form can be animated and populated – as such it offers a negotiated space between maker and audience. Architectural models are often built up over a period of time, carefully adding layers of detail and interpretation. By contrast, photographs of models restrict the observer to the prescriptive, two-dimensional world of the other forms of representation.

CAD⁷¹

In director Cedric Klapisch’s film *Paris* (Klapisch 2008), Philippe Verneuil is an architect who has nightmares relating to his current project, a new urban centre. It is not the predictable worries of project management or budgets that concern him: in his recurring nightmare he finds himself trapped within an animated version of the vision he has created, a combination of Computer Aided Design (CAD) and an ‘artist’s impression’. What is being proposed by his design – which is ultimately what is being sold – is an imaginary scenario, within which the building is located. This representation is sufficiently removed from the project’s actual aims that the notion of being ensnared within it appears as a dystopian vision. Klapisch emphasises the difference between the planned as it is presented to the client and public – and the fear that this might become a reality. Philippe is forever planning the future, yet uncertain of whether this will be realised, ‘an aspect underlined by the architect’s insecurities and fears’ (Humbert 2012).

CAD renderings are usually (hitherto rather unconvincingly) heavily populated, with random, happy inhabitants, who are sourced from an image library, designed to appear realistic [see Figures 21b (top), 22a, 22b and 22c]. Before the widespread use of computers to create visions of future buildings, ‘artist’s impressions’ were restricted to drawings or paintings, media that intrinsically conveyed that these were only

⁷⁰ In fact even the navigation of an interactive CAD ‘fly-through’ only allows the observer to follow a range of pre-programmed paths, with pre-determined viewpoints, angles of view and lighting.

⁷¹ See my explanation of my use of the term CAD in ‘Terminology’ (p 4).

visualisations.⁷² In contrast it is becoming increasingly difficult for the layperson to ascertain whether digitally constructed CAD renderings are real or faked. Drawings are still used today, as I will illustrate later, although they are conventionally being superseded by CAD illustrations.

Precedence

By virtue of preceding the completion of the building CAD representations, sketches and models indicate a proposal rather than a reality. In advance of construction it is through these fabricated visions that those without sight of (and the skills to interpret) the architectural drawings produced for the builders will see architecture, as they expect it to be realised. At the point where the buildings are completed these visions 'are already of the past,' becoming a 'utopian ideal' (Hayward 2000, p 20). The complex web of permutations offered by technologies, techniques and audience perception defies any clear-cut opportunity to summarise these non-photographic representations. If it were possible that such evidence could be researched and analysed, it would be beyond the scope of this thesis, primarily concerned as it is with a study of photographic representations. Although many are clearly fabrications that give an impression, or an idea of what the building will look like, others imitate photographic depictions in their verisimilitude and presence. Suffice it to say at this point that if an image appears to be a photograph, then the viewer could read it as a photograph of a subject that exists, or at least of one that existed when the image was made.

The conventions of commercial architectural photography produce a representation that is removed from the actual experience of visiting the site, even more so of inhabiting the site. What is usually missing in these photographs are the people who are experiencing and using this building: somehow they, or at least a representation of them, have disappeared between the creation of the original CAD renderings, presentation models and illustrative sketches and the point of completion, when the photography was commissioned.

All three of the aforementioned representations created at the proposal stage are normally contextualised: populated and animated as visions of how the building will be used. They also promise – by virtue of being the primary communication of what is proposed – a vision of what is expected by the client and the public. They illustrate the commercial vision at the point of sale: whether 'selling' to clients, planning committees or

⁷² A status acknowledged by the use of the word 'impressions'

local residents. This negates the usual explanation for the dominant style of architectural photography: that this is what 'the commercial market' wants, that the images are only commercially driven. If that were the case then surely the other three forms of visual representation I have referred to would be similarly devoid of life. Photography, by contrast with other visual representations, is regularly used to display the autonomous view of architecture: 'the presentation of a single uncomplicated idea, an architectural one-liner that once in the public realm would be difficult to change' (Morrison 2004), thus fixed in its own, limited temporal dimension.⁷³

The case for populated photographs

Architectural photography's similarities with other record photography include its formal appearance, one that is objective (in both senses) and is of high technical quality (including rectilinear facades). This invokes a degree of authority, which when allied to photography's inherent indexical nature, produces a persuasive vision of a building shown with little mediation ...until compared to alternative representations. Unlike other record photography, architectural photography is skewed towards aesthetically driven product photography, while non-photographic media (paradoxically) can appear dynamic, temporal, animated, inclusive and – bizarrely – more realistic.

The multiplicity of representations across different media may come as no surprise, as they are produced by different artists and intended for different purposes. But it is within the subject of architecture that I find the greatest polarisation of representations between photography and other visual representations. It may seem that I am overstating the importance of the differences between representations of architecture. The differences are clearly instructive within the context of this thesis, but these representations of architecture are important beyond this thesis, as this is the way that discourses surrounding architecture are fuelled and disseminated. These representations, primarily via photography, are the way that we learn the vast majority of buildings: those we have not visited. Through them we may wish to see what the design is and how it functions (successfully or otherwise). This is illustrated by a unique feature of museums of architecture – that they do not 'display the artefacts of their enquiry, but representations of the subject' – they are required to engage with the built world, *and* the complex relationships between representations of it, and the ways that these representations convey ideas and attitudes (Blau, Kaufman et al. 1989, pp 13-14). As Iain

⁷³ Morrison quotes taken from Architects Journal/Bovis Award speech, 2004.

Borden has pointed out, 'For the archive [of architectural history], this means thinking about images which do not so much record an object but have the potential to convey meaning' (Borden 2007, p 74). Without these artefacts they conduct their discourse solely via mediated representations, therefore the modes of representation are crucial to these discourses.

<https://www.sheppardrobson.com/architecture/view/manchester-metropolitan-university-brooks-building>

Figures 21a, b and d: *Brooks Building*, Manchester Metropolitan University, Sheppard Robson, 2014, two drawings, a CAD render and photographs commissioned at completion (none credited)



Figure 21c: D Trillo (photograph), *Brooks Building*, Manchester Metropolitan University, Sheppard Robson, 2014, architectural model

Comparative examples

I will illustrate the above comparisons through examples from three building projects. These contrast commissioned photography with other representations of those buildings: models, CAD and illustrative sketches. The projects are Manchester Metropolitan University's Brooks Building (Sheppard Robson, 2014), The Co-operative Group's One Angel Square, Manchester (3DReid, 2013) and St. Peter's Square landscaping. Figure 21a shows two sketches of Brooks Building (MMU), 21b a CAD rendering, 21c the model and 21d two commissioned photographs. Figures 22a, 22b and 22c show three CAD renders of

One Angel Square, and 22d a commissioned photograph (after completion), as presented by the Co-op.

<https://www.placenorthwest.co.uk/news/co-op-reveals-new-views-of-noma/>

Figures 22a, b and c: *One Angel Square*, Manchester, 3DReid, 2013: CAD renders



Figure 22d: *One Angel Square*, Manchester, 3DReid, 2013: Commissioned photograph (not credited).
Licensed under the [Creative Commons Attribution 2.0 Generic](https://creativecommons.org/licenses/by/2.0/) license.
[https://commons.wikimedia.org/wiki/File:Angel_Square,_front_facade.jpg]



Figure 23: D Trillo (photograph), Latz + Partner, CAD/drawing/illustration posters, *St. Peter's Square proposals*, Manchester (2016)

<https://www.latzundpartner.de/en/projekte/urbane-transformation/st-peters-square-manchester-uk/>

Figures 24: Latz + Partner, *illustrations of St. Peter's Square proposals*, Manchester (2012)

<https://www.latzundpartner.de/en/projekte/urbane-transformation/st-peters-square-manchester-uk/>

Figures 25 a and b: Latz + Partner, *photographs after completion*, Manchester (2017)

Figure 23 shows the proposed regeneration of St. Peter's Square (completed 2017).⁷⁴ It has been developed as a more open public space with the cenotaph moved to make way for a larger tram station. These images (which were attached to the hoardings of the building site) depict a busy, well-populated, summer time vision in which only the architecture of the north side is shown. On the south side are two large new buildings, both replacing twentieth-century commercial blocks.

The images are a fusion of drawings, digitally generated images, silhouettes and stock photography. In the images the contents of the square are shown to be people, trees, seating and paving. The present contents of the square and its surrounding architecture play a secondary role; in fact the tram station is invisible. Figure 24 shows further composite drawings and Figure 25 shows commissioned photographs of St. Peter's Square after completion. All of these examples show the similarities between non-photographic representations, as discussed earlier, as well as the contrast with images typical of commissioned photography. In the case of Figures 21d and 22d, the building was cropped to exclude the ground, preventing the possibility of showing people.

Photography as a process

Scholarly activity is increasingly reframing photography as a process, with many influences and myriad possible outcomes. Patrick Maynard's book *The Engine of visualization* (Maynard 2000) proposes photography as a process of communication, in fact as one of the primary sources of information that we use in Western society on a daily basis: which involves both viewing and understanding the world *through* photography. Maynard examines what photography does and how it works, rather than what it is, or what it represents. This is not in opposition to the conventional reading of images, more an additional interpretation of photography. Traditional discourse dwells on photographs' appearances: the content and meaning of photographs as a way of exploring how the images came to resemble the way that we see them. While there is much to gain from attempting to analyse motives and influences based on clues we may

⁷⁴ The site of a former church and churchyard, latterly a public square that includes Manchester Central Library, Manchester Town Hall's extension (rear), Manchester's foremost war memorial, public sculptures and gardens.

find within the images alone, Maynard considers the wider view of the whole production cycle, including its external influences, as revealing more than the analysis of images alone. By acknowledging the wider picture of external controls, we can see that external demands reinforce established practices. From this perspective architectural photography should share the influences that other media do. Increased objectivity resulting from changing discourses surrounding photography should allow fresh perspectives on traditional genres: perhaps, as architectural photographer Timothy Soar contended, 'digital photography will facilitate getting involved with the nitty-gritty of design in a more immediate and humanistic way' (Elwall 2004b, p 26). Elwall had himself predicted that digital imaging may provide the impetus to interpret buildings as they are experienced, rather than 'idealized, formal abstractions' (Elwall 1991, p 67) There has been little evidence of changes in architectural photography's predominant style since Soar's prediction, except for the ability to alter images more seamlessly than before. What *has* been in evidence is a change in the role and status of photography: as explorative, post-modern practices increase, the role of the photograph as a document diminishes. If the production and consumption of architectural photography is now generated by digital technologies, will it draw photographs closer to design images? The viewers' assimilation of new technologies has altered consumption habits changing expectations of how images are produced and viewed. Will digital technologies produce a different form of architectural photography: one that is nearer to the plethora of digital content consumed every day?

David Green suggests that fine artists who produce what Robert Shaw termed 'Post-photography' (Shore 2014) – post-modern artist-photographers, rather than those that call themselves 'photographers' – have 'drawn our attention to the ambiguity and potential undecidability [sic] of the photographic sign, its resistance to meaning, its relationship to time and history, and its indexicality' (Green 2003, p 10). These practices have contributed to the blurring of the boundary between traditional art forms and photography. In particular this has occurred with the incorporation and exploitation of contemporary technologies and representational practices; thus it is increasingly difficult to say where photography is, in relation to these media and in what form we can define the medium (summarised from Green 2003). I will explore the impact of these changes in the next chapter, but for now I will stress that this vagueness surrounding photography's definition and status does not explain the differences in architecture's visual representations.

Illustration

If photography is increasingly regarded as a construction, in what form could this construction build a view of architecture over an extended period, while still retaining evidential rigour?

The viewers' belief of the validity of record photography stems partly from the disciplines for which it is produced (scientific, medical, legal, archaeological), and in part from what has been suggested to be its predecessor; scientific illustration. These predecessors are exemplified by drawings and paintings of botanical and zoological specimens. They were not conceived as accurate reflections of life 'as seen', nor did they attempt to convey 'reality' by showing all of the specimen's context, or the depiction of natural lighting. Martin Kemp's exploration of the art historical background to this genre draws on perceptions shared between science and art. Kemp points out that John James Audubon (Audubon 1840) used two 'registers of information', the first being 'the close-up observation of surface features', and the second is the 'use of outline to capture the silhouette, motion, and dynamic 'personality' of the bird in the field, as it might be seen fleetingly or at a distance' (Kemp 2000, pp 52-53).⁷⁵ These illustrations convey information to be interpreted by observers in the field.⁷⁶ They are representations of actual subjects, yet are edited to display the most useful information. The clarity of this combination of detailed information, recognisability and the suggestion of movement mean that it is still rare that photographs are used instead of illustrations in natural history field guides. Kemp cites Leonardo Da Vinci's botanical illustrations that show only the salient features of leaf, fruit and stem: A composite view still evident in the books of botanical illustrations that proliferated in the nineteenth century: Figure 10. Each perfectly formed specimen shows every detail of form and line edited to reveal the information required to summarise without distractions. Despite being evidential in the sense of describing details of what might be seen, they form an unrealistic whole, compressing the time of a plant's life cycle by showing ripe fruit and flowers on the same stem of a plant. In natural history and archaeological illustrations it has long been acceptable to convey information through such compromises between depiction and interpretation: an artist's interpretation of the important information, minimising extraneous details. The licence to interpret in order to inform is granted to artists to encapsulate multiple aspects, while still retaining the integrity of the whole image.

⁷⁵ See also Kusakawa (2011).

⁷⁶ As with the archaeological illustrations mentioned previously.

Similarly I see my multi-exposure compositions and collages as compressing events across time, edited to show (what are to me) the significant moments together in the same image. Each is a genuine occurrence, forming an *interpretation* of events rather than the depiction of a single moment.

<https://www.pinterest.co.uk/panteekprints/antique-botanical-lithograph-prints-by-twining/>

Figure 26: Elizabeth Twining, *Pomaceae*, from *The Natural Order of Plants* (1849)

Drawing and painting

Record photography has been shown to perform the functions of documentation *and* interpretation. Drawing and painting may appear disconnected from my practice: however, following scientific illustration's capacity to document a summation of information I propose an appraisal of the methods of drawing and painting, in order to show what could be derived from them for my practice.

Both drawing and painting (and for that matter three-dimensional arts such as sculpture) are built up over time, illustrating the subject by producing a representation that is indicative of the experience the artist. This is not a documentary record, or a 'photographically realistic' rendering (although some artists do attempt this), but a layered interpretation, using skilful editing and judgement. At each stage these practices involve consideration of each element, and the whole picture. Amassing details at different times affords time to pause for contemplation and decision-making. My practice has evolved to encompass all of these methods and, in some cases, other opportunities afforded to drawing and painting: the addition of views from different angles and at different scales. Eventually an image emerges that is felt to be representative of the whole experience – or at least the experience for the time of the work's production – conveying the vision of the author as an accumulation of moments. The process consists of observation, interpretation, editing, presentation, iteration and, finally, a representation. This procedure matches the methods employed for all of my later practice with clear parallels to drawing and painting.

<https://shop.thelowry.com/products/coming-from-the-mill>

Figure 27: L.S. Lowry, *Coming from the Mill* (1930) © The Lowry Collection, Salford

It can prove awkward to represent moving people in a built environment by an accumulation of many smaller movements: unlike painters I do not have the licence to place my subjects wherever I like in the frame. Careful consideration is required in their

composition to avoid a teeming mass, where their directions appear incoherent, as if many are about to collide. Selecting the number and placement of figures is a skill exemplified by the paintings of L. S. Lowry, who composed his subjects to indicate their directional flow, while still retaining clarity via natural compositions. Although also known for single portraits and seascapes, Lowry's best known works are of people in England's industrial northwest, attending to their daily business in landscapes of terraced housing, textile mills and football grounds, Figures 27 and 28. Depicting massed people over wide areas, it was impossible capture these movements at once, so the accrual of numerous sketches on the street was later combined onto canvas (Rosenthal 2014, p 203). Even in Lowry's works that depict vast areas, such as *Peel Park* (1944) (that shows almost the whole park and everyone in it), or *Britain at Play* (1943), the compositions retain lucidity in a form that would not be possible by taking a snapshot of a crowded space, yet without appearing overly contrived.

<https://shop.thelowry.com/products/mug>

Figure 28: L.S. Lowry, *Going to the Match* (1953) © The Lowry Collection, Salford

John Berger has described Lowry's paintings as 'synthetic, insofar as they are constructed from his observation and memory of different incidents and places'. Few represent specific scenes accurately: 'however, if one goes to the mill towns, [...] to Manchester, to Barrow-in-Furness, to Liverpool, one finds countless streets, skylines, doorsteps, bus stops, squares, churches, homes, which look like those depicted by Lowry, and have never been depicted by anybody else' (Rosenthal 2014, p 203). These paintings are impressions of a wider landscape, gathered not only over time, but also spatially across many similar 'typical' landscapes that do exist. I have always restricted my own practice to accumulations from within the scene framed, without mixing elements from different locations, but the aspect of an accumulated impression, built up over time is one that I have followed, as is the method of selecting people as details that are indicative of my impression of the location.

Lowry is often included in a line of painters depicting scenes with a balance of realism, innocence and often humour.⁷⁷ John Willett identifies what differentiates Lowndes work from the 'straight architectural and topographical realism of artists [such as] Edward Hopper' as its 'concern with people'. Lowndes's pictures are 'never inhumanly still like Hopper's, or photographically frozen like those of Hopper's followers today', for

⁷⁷ Lowry's tutor Adolphe Valette before him and later painters such as Alan Lowndes, Helen Bradley and Harold Riley.

example the photographer Gregory Crewdson. The scenes are interesting depictions of buildings and interiors, 'expressive of a way of life [,] but the figures who move through and round them are even more so [and are] full of human character' (Lowndes and Willett 1972, p 5). Although born and bred amongst Manchester's mill strewn landscape,⁷⁸ I do not claim any descendance from this lineage, but I do feel a similar empathy with the passing characters, that they too should be acknowledged and recorded as the inhabitants for whom the environment was built. In a speech to the House of Commons in 1943, Winston Churchill said that 'we shape our buildings and thereafter they shape us' (Plummer 2016, p 17). They give it purpose, moulding it and being moulded by it.

Anne Wagner sees this as a visual interdependency, present in Lowry's urban landscapes. For his paintings to succeed Wagner believes that 'the human action in it – the crowd round the drowned girl, the children not wanting to go home yet, the men on the touchline, the women by the hospital gate – has to be framed, confined, dictated by the built environment' (Clark and Wagner 2013, p 69) These are ordinary lives, usually overlooked, reminiscent of Dickensian dramas that show 'not the captains of industry, but the small tragi-comedies that beset its rank and file' (Clark and Wagner 2013, p 88). It is perhaps inescapable that even transient, blurred figures will contribute something of the spirit of the locations – the *genius loci* – to the story of the landscape: Figure 29: D Trillo, *Platforms 9 and 10*, Piccadilly Station, Manchester (2013). It is not that I feel these 'tragi-comedies' cannot be ignored, more that they are intrinsically bound to their environment: coincidentally in front of the lens at this time, yet when taken as a whole their actions and flow are representative of this location.

⁷⁸ Ancoats, Manchester.



Figure 29: D Trillo, *Platforms 9 and 10*, Piccadilly Station, Manchester (2013)

A negotiated interpretation

The non-photographic forms of constructing architectural representations (drawing, painting and modelling) compare closely in temporal terms with literary constructions (novels, poetry and drama). All are crafted, mediated and layered, building considered interpretations of source material, drawn from experiences, memories and imaginings, but all interpretations are subjective. There are risks and caveats attached to any licence to interpret. The intent and integrity of the creator(s), along with the subsequent context of its presentation, can deliver widely disparate viewpoints, even when drawn from identical source material. It is reliant on the author to deliver *a* truth – if that is their claim – not *the* truth. In Andreas Feininger's words, photography produces 'an interpretation in the hands of the photographer' (Adam 1983). Thus the agency of the photographer is manifest in the directing and editing of a constructed entity. For photographs to be accepted as 'true' representations, the viewer has to trust the producer, the editor and mode of presentation. This process could be compared with a director's creation of a documentary film. They may well be wary of the production, yet the audience has to trust in their agency. This trust may be lost if there are parts of the production that stretch credibility, but there is an assumption that, unless they experience something to the contrary, they will trust the production. It is within these processes and decisions that the image's representation builds its integrity.

Despite photography's limitations to depict 'accurately', its ability to record effectively has to be seen as a virtue: the medium is still capable of being singularly affective on the viewer. As Berenice Abbot put it, whatever its shortcomings, photography's unique properties should be embraced and utilised, because 'if a medium is representational by nature of the realistic image formed by a lens, I see no reason why we should stand on our heads to distort that function. On the contrary, we should take hold of that very quality, make use of it, and explore it to the fullest' (Abbot 1951). There are opportunities for using these properties *and* what is now becoming assimilated into our visual language: digital, post-modern experimentation. I seek to utilise this space, while still remaining relevant to the needs of representation in architectural discourse, to produce images that include some of the life shown in the alternative representations I discussed earlier.

In this chapter I have suggested caution when evaluating architectural photography by using the terms record, indexical and representational. I have advocated various properties and techniques that might be used to produce a representation of architecture: one that incorporates notions that identify with the experience of architecture as we see it in real-life. These properties are evident in CAD, models and sketches, in the Manplan series and its predecessors, and even in archaeological and scientific illustrations. What form could photography illustrating these qualities take or perhaps, what could be added to conventional architectural photography to produce a view that is closer to (a) 'reality', closer to the lived experience; 'providing layers of narrative and meaning' (Pardo, Redstone et al. 2014, p 20)? In the next chapter I will demonstrate ways in which movement has been shown by using the 'static' medium of photography. With particular reference to chronophotography I will illustrate how movement was de-constructed and re-constructed, giving the perception of movement via photography. Chronophotography also revealed aspects of movement and temporality that influenced contemporary thought and art around the turn of the last century. The different approaches of chronophotography's major practitioners informed my methodology towards an evidential and analytical course. The practices and research centred on the areas between still and moving images produced shifts in the increasingly fuzzy boundaries of both media. Likewise the growing agency of artists and consumers, facilitated by new technologies, has produced changes to the perception and assimilation of constructed images.

Chapter Three

Representing temporality and movement in photography

Chapter introduction

A photograph is normally the result of a brief exposure, lasting only a fraction of a second, which produces a 'still' image. Any movement perceived is implied, not physically evident in the photograph. Although the technological basis of 'moving' images⁷⁹ is derived from photography, that is not the medium used for this thesis.⁸⁰ Therefore I question how to represent a view of architecture as a temporal landscape, experienced for more than a brief period, by using a medium with these inherent inadequacies? This is a question I have addressed previously in a conference presentation (Trillo 2014).⁸¹

The understanding and perception of these temporal aspects of photography underwent a paradigm shift in the late nineteenth-century with the invention of chronophotography. Its implications were wide reaching and I wish to show how its histories impacted on my methodology. The writing of history is contingent: it is conditioned by the context in which it was written and is subject to continual development as new research is disseminated. The reason I draw attention to the plurality of histories is that in the first part of this chapter I will examine chronophotography (analytical, time-based, multiple images) and its diverse histories. The development of chronophotography applied photography to the investigation of movement and temporality, the same issues that I mention above and to which I direct the practice element of this thesis. A brief summary of the histories of chronophotography will, for my purposes, illustrate the two different approaches of practice that resulted in seemingly similar imagery, but used different methodologies, reflected by different histories. By illustrating the differences between them I intend to establish a major influence for my own methodology. I will also show that what chronophotography revealed led to a reappraisal of movement and temporality, which in turn has informed my research and practice.

My research for the second part of this chapter is largely drawn from film studies (especially those surrounding animation), histories of photography and theoretical debates resulting from hybrid forms of practice, between photography and cinema, I will

⁷⁹ A phrase I will return to later in this chapter in an analysis of changing views of medium specificity.

⁸⁰ See the thesis introduction.

⁸¹ Unpublished at the time of thesis submission.

refer to as *still/moving*.⁸² This area of research proliferated from the 1970s with the introduction of consumer video technology. Digital innovations including CD ROM and DVD offered even greater control of moving images, as well as possibilities for dissemination, culminating in web-based practices that now facilitate sharing and interaction via social media. This field has become more difficult to demarcate, as digital technologies have made the definitions of traditional media increasingly indistinct. I shall also consider how the public's growing fluency with atemporal, user-defined, digital media production has led to changes in perception and acceptance of these hybrid forms.

Chronophotography

First I wish to survey the ways that temporality and movement have been shown in photography. The decision to start with an analysis of chronophotography may appear at odds with the far more recent research and practice surrounding still/moving, yet each of the primary sources I use have acknowledged the vital part played by chronophotography. Chronophotography is especially useful in showing actions too brief, too fast, or those that happen over a period so long that it is difficult to appreciate what has happened. This is what Walter Benjamin referred to as 'the optical unconscious' (1931): photography's ability to reveal what is often overlooked, or to disclose what exists 'beyond ordinary human vision'. Erin Duganne further defines this as photography's 'dual role[s] of revelation and recognition' (Duganne 2015, p 98). Chronophotography was one component in the history of photography's role as a tool for scientific discovery and dissemination, a history that goes back to the start of photography's proliferation in the mid-nineteenth century.⁸³

Chronophotography is the analysis of movement, shown via photography, which resulted in the breaking down of movement into smaller components, and its resultant re-construction. Early forms included strips or grids of images, animated via mechanical devices (such as the zoetrope, mutoscope, kinora and zoopraxiscope). Later images were recorded sequentially on rolls of film, resulting in the invention of cinematography.

Chronophotography moved the application of photography from its previous functions within science – such as the recording of objects too distant (astronomical) or too small (microscopic) – to an altogether different, temporal, level of disclosure. Figure 30, Etienne-Jules Marey, *Chronophotographic Studies of Air Movements* (1901), shows

⁸² The term is taken from the title of *Still/moving: between cinema and photography* (Beckman & Ma, 2008)

⁸³ See *Revelations* (Burbridge et al 2015) for an account of this field from 1840s to the 2010s

Marey's image of smoke plumes revealing air currents in what we would now term a wind tunnel. In this image the previously invisible dynamics of the air's flow were now visible and measurable, so that comparisons could be made between different models. Through indicators of movement (such as smoke, lights or reflectors) chronophotography showed movements that cannot be seen with the unaided eye; as such it was entirely within the scope of Benjamin's 'optical unconscious'.

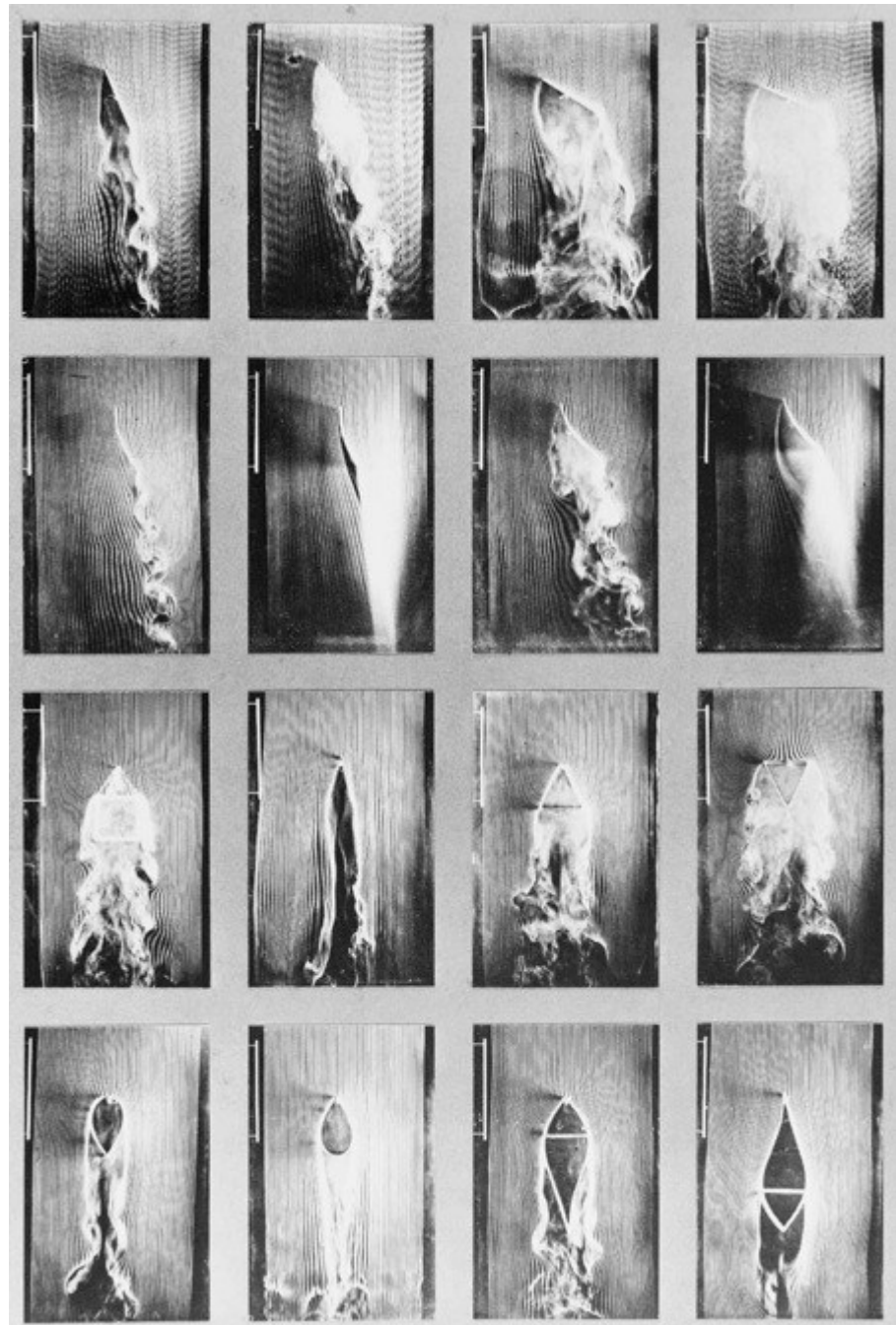


Figure 30: Etienne-Jules Marey, *Chronophotographic Studies of Air Movements* from *La Nature* (1901)
[out of copyright]

This field highlights how the medium of photography straddles the divide between art and science making the location of any particular field of photography difficult: as

Allan Sekula once wrote, photographic history has always been ‘haunted by two chattering ghosts: that of bourgeois science and that of bourgeois art’ (Stimson 2014, p 202). To this day the educational charity The Royal Photographic Society’s mission is stated as being ‘to promote both the art and science of photography’, which emphasises both the breadth of the medium and the paradox of serving those disparate branches of endeavour. Chronophotography was intended to use photography in the service of science, but its impact influenced art, as I shall show, leading to a new appreciation of movement and time. It is photography, at this divergence in technology and perception of both movement and time, which I wish to explore, as contextual research to understand the processes involved and their perception by the viewer. The methodology of its principal protagonist, Etienne-Jules Marey – experimental, empirical and non-commercial – has also been a strong influence on my own methodology (by contrast with his better known contemporary Edward James Muybridge).

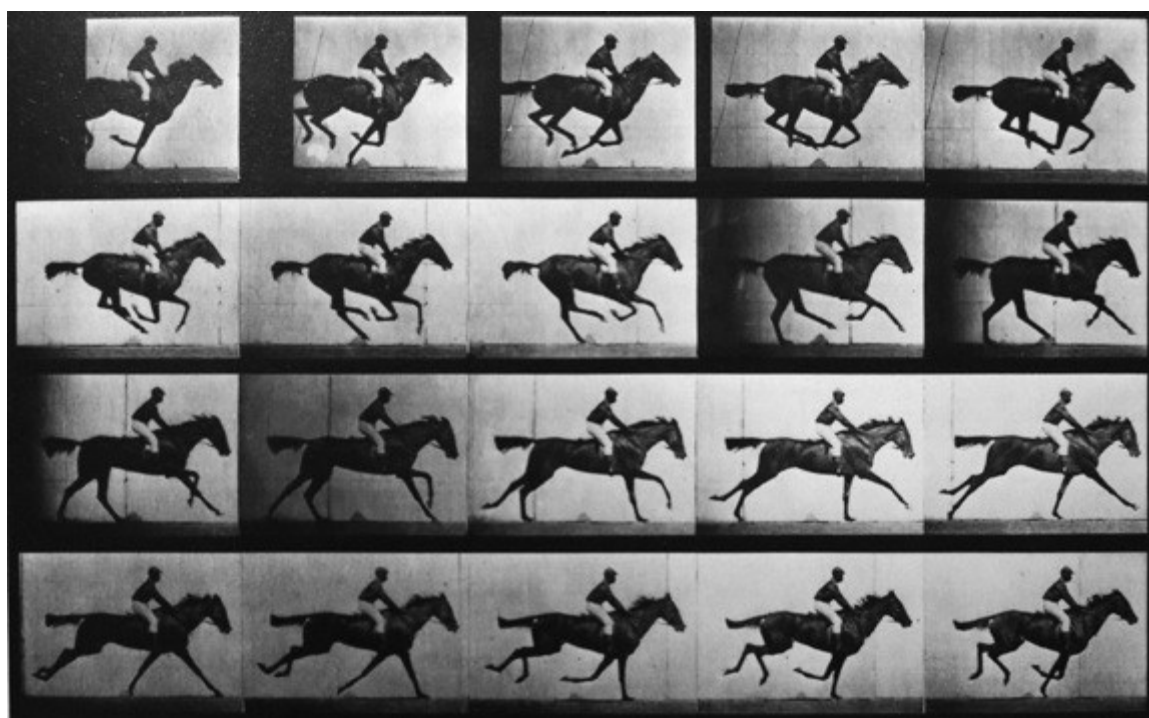


Figure 31: E. J. Muybridge, *Jockey on a Galloping Horse* (1887)

[out of copyright]

The Frozen Moment

Before exploring the effect of producing and viewing sequential images, I must recognise a component of most chronophotographic images, which is that they are composed of many (relatively) sharp images, capturing moments within trajectories of movement. The physical and chemical advances that allowed brief exposures to arrest motion with clarity

were significant and essential components of chronophotography: a revelation that ‘further separated photography from drawing and painting’ (Wingham 2012, p 257). Although other photographers had achieved motion-stopping brief exposures by employing faster emulsions on the camera’s wet plate (Brookman and Braun 2010, pp 136-7), it was the invention of electrically fired, mechanical shutters that solved the problem of achieving exposures that were short enough to capture a galloping horse.⁸⁴ Exposures were previously timed by removing and then replacing the lens cap, or made (in the dark) by use of lightning or sparks.⁸⁵ Such ‘instantaneous’ exposures came to prominence through Muybridge’s celebrated images of horses galloping, where each exposure was captured in ‘the range of a thousandth of a second’ (Brookman and Braun 2010, pp 138-9), Figure 31, E. J. Muybridge, *Jockey on a Galloping Horse* (1887). This motion-stopping ability is a feature of images depicting movement that is easily overlooked. The ‘frozen’ instant may appear paradoxically static, yet the positions of activity stilled in this way are entirely improbable unless viewed as a brief moment *during* movement: Figure 32, Jacques Henri Lartigue, *Cousin Bichonnade in flight* (1905). Ivana Wingham sees this property of photography as being one denied to drawing, not ‘capable of arresting fragments of the world seen like this, [...] to fix the quintessence of movement (Wingham 2012, p 257).

<http://www.bbc.co.uk/photography/genius/gallery/lartigue.shtml>

Figure 32: Jacques Henri Lartigue, *Cousin Bichonnade in flight* (1905)

I debated with the length of shutter speeds to choose in my own practice: sharp images convey more information (although perhaps making people *too* identifiable⁸⁶), yet blurred images convey a sense of motion and direction. In Figure 33, *Merseyway*, Stockport (both 2013), the left-hand image shows the effect of a relatively short exposure that allows the people to appear slightly blurred, but with little sense of direction. In the right-hand image the longer exposure exhibits greater blurring, giving a better indication of the direction of flow, but appears so feint and abstracted as to draw attention from the buildings. In Figures 34 and 35, the raised viewpoint I chose used the floor as a background to allow the longer exposures to register with fewer distractions. The top image has a shutter speed of one second and the lower a duration of two seconds. Even

⁸⁴ Muybridge claimed this invention, but it was later credited to Muybridge’s engineer John D. Isaacs (ibid).

⁸⁵ Spark photography froze movement in small-scale experiments: Arthur M. Worthington’s series *Instantaneous Photographs of Splashes* (1900) and Arthur C. Banfield’s *The Life History of a Splash* (1903).

⁸⁶ Due to ethical considerations.

at two seconds the individual steps are still visible and their repetition appears similar to the multiple exposures of chronophotography. The additional blurring between steps forms a continuous trace showing direction and – as it is measurable – the distance covered in the specified time. A balance between the short exposures with little blur, repeated exposures and long exposures showing fewer individuals is required, as these early pioneers established. Writing of Marey's accumulated exposures on one plate, Dagognet analysed that 'camera and technique had to find a place between fusion and fragmentation' (Dagognet 1992, p 100).



Figure 33: D Trillo, *Merseyway, Stockport*: half a second (left) and two seconds (right) (2013)



Figures 34 and 35: D Trillo, *Piccadilly Station, Manchester*: one second (top) and two seconds (bottom) (2017)

Dual histories

Chronophotography is still an under-researched category of photography that has been highlighted as revelatory in its early forms, but until recently was not contextualised to show the depth and breadth of its protagonists' research and its far-reaching influences. American histories of photography have championed Eadweard Muybridge's work in

America,⁸⁷ ignoring the range of contemporary accounts (from Marcel Duchamp's paintings to the Wright brothers' first flight) that acknowledged other practitioners, those who had rejected Muybridge's methods. Before the 1990s literature on chronophotography was limited to historical accounts⁸⁸ that acknowledged practitioners and drew a direct line from this practice to the invention of cinema. This limited view is still being published: as recently as 2003 Rebecca Solnit's *Motion studies: Eadweard Muybridge and the technological Wild West* (Solnit 2003) lauded Muybridge as scientist, inventor of cinematography and the man 'who split the second, as dramatic and far-reaching an action as the splitting of the atom'. Other recent publications take a different view, as I will show later.

After Leland Stanford⁸⁹ read Marey's book *Animal Mechanism* (Brookman and Braun 2010, p 133) he commissioned Muybridge to settle a wager as to whether horses raise all their hooves off the ground at any point when galloping [Figure 31]. Muybridge opted to use a row of cameras, fired by the horse passing through trip-wires. The results led to Muybridge being feted in America and later in Paris, where he presented his work to the scientific community (including Marey). Upon further investigation Marey and other scientists were dissatisfied with Muybridge's methods and his attitude to evidential representation. Marey soon dismissed Muybridge's multiple camera set-ups. Using a modified version of astronomer Pierre-Cesar Jules Janssen's photographic 'gun', he captured sequences of birds in flight (twelve images per second on a rotating plate exposed for 1/720th of a second each) (Braun and Marey 1992, p 55).⁹⁰ As early as 1882 Marey started taking multiple exposures on a single, fixed plate with a regularly firing shutter (McKernan 2004, p 2): Figure 36, Etienne-Jules Marey *Saut à la Perche* (circa 1890). The advantages over Muybridge's battery of cameras were that it had 'a single point of view and equal, as well as verifiable, intervals of time [with] continuous registration on a single plate (Braun and Marey 1992, p 61). The fixed camera position allowed the background scale to measure distances traversed in the set period between exposures, thereby measuring (changing) speed at each exposure interval. Measuring people's speed in the real-world situations of my practice – unlike the chronophotographers' studio conditions – would be impractical. For the same reason as

⁸⁷ Born Eadweard James Muybridge in Kingston-upon-Thames, England as Edward James Muggerridge, reinventing himself when he immigrated to America circa 1850, changing names at least three more times.

⁸⁸ See, for example, Muybridge and Taft (1955), MacDonnell (1972) or Hendricks (1975).

⁸⁹ He was a newspaper magnate, racehorse owner and later Governor of California and University founder.

⁹⁰ Marey's colleague Janssen invented this camera to record the transit of Venus across the sun in 1874.

the (later) chronophotographers I have settled on a fixed camera point, to correlate each person's movement with the building and with every other person.⁹¹

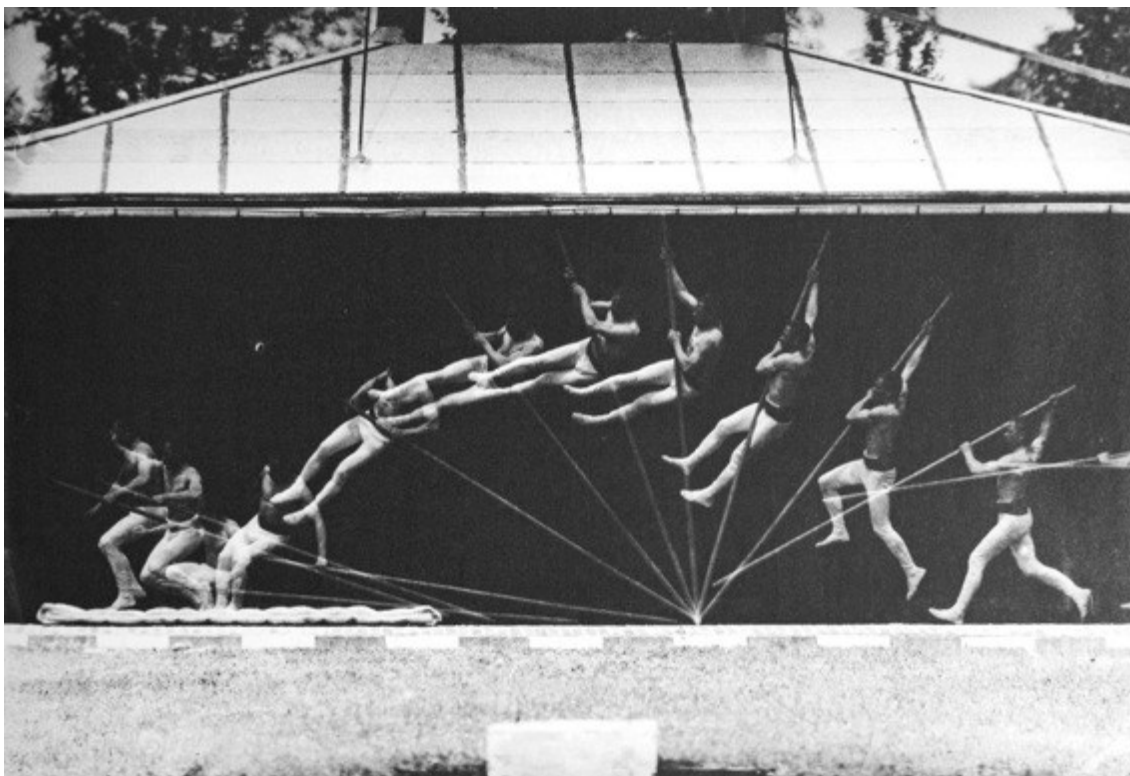


Figure 36: Etienne-Jules Marey, *Saut à la Perche* (circa 1890)
[out of copyright]

This period of experimentation in the history of photography has proved a fertile ground for my practice: in Figures 37 (P) *Benzie Building (after Marey)*, MMU (2017) and 38 (P), *Park Hill Flats (after Marey)*, Sheffield (2015), multiple images of the same people aggregated in post-production form similar sequences to those seen in early chronophotography. Although the flow lines are clear in both images, the first appears unnatural to most viewers, as the figure(s) seem real, yet duplicated. In the second the flow lines are again established, but the transparency of the images indicates that this is not a straightforward shot of a row of similarly dressed couples. The manipulation creates 'signposts' to the viewer that this is a construction, an alternative to a straightforward shot. In each image the number of repeated figures preclude the addition of other people along the same path, thus limiting the accumulation of a variety of subjects to establish a greater sample size of the flow. In later practice I use more people in the images, with less exposures per person.

⁹¹ Except for my collages, where the individual frames serve the same purpose.

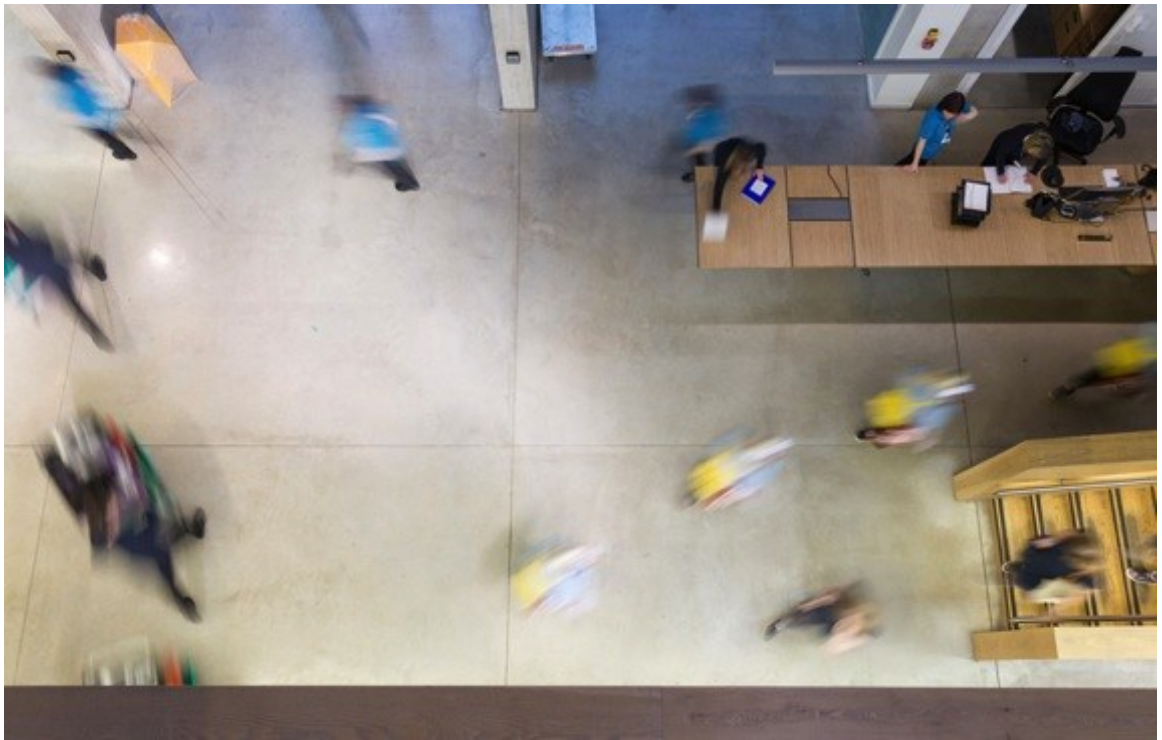


Figure 37: (P) D Trillo, *Benzie Building (after Marey)*, MMU (2017) 11 exposures, 09/11/2017 16:06 –16:07



Figure 38: (P) D Trillo, *Park Hill Flats (after Marey)*, Sheffield, (2015) 21 exposures, 14/10/2015 15:43 – 15:44

Marta Braun harshly dismisses Muybridge for his failings: for example the erratic spacing of images, the cameras not being synchronised to photograph at precise intervals and the graphing lines added to backgrounds (to engender a scientific appearance) could not be utilised by a multiple-camera system (Brookman and Braun 2010, p 173). As Braun herself points out, Muybridge was ‘an artist whose roots in the pictorial traditions of his

day conditioned the way he used his camera' (Braun and Marey 1992, p xvi). He invented a system that captured multiple exposures of (relatively) sharp images of fast-moving subjects, which illustrated component parts of movements previously too fleeting for the eye and brain to perceive. Braun further concedes that regardless of his efforts being unscientific, 'they [were] still the most convincing illusion of natural movement that had hitherto been achieved' (Braun and Marey 1992, pp 251-2). The primacy of establishing precedence must be acknowledged. As such Muybridge's work opened the possibilities to de-construct movement and to analyse it through photography.

In the 1880s Muybridge convinced the University of Pennsylvania to fund further work, but these commissions were not sustained, as his methods were questionable: primarily aimed at aesthetic and sensationalist imagery. Sequences included *Chickens Scared by a Torpedo* (1887), [a naked] *Woman Spanking a Child* (1887) and *Nude woman pouring water over another nude woman in bath* (circa 1888). Many of these were published in Muybridge's multi-volume book *Animal Locomotion; an Electro-Photographic Investigation of Consecutive Phases of Animals Movements* (1887). Erin Duganne has concluded that Muybridge's motives were more concerned with 'white desire' and fantasy than with the discipline of science' (Duganne 2015, p 99). Therefore the point of departure I take from Muybridge's influence comes relatively early in the history of chronophotography. Although I am not claiming strict scientific method for my work, it does adhere to evidential rigour, and the integrity of the results rely on controlled methods that allow direct comparisons between images and component parts within those images.

A scientific approach

The shift in perspective on the histories of chronophotography occurred with successive publications in 1992. Although Michel Frizot had published two exhibition catalogues: *Etienne-Jules Marey: La Photographie du mouvement* (Frizot 1977) and *Chronophotographie* (Frizot and Marey 1984), these were in French text only. As was François Dagognet's *Etienne-Jules Marey: a passion for the trace* (Dagognet, 1987, [Éditions Hazan]). It was the first English translation of Dagognet's book (Dagognet 1992) that opened chronophotography's influence to wider debate. In the same year Marta Braun's extensively researched *Picturing time: the work of Etienne-Jules Marey* was published (Braun and Marey 1992). Braun contextualized chronophotography by accessing contemporary accounts that, for the first time, included Marey's own papers

and letters. Dagognet, as a philosopher of science, had a markedly different approach to archivist and historian Braun, but the two accounts complement each other well, producing a comprehensive appraisal of Marey's work and influence.

In Marey's early research he invented graphing equipment: pioneering the measuring and recording of heartbeats, pulses and breathing patterns. The 'graphing inscriptors' did not make images of 'the movements they were tracing; rather, they furnished Marey with a fluid [,] visual expression for time and motion' (Braun and Marey 1992, p 61), albeit only as lines on graphs. Adopting and developing chronophotography, his work evolved into broader physiological enquiry, attempting to 'schematise, or develop visual algorithms, for the perception of human locomotion' (Stimson 2014, p 203).⁹² To summarise Marey's methodology – to observe, record and synopsis information – Stimson quotes philosopher of science Pierre M. M. Duhem who wrote that 'such a condensation ... in a small number of principles is an immense relief for the human mind which would not be able, without such an artifice, to store up the new riches that it conquers everyday' (Stimson 2014, p 203). With Marey's development of chronophotography, this information was simultaneously recorded by a medium whose appearance (unlike graphs) was accessible to the layperson. There is a continuous route from this work (via many others) that leads to the practice elements of this thesis: in particular the tracing of movement and the condensation of actions into a summation of information. This enables the summarising nature of a simple graph's single line, representing a collection of data, but through the more easily read medium of photography.

The ways in which chronophotography developed in the unrelenting quest for knowledge by Etienne-Jules Marey (amongst others⁹³) is a prime example of the breadth and depth of achievements that could be accrued by researching animals' movements (examples as diverse as insects, fish, birds, elephants and humans), with the sole aim of the advancement of knowledge. The use of experimentation, if not 'scientific' then at least evidential, is a method stretching the ideas and influences of the practitioner. As Moholy-Nagy advocated 'the enemy of photography is convention. [...] The salvation of photography comes from the experiment' (Albright 2017).

Developments attributed directly to Marey range across diverse fields. Although his inventions went on to found whole industries, commercial applications were not

⁹² Although Marey's later research was not limited to human subjects.

⁹³ Although Marey was the major practitioner, others to be acknowledged here include Pierre-Jules-César Janssen, Ottomar Anschütz, Albert Londe, Thomas Eakins and William Friese Greene. For a comprehensive account (in French text only) see Frizot (1984)

pursued. These included the start of propelled aviation: Marey was a 'crucial exponent of recording [animal] flight' (McKernan 2004, p 1), acknowledged as primary influence on design by the Wright brothers, who had consulted Marey's book *Le Vol des Oiseaux* (1890) (McKernan 2004, p 4). Marey researched exercise regimes to study the forces at work and the relative efficiency of each movement. The results were applied to physical training for athletes and soldiers: the foundation of today's sports science, Figure 39, Frank and Lillian Gilbreth *Untitled* (circa 1916). In manufacturing industries his ergonomic measurement and recording later became the 'time and motion' studies that revolutionised productivity in factories. Frank and Lillian Gilbreth applied Marey's photographic techniques to F. W. Taylor's research into workers' productivity, using lights attached to workers' bodies (they never acknowledged Marey). The 'cinematic' camera that Marey created produced 'the earliest filmed images of movement ever seen in public' (Braun and Marey 1992, p 151), which led directly to the Lumière brothers' cinematographe: Marey's assistant, Georges Demeny, sold evidence of Marey's research to the Lumière brothers via Léon Gaumont (McKernan 2004, pp 2-3). Marey rejected cinema because 'what they [moving photographs replayed at actual speed] show, the eye could have seen directly ...the true character of a scientific method is to supplement the shortcomings of our senses and correct them' (quoted in Dagonnet 1992, p 157). It was the information that photography (still or moving) could reveal that drove Marey's research: the *replication* of experience held no interest⁹⁴ Each of these examples illustrates the diversity of applications that could be achieved through chronophotography, many by disclosing the 'optical unconscious'.

Throughout his career Marey's research was funded solely by the Collège de France, which made his findings public. Other scientists adopted these methods and a cross-fertilisation of ideas was available for the research community (Frizot and Marey 1984). The divergence between the scientific and commercial spheres: their methods, ethics and the resultant advancement of knowledge may appear to be merely a historical footnote, yet the essence of these factors is as applicable to the chronophotography of the nineteenth century as it is to my own practice today.

<http://americanhistory.si.edu/ontime/saving/images/enlargements/89-14251.html> and https://www.researchgate.net/figure/Frank-Gilbreth-Chronocyclograph-Efficiency-Studies-19081924_fig14_319179971

Figure 39: Frank and Lillian Gilbreth, both images *untitled* (both circa 1916)

⁹⁴ Although the recording of experiments for later analysis and dissemination has proved invaluable to scientific research.

Still photography supplementing experience

Tom Gunning wrote that chronophotography's influence went far beyond the direct inventions, that 'through chronophotography the invisible was rendered visible and analysable, measurable – a triumph for positivism in recording previously invisible processes' (Gunning 1993, p 44). This reinforces Dagognet's claim that Marey was dominant in 'the modernisation of perception' (Dagognet 1992, p 152). Gunning concludes that 'Marey's major impetus in all his work came from a suspicion about the evidence of human perception' (Gunning 1993, p 44), as Marey recognised human sight was both fallible and subjective. That human perception is similarly limited and fallible is widely acknowledged, yet we still persist in valuing 'seeing as believing': the primacy of witnessing events and phenomena for ourselves. In the nineteenth century, before new ways of revealing knowledge was as prevalent as it is today, chronophotography was evidence made visible, via photography. This reliance on sight is also reflected in the indexicality of 'photographic truth', which I examined in chapter two. That perception of the 'evidence', of photography – including my own – is questioned throughout this thesis, as my practice negotiates its acceptance with the viewer's perception. Marey's influence inspired others to appropriate concepts and ideas within their own work, as part of the new concepts of time and motion engendered during the late nineteenth and early twentieth centuries, that I explored in chapter one.

The term 'chronophotography' implies photography allied to timing and as such it can be misconstrued as a simple process of measurement. Molly Nesbit suggests that Marta Braun 'favours 'time' as Marey's problem' (Nesbit 1995, p 149), but I disagree that this was the essence of his endeavours. It was the revelation of the *manifestation* of time: the change in spatial distance over time, its direction, speed and rhythms, which was Marey's objective. For Marey was 'intrigued by the analysis of motion, not its synthesis. The scientific breaking down of motion into its phases with a clear sense of trajectory and duration was his achievement' (Gunning 1993, p 44). My own practice has a less quantitative approach, yet the practices still employ similar methods, producing (visually) similar results. The principles of using photography as a tool for discovery - for both description *and* detection - guided later chronophotography and in turn (and for the same reasons) were a principle of my methodology. These experiments used photography to reveal what the unaided eye cannot see: to slow down and/or break down brief, or fast movement, or to accumulate movements over an extended period, that could be aggregated together through compositions or collages. Greg Hobson

describes this as ‘photography’s ability to give form to the intangible’ (Burbridge, Hobson et al. 2015, p 7)

My stated aim is to represent architecture – as a relatively permanent entity – by the accumulation of images over an extended period of time. This allows a more representative sample of the activity within a space than a single exposure could. This is also the property that is missing from the brief exposures typical of commercial architectural photography. The experience of architecture is rarely such a brief one: perhaps a glance out of the window of a passing train, or car would be the closest equivalent to the time-scale of a conventional photograph. Human experience of architecture is normally closer to an amassing of small encounters over a prolonged period.⁹⁵ The de-construction of movement into separate, fleeting moments and their accrual echoes this vision and the methods of chronophotographers who used similar means to analyse and summarise movement: sequence, blur, direction and flow. For Marey ‘overlapping forms effectively destroy the Renaissance canon of a single frame – single time space continuum [...using photography] to devise a visual expression for movement as it occurs along the double axis of time and space’ (Braun and Marey 1992, p 254).⁹⁶ It is this continuum of time in spaces that is conventionally thought of as linear, and measured as such, despite our reliance on non-linear memories of past experiences.

The impact of chronophotography and the extent of its legacy were wide reaching, well beyond their scientific applications. Tom Gunning reviewed both Braun and Dagognet’s books, concluding that ‘as the recent reinvestigation of the history of early cinema begins to broaden out into a new understanding of the foundations of modernity, these books reveal a key figure in the changes of perception and representation that mark the turn of the twentieth century’ (Gunning 1993, p 44). Marey’s later years coincided with radical new thoughts and perceptions of the human relationship with time and movement, after the industrial revolution and at the start of the modern city.

Influencing art

The field of art was an especially fertile ground for the interest and experimentation that chronophotography engendered. Movements such as the Futurists strove for the ‘language and tools of kineticism: the rejection of still photography and inert representation, with the false realism of its motionless details’ (Dagognet 1992, p 148)

⁹⁵ See page 150 for an account of the eye’s roving movements, jumping from one detail to another (saccadic vision), and the accumulative nature of the construction of our sight.

⁹⁶ Although the Renaissance artists’ single point perspective is retained.

Although F. T. Marinetti's Futurist Manifesto was published after Marey's death (1904) in 1909, Giulio Bragaglia was inspired by Marey's images to create his 'Trajectories' or 'Chronodynamisms', which in turn influenced Giacomo Balla (who drew and painted birds in flight).⁹⁷ A clear visual link can be drawn between chronophotography and Futurist paintings in their pursuit of representations of the 'double cult of machines and their propulsion' (Dagognet 1992, paraphrased from p 148), such as Figure 40, Natalia Goncharova, *Cyclist* (1913), where the simulation of motion is shown by overlapping, partial images.



Figure 40: Natalia Goncharova, *Cyclist* (1913)
Public domain, courtesy of The Russian Museum, St. Petersburg

The streaks and blurs of chronophotography are also evident in Figure 41, Giacomo Balla, *Dynamism of a Dog on a Leash* (1912), that are recognisable today to anyone who has photographed movement using slow shutter speeds. Dagognet quotes examples of Futurism to illustrate the 'position of Mareyism within the revolution in the plastic arts, which it partly provoked' (ibid), but Tom Gunning sees the key to Marey's influence in art as

the philosophy of Henri Bergson, who actually attacked the photography of motion as a distortion of our intuitive experience of duration. However, the spectral streaks of motion Marey produced became for the Futurists and other

⁹⁷ One of Marey's recurring experiments.

modernists a visual emblem of the temporal experience [that] Bergson described (Gunning 1993, p 45).

<https://www.britannica.com/topic/Dynamism-of-a-Dog-on-a-Leash>

Figure 41: Giacomo Balla, *Dynamism of a Dog on a Leash* (1912)

I have already suggested the importance to artists of the links between Bergson and Marey, as indicated by Marta Braun and others (Gunning 1993, p 45)⁹⁸, as well as Bergson's critique of the 'illusion' of cinema in *Creative Evolution* of 1907 (Bergson 1984, see pp 272-340).⁹⁹ Despite inspiring artists (particularly Futurists and Cubists) with the 'ambition to transform the image through a new consideration of motion', Bergson seemed to denounce cinema (Gunning 2014, p 5). As Gunning concludes 'the mechanism of cinema and its frozen frames of movement had supplied Bergson with a vivid analogy that illustrated how movement could be misconceived as a transition along a series of static points, an accumulation of static frames rather than a continuous sweep of consciousness. [Therefore] he condemned a view of motion that cinema could represent [as duration] *rather than the new medium itself*' (Gunning 2014, p 6).¹⁰⁰

Chronophotography (and later cinema) did not produce or record Bergsonian duration: however, I would argue that they simulated it in the perception of the viewer, becoming sufficiently visually persuasive to *represent* Bergson's concepts for these artists. As early as the 1890s Georges Seurat painted dancers and singers whose 'bodies were overlaid in dynamic laminates' (Braun and Marey 1992, p 272).¹⁰¹ Marcel Duchamp had read Marey and knew him directly as Duchamp's brother (Raymond Duchamp-Villon) worked for Marey's assistant Albert Londe (Dagognet 1992, p 149). By 1912 Duchamp had produced Figure 42, *Nude Descending a Staircase, No. 2* (1912). The painting's figure, dressed in dark clothing, with bright lines and arcs of circles on limbs and joints respectively, echoes Marey's photographs, for example Figure 43, Etienne-Jules Marey, *Saut en Longueur et Course, chronophotographie geometrique* (circa 1886).

<https://www.philamuseum.org/collections/permanent/51449.html>

Figure 42: Marcel Duchamp, *Nude Descending a Staircase, No. 2* (1912)

⁹⁸ Bergson and Marey were colleagues at the College de France for four years, curtailed by Marey's death.

⁹⁹ Although a keen supporter of early cinema, for Bergson this was proof of the chasm between the perception of duration (and implicitly of movement) and the way that it was only a perception of a fabricated misrepresentation.

¹⁰⁰ My emphasis.

¹⁰¹ Georges Seurat, *Chahut* (1889-90).

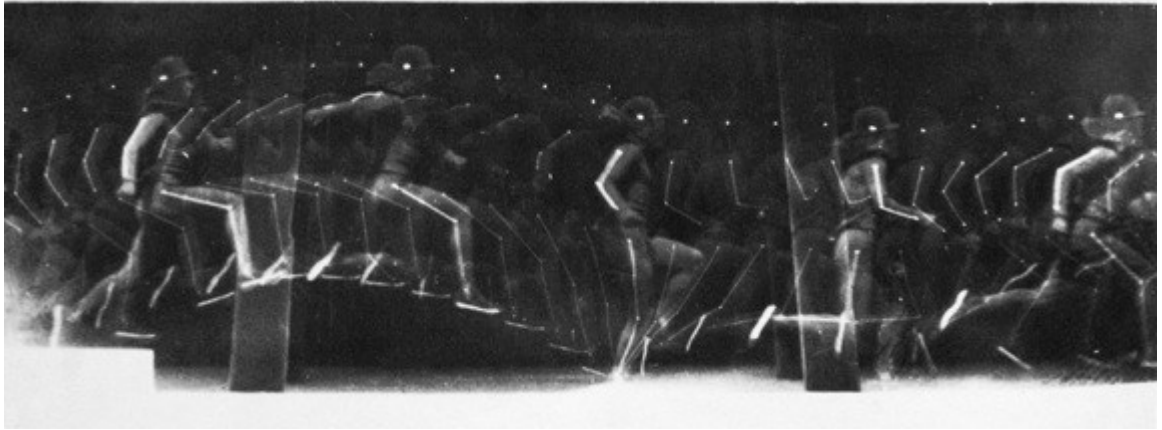


Figure 43: Etienne-Jules Marey, *Saut en Longueur et Course, chronophotographie geometrique* (circa 1886)
[out of copyright]

John Stezaker concludes from Marcel Duchamp's statements and titles that he saw his 'ready-mades' as 'interruptions within the momentum of everyday encounter', referring to them as 'arrests', analogous to 'snapshots' (Stezaker 2006, p 122), thus reinforcing their links to photography. Duchamp's earlier paintings 'adapt Marey's cinematographic imagery to the representation of the temporal dimension of everyday life, [suggesting] a metaphorical connection between these two experiences of momentum: cinema and the everyday' (Stezaker 2006, p 122).¹⁰² This idea resonates with the connections I drew between cinema and the vitality of the modern city in chapter one.

¹⁰² Although perhaps 'cinematic' would be a better term, as it is drawn from Marey's pre-cinema imagery.



Figure 44: Georges Demenÿ *Movement of a Boxer* (1890)
[out of copyright]

The concepts and techniques utilised in chronophotography – for example Marey’s multiple exposures on a single frame, or the blur between exposures of Demenÿ’s boxer, Figure 44, Georges Demenÿ *Movement of a Boxer* (1890) – are explored within my practice, in combination with other techniques, as analysed in the next two chapters. The possible permutations of concepts, techniques and viewpoints are summarised in two tables in the appendices: Table One is an analysis of the effect of the camera’s viewpoints and angles, while Table Two is an analysis of techniques for representing movement in still images.

The turn of animation: the temporality of static images

Challenging the notion of what is categorised as 'stills' photography further questions traditional definitions of photography as capturing a brief moment in time. Reappraising such definitions, and exploring alternatives, provides the context for the 'compression of time' within my practice, allowing me to address the question of where my practice lies on the indistinct boundary between still and moving images.

Animation is cinema’s 'paradox of mechanical motion' (Gunning 1993, p 45), the de-construction of movement and its subsequent re-construction into the *perception* of

movement.¹⁰³ My practice relies on fleeting moments that are captured, collected, edited, accumulated, then re-presented to attempt to convey the perception of movement and temporality, but without the animation of cinema's subliminal effect. Films, like photographs, are 'inscribed in advance'. Despite the outcome of a film being known,¹⁰⁴ by comparison with photography it has something I cannot reproduce, whatever my practice entails: cinema's 'promise of an unforeseen future' (Gunning 2014, p 7). This is the feeling that something, anything, *could* happen, even if you know it does not.

While it may be possible to *imply* temporality, movement and even 'flow' in still photography, viewers of cinema can imagine the future as it unfolds, right up to the closing credits. Cinema's visualisation unfolds over time, in a state of constant change. For Stezaker, 'what is at stake in the stillness of the image is the freedom of vision to mobilise itself in and beyond the image' (Stezaker 2006, p 125). The difference between single, static photographs and those with implied movement may be the opening up of a space between multiple exposures that leads the viewer to (attempt to) fill in those gaps, to envisage the states between one and another, then to project this onto an imagined trajectory of what they imagine the images indicate.

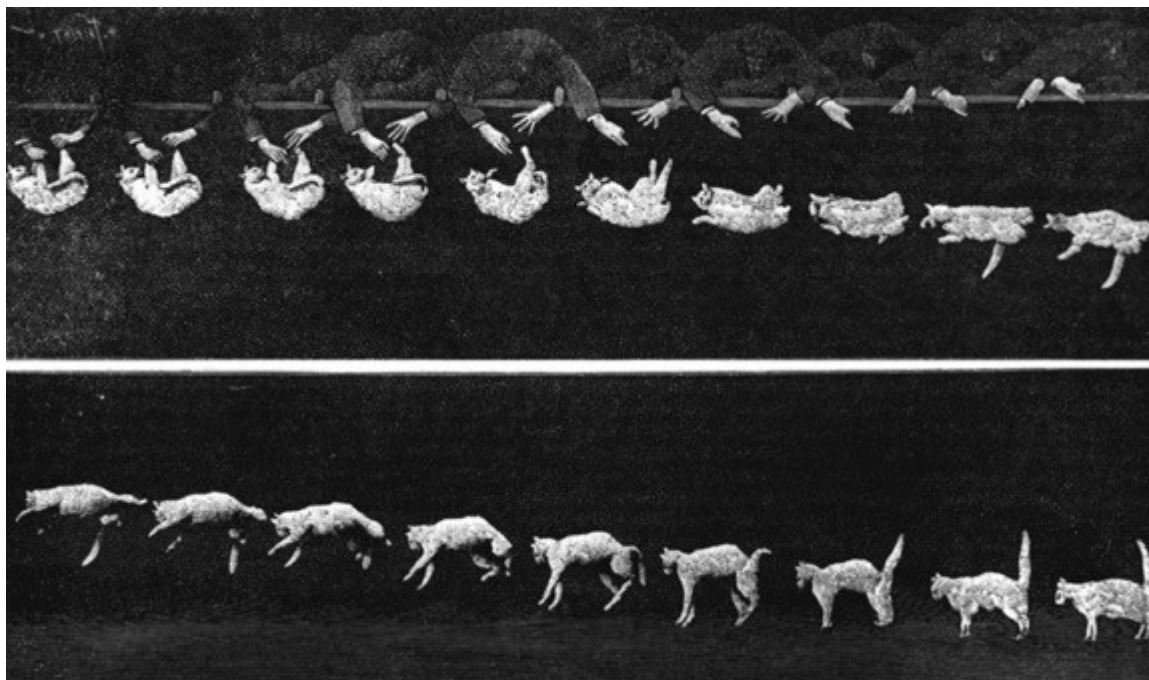


Figure 45: Etienne-Jules Marey, *Falling Cat* (1894)
[out of copyright]

¹⁰³ Gunning cautiously chooses 'perception' as opposed to the more pejorative term 'illusion'.

¹⁰⁴ At least after the first viewing.

The gaps (in time) between cinematic frames, perceived as continuous, can similarly be suggestive of motion between consecutive still images: as in the series of individual frames seen in early chronophotography sequences, Figure 45, Etienne-Jules Marey, *Falling Cat* (1894).

As we have seen, the still image can be perceived to be 'movement', due to blurring, motion lines (from lights or reflected highlights), the impossibility of action that is frozen in space, or closely sequenced multiple images. This effect of a 'moving' still image has been shown to invoke a similar response in the viewer to that produced by a 'moving' video image. Working to rehabilitate stroke victims psychologist Zoe Kourtzi found close correlations between brain impulses resulting from viewing the 'stills', compared to a video of movement in the same scene (Kourtzi and Kanwisher 2000) (Kourtzi 2004) (Kourtzi, Krekelberg et al. 2008).¹⁰⁵ These results support the view that viewers see the blur of subjects in still images as moving, despite (normally) being fully conscious that the images are static. This perception suggests possibilities for the acceptance of still images as significantly more than static entities, as more than cinema's 'poor relation' in terms of the depiction of movement.

If a property of photography to imply, to suggest, to trigger memories is acknowledged, then why not also to imply or invoke the memory of movement?¹⁰⁶ Movement is after all *suggested* in other static media: the Futurist paintings of Giacomo Balla, Tullio Crali, Natalia Goncharova et al, George Grosz's paintings, Marcel Duchamp's descending nudes, the drawings by Roy Lichtenstein based on Carlo Carra's Futurist paintings, cartoonist's 'speed' lines or sculptures, such as Figure 46, Umberto Boccioni, *Unique Forms of Continuity in Space* (1913).

¹⁰⁵ The sight of moving people was found to accelerate recovery of motor faculties, as did still images depicting movement.

¹⁰⁶ For overviews of temporal aspects of photography see *Art and Time* Rawson and Rawson (2005) and *Time and photography* Jan Baetens, et al (2010)



Figure 46: Umberto Boccioni, *Unique Forms of Continuity in Space* (1913)

[out of copyright]

Tracing motion through an accumulation of separate subjects: plural temporalities

I have illustrated a chronophotographic method to expose single frames for an extended period, creating multiple exposures via multiple shutter openings, as demonstrated in many of Marey's images. Later technology facilitated multiple flash exposures while the shutter remains open, as produced by Harold Edgerton [Figure 47].

<http://edgerton-digital-collections.org/techniques/multiflash>

Figure 47: Harold Edgerton, *Gussie Moran's serve* (1949)

Edgerton's use of high-speed flash, with electronic triggering and synchronisation, lead to a far greater understanding of actions of extremely short durations.¹⁰⁷ Edgerton's exposures were not of similar time-scales to the use of architecture that I am pursuing: it is the compression of time to bring an extended period into focus that is of more interest than analysing an individual's brief movements. Figure 48 (P) D Trillo, *Every passing plane in Twenty-five minutes, (10:50–11:15, 24/08/2016)*, Fred Perry House, Stockport shows an

¹⁰⁷ Previously these relied upon the unreliable illumination by sparks in a darkened laboratory.

accumulation of multiple instances of movement (separate planes on separate flights), whereas Figure 47 records multiple instances of one subject's movement. The latter technique shares the same drawback as the tracing of lights mentioned earlier: they have to be shot against a dark background, with low levels of ambient light, neither of which are normally practicable methods in real world scenarios.



Figure 48: (P) D Trillo, Every passing plane in Twenty-five minutes, Fred Perry House, Stockport
8 exposures 24/08/2016 10:50-11:15

Figure 48 (P) illustrates that it is possible to show an accumulation of traffic – road, pedestrian and aircraft – compressed from a relatively long period of time, in daylight. More than any other of the practice images in this thesis, this is the one that appears ‘impossible’ to be an instantaneous image, captured and reproduced in the

conventional manner. It is a standard architectural image of the main building on view, yet it also has an uncanny quality that sets it apart. While few may question the number or positioning of traffic (vehicular or human) in other images (or indeed in this one), this image uses the same techniques of accumulation, while also overtly appearing constructed. This image marks a division between the conceptual nature of the practice – the digital constructions used to create them while appearing ‘normal’ – and the overt indication of my methods that show the principles of that practice (temporal, populated scenes).

The notion of a lingering memory of vision, or ‘persistence of vision’ has been used to explain the animation effect.¹⁰⁸ Perhaps contributing to this effect is the *anticipation* of movement; its suggestion of what comes next. This duality of implying present and future is what Bergson and Husserl termed ‘the thickened present’: a ‘continuous flux, a succession of states each of which announces that which follows and contains that which precedes it’ (Braun and Marey 1992, p xx). Harry Harootunian posited this in a visual form, one that acted as ‘the stage for a constant enactment of the past in the present. [...] A present filled with traces of different moments and temporalities, weighted with sediments’ (Harootunian 2007, p 476). This concept allows for overlapping between separate constituents. Husserl proposed the analogy of musical notes, not as discrete entities as they appear when written on a score, but as interrelating successive notes: our memory retains the previous notes, we hear the current, possibly before its predecessor has faded and, if we know the melody, we can anticipate the following notes (Harootunian 2007, p 477).

Stillness, as the immobile moment of photography, plays a major part in photography’s theoretical discourse, especially from Roland Barthes’ *Camera Lucida* onwards (Barthes 1993 [1st edn. 1980]). Analyses of the differing temporalities of still and moving ‘clouded how photography represents reality, or [...] intercepts it, disrupting our common-sense understanding of the relationship between past and present, stopping the flow of time and holding it in an uncanny stillness for years on end, revealing to us a present without a future’ (Lowry 2006, p 65). The label of a ‘frozen past’ no longer binds photography, as later research develops a more holistic view. The duality of the stopping of time is illustrated by Figure 32, where Lartigue arrests his cousin’s present/presence in mid-flight: by capturing her in Edwardian-era fashions he has also locked the figure in a past, beyond our present. A plurality of temporalities is further illustrated in the image(s)

¹⁰⁸ Persistence of vision is explained (loosely) as the brain’s ability to ‘retain’ an image on the retina for an instant after the object has moved. See Braun and Marey, 1992, p 28.

in Figure 48, which shows a view of Fred Perry House (Ingenium architects 2010), where planes passing overhead, stopped in mid-flight, give the appearance of being unfeasibly static. They are simultaneously frozen in time at the date given for the photograph. As a composite image discrete compartments of time – showing planes, people and traffic – are selected and later compressed together from across the time span stated in the photograph's title. The start and end times of this period delineate the duration of the event of the image's capture, which will not alter for the photograph's life span. Thus in one image we can see three different notions of this photograph's temporality.

With reference to architecture, I would also suggest a wider-reaching concept: that of separate experiences, views, 'moments', at different points around the same building as experienced by different people at the same time or, of different views as seen by different people at the same point, but at different times. It is only when displaying multiple viewpoints together, through collages and layered images, that my practice makes this concept explicit. I will explore this more fully when discussing the multiple perspectives and temporality of collaged works in chapter five, but this aspect of the practice highlights not only the possible temporality of photography in one frame across time, but also the possible plurality of this experience across spatial distance.

Still Moving: shifting medium specificity

In my introduction I stated that this thesis was (in part) an 'exploration on the ill-defined boundary between stills and cinema'. The first part of this chapter examined the mechanisms by which movement can be analysed and represented in stills imagery. In this second part I will show how the ability to define 'still', or 'moving' is not only difficult, but also subject to change as new technologies and perceptions develop. It is this transformation in technology and visual perception that I utilise in my practice and rely on for the practice's acceptance.

I will try to steer a course between concepts of still and moving, to illustrate the ideas and perceptions that inform my practice and to evaluate the choice of various techniques. Although the animation effect of cinema (and cinematic-based art) plays a large part in the available literature on this area, I concentrate predominantly on how texts and practices guide my own practice.

'Still' was shouted to sitters by Victorian-era photographic portraitists, to warn of an imminent (long) exposure. 'Still' is also used in the sense of 'an extract from the

continuum of cinema': a film still, is a '*contrastive*¹⁰⁹ concept' (paraphrased from Friday 2006, pp 39-41). These definitions illustrate the separation of concepts of 'still', as technology developed and diverged: one is a posed, prepared and compressed period of several seconds that appears to be instantaneous in the photograph. The other is a fraction of a second - one of twenty or so in that second that are too brief to be perceived individually - isolated for examination from the cinematic flow. It is this contrastive concept that has been the basis of academic scholarship on the definitions of photography and cinema. The writings of Benjamin, Barthes, Bazin, Kracauer and Metz all 'focus upon what were seen as the essential *differences*¹¹⁰ between the two mediums [sic] of photography and film' (Friday 2006, p 39). Historically, the invention of cinema altered the conception of photographic stillness, as did the invention of high-speed shutters and faster reacting emulsions on plates (and latterly on film). It is difficult to 'shake off the conceptions of photographic stillness that define this property in relation to cinematic motion, and to recover what stillness might have meant before the advent of cinema' (Friday 2006, p 39). In this context it is significant that it took 'many decades before photographers began deliberately to blur parts of the image to suggest movement' (Friday 2006, p 39). In the modern perception of photography we see it as static by contrast with the plethora of moving media.

It was not until this century's growing hybridisation of 'still' and 'moving' arts and technologies that several conferences and books addressed the impact of these changes: *Stillness and Time* 2006 (Green and Lowry (eds) 2006) followed the proceedings of the conference of the same name (Green and Lowry 2004), intending to 'open up a space for reconsidering the relationship between photographic theory and the theory of the moving image as [it] has been articulated in the study of film' (Green and Lowry (eds) 2006, p 7). Eivind Røssaak's *Between Stillness and Motion: Film, Photography, Algorithms* followed a 2007 conference, convened to analyse how the strategic use of stillness and motion in art and mainstream entertainment affords new perspectives on contemporary patterns of communication (paraphrased from Røssaak 2011). Beckman and Ma's *Still/Moving* (Beckman and Ma (eds) 2008) was more concerned with the perception of cinema, the photogram (a single image frame from cinematic film),¹¹¹ action in films apparently stopped and recorded as frozen (as in its cover image) or films slowed, such as Douglas Gordon's *24 Hour Psycho* (1993): a version of Alfred Hitchcock's *Psycho* (1960)

¹⁰⁹ My emphasis.

¹¹⁰ My emphasis.

¹¹¹ Not to be confused with the photographic term *photogram*: a print made from light and shadows of objects cast on light-sensitive material (normally photographic paper).

stretched to twenty four hours. Within Beckman and Ma's book was George Baker's chapter 'Photography's Expanded Field' (Baker 2008), that posits photography as moving increasingly beyond traditional definitions (such as the decisive moment), into an expanded field of practice, gradually more integrated with other media. Baker sees this field as one that is a 'tearing of photography between oppositional extremes' questioning whether the photograph is 'torn between narrativity¹¹² and stasis' (Baker 2008).¹¹³

Each of these publications address different aspects of still and moving (essentially addressing photography and film separately), yet all acknowledge the shifting representations of both media. As with calls for changes to architectural photography, academic research in this area is small, but growing: the main forms of dissemination are still conferences and their resultant publications. I believe that both are yet to fully mature into an integrated discourse across all of the affected disciplines, at which point the full impact of integrating still and moving, both technologically and in consumers' acceptance and assimilation, will provide many opportunities for further research, interrogating photography's status as a static medium.

From consumers to creators

In Helen Powell's book *Stop the Clocks! Time and Narrative in Cinema* she provides an analysis of photography's relationship to time by comparison with filmmaking. For example that time becomes stretched or compressed in the hands of screen-writers, directors and editors (Powell 2012). However, I would assert that even more profound changes in the production and consumption of moving images started in the 1970s, when increasingly lower prices of video technology (video cameras, video cassette recorders [VCR] and the distribution of films) enabled artists to access recording, editing and, crucially, the control of moving images – paused, rewound, slowed or speeded up. As a tool in the hands of artists the VCR 'fundamentally altered our relationship to the screened image' (Green 2006, p 20). This put the 'material substrate of the narrative into the hands of the audience': a narrative that could be controlled, 'offering possibilities for dismantling and reconfiguring the once inviolable objects offered by narrative cinema' (Burgin 2006, p 165). Latterly Burgin saw the advent of cinema being viewed piecemeal through television clips, reviews and trailers (Burgin 2006, p 166). Today that experience is even more dislocated (both literally and figuratively) from the experience in the

¹¹² Baker's own term for producing a narrative.

¹¹³ A term he coined with reference to Rosalind Krauss's, 'Sculpture in the Expanded Field' (1979), in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, Mass., MIT Press, 1985), p. 277.

cinema: online video sites (such as YouTube.com) offer innumerable clips and even whole films, posted by the public. These are alongside the film industry's 'authorised' dissemination of trailers and advertisements on mainstream and social media.

The last two decades have seen digital innovations that allow greater control, including dissemination: initially through CD-ROM and DVDs, and latterly in web-based work facilitating sharing via social media. The ability for the public to interact with visual media – to construct, edit and distribute their visual conceptions – allowed artists' practices to be more readily accepted and appropriated. The possibilities afforded by technology facilitate communication to their audience, once they have been assimilated into the mainstream, shifting perceptions, slowly becoming 'pervasive, tacit and often sub-conscious' (Otter 2008, p 254). The acceleration of these changes in the perception of digital technologies, due to audience participation, creates the framework within which I situate my practice.¹¹⁴ Green and Lowry also attribute 'the progressive erosion of the boundaries between the still and moving image' to digital technology (Green and Lowry (eds) 2006, p 7). David Green further connecting these shifts in perceptions, due to changes in technology, production and dissemination, with 'the way in which we experience and conceive of time'. Green predicted that 'distinctions between the filmic and the photographic, between the moving and the still image [could] wither in the face of these profound shifts in the complex technology of the visual'. At that time he suggested that film and photography still existed as separate entities, if perhaps for only 'a brief and fragile moment' (Green 2006, p 21).

From the current perspective, due to the changes that have occurred in the intervening decade or so, it would be more accurate to attribute this changing relationship to the shift in control and consumption of media, through technological advances being in the hands of artists and consumers, rather than the availability of the technology alone. I would argue that it is this shift in agency that has driven recent changes in perception, allowing artists the freedom to experiment with new technologies, *and* to connect with their peers and the public at large. It is in this arena that it becomes possible to introduce digitally constructed images that may be read, considered and assessed against the conventional offerings on a (more) level playing field. Figure 49: (P) D Trillo, *Stacked vertical view, Benzie Building, MMU* (2013) shows a compilation of five separate exposures, combined in one frame. There is a sense of the uncanny emanating from this construction that is generally accepted for what it shows: that what it indicates

¹¹⁴ For an exploration of the public's assimilation and adoption of new technologies see Otter 2008.

as a *representation*, rather than for its method of fabrication. The number and positioning of human traffic *could* be a routine occurrence, a chance moment. That they are seen at all three levels, discretely spaced, may alert the visually literate that this image may not be what it seems. Yet to the casual observer this is an image that shows a static, triple level view, the traffic that indicates the flow of people through these areas and the relative numbers of people seen at each level at this time.



Figure 49: (P) D Trillo, *Stacked vertical view, Benzie Building, MMU* (2013) 5 exposures, 17/09/2014 14:22 – 14:26

The convergence of still and moving

At the start of this chapter I asked how to represent architecture within a temporal landscape, experienced for more than a brief period, by using a static medium with the inherent inadequacy of only showing brief moments with clarity. I suggest that the use of (primarily) digital technologies to form hybrid creations displaying both 'moving' and still components appears to be the best option. The assimilation of such technologies allows the acceptance of images that are representative, rather than being bound to the production of 'straight' shots.

David Company recognises the convergence of artistic practices opening a myriad of possibilities for the acceptance of new visual forms such as 'slow' photography – subtle animation of stilled tableaux and individual portraiture – that 'chimes with the predominance of slowness in contemporary video art'. Company argues that photography has all but given up on the 'decisive moment' in order to explore what a moment is; [whereas] video art has all but given up on movement, all the better to think [of] what movement is'. Hence current art and writing exploring stillness and movement 'really only considers *slowness* and movement' (paraphrased and quoted from Company 2006, p 111). This opens two ostensibly similar, yet differently defined, areas: 'moving' or extended stills, such as the practice of David Claerbout (Claerbout, Lowry et al. 2004), and 'slow' films. John Stezaker asserts that Andy Warhol's 'still' films used the 'slowness of [unedited] real time to subvert the compression of cinema', but there are other factors that place this convergence in the current consciousness.

The popular 'slow television' movement started when Norwegian Broadcasting Corporation (NRK) showed the seven-hour train journey from Oslo to Bergen in an unbroken seven-hour programme. This has been followed by eight more broadcasts culminating in *Reinflytting Minutt for Minutt* (Reindeer Migration Minute by Minute) shown continuously over seven days (Ulven 2017). British versions include a glass vase made in half an hour shown in real time, a narrow-boat trip along the Kennett and Avon canal and a two-hour bus ride through the Yorkshire Dales, *All Aboard! The Country Bus* (BBC4 August 2016): the latter attracting nearly a million viewers. The programmes are shown without voice-over, music and, importantly, without the 'boring' parts edited out. NRK producer Thomas Hellum said 'it's telling a story, but a story that's happening without us, as TV-makers, colouring it in any sense' [...] 'This means that you, as the viewer, have to decide for yourself which bits are interesting' (Hellum 2017). The viewers enjoy the authenticity of the productions, which I would argue is a critique of television's

customary productions as they relate to the viewers' time. Artworks referred to as still/moving explore a similar critique of medium specificity, as well as their mode of engagement with the viewer's perception.¹¹⁵

A factor that distinguishes photography from film is that film 'represent[s] [a] reality as it evolves in time' (Kracauer 1965 p 41). For Green and Lowry 'this temporal dimension is indissociable from film's ability to capture movement' (Green and Lowry (eds) 2006, p 12). Ultimately my choice of still photography denies the possibility of actual animation, often seen as the 'defining characteristic of film', one that 'gives rise to a set of unique possibilities for representing physical reality in all of its contingencies and transience' (Green 2006, p 12). Kracauer termed this representation of the 'raw material of experience' *the flow of life* (Kracauer 1965, p 71). Following the phenomenology of Bergson and Husserl, the notion of 'the flow of life' was 'intended to unite Kracauer's theory of what was specific to film as a medium, with his belief in the cinema's natural propensity for the actual and the everyday. The motif that encapsulated this convergence of form and content was that of the street' (Green 2006, p 12). Kracauer's concept of 'encapsulating the street' is not far removed from my stated aims of conveying transience, dynamism and temporality within and around architecture – Berenice Abbott's 'flux of the metropolis' (Campany 2014, p 29). In my thesis' title I use Kracauer's term 'the flow of life' because, as Green points out, this term 'encompasses the flux of reality' (Green 2006, p 12). Although for Kracauer this concept of the everyday flow of life was allied with the cinematic, as distinct from photography, I find many parallels between my practice's outcomes and Kracauer's rich, experiential description of the street. David Green sees Kracauer's description of film's ability to evoke the 'visual and sensory encounters of the urban milieu' as being 'synonymous with modernity'. For Green the 'restlessness of the city street finds its direct analogy in the relentless movement of the film, in the fluidity of the camera and the rapid spatial transitions of montage' (Green 2006, p 12). Clearly there is a contradiction, or at least a coalescing of two different concepts here: the one of fluidity and the other of rapid spatial transitions. These are the two cinematic perceptions: the former that we perceive as cinema's flow, its animation effect, the latter is the mechanical replacement of one frame with another that we know, but set aside when enveloped by the cinematic sensation. I will return to descriptions of the flow of life, as expressed by Kracauer later.

¹¹⁵ Slow television shifts the consumer's relationship with the medium, to savour the experience without being hurried and with a degree of agency. As such it follows slow food and slow travel

Utilising the techniques I covered in the first part of this chapter and those in the following two chapters, I have 'animated' my practice by (digitally) combining still images from different moments of this flow. I then rely on the viewer's perception of my techniques to see (at least) the suggestion of movement, and to be aware of the temporality of its capture.

In the next chapter I will use examples from my own and other people's practices to evaluate which of these have contributed to my later practice, either as marking the limits of the field in which I place my work, or as examples of techniques I have employed. Many of these are hybrids between still and moving, in that they show aspects of both, often contrasting one against the other to signpost their differences.

Chapter Four

Exploratory Practice

This chapter reflects upon areas of photographic practice that I have investigated during this thesis, drawing on the research examined in the first three chapters. My practices in this chapter acted as experiments to work through ideas, testing their contribution. My assessment of other people's practices serves as a 'literature' review of practical and conceptual influences, some of which have not yet been covered. A brief analysis of each one measures them against the research question, and acknowledges what I have taken from them to build the foundations of the thesis' practice. In chapter five I will look in greater detail at practice that has been developed more fully.

Before I proceed to the more critical and reflective areas, the first part is based on examples of techniques and technologies that were not pursued, yet are included as examples that informed and contextualised my practice. Each illustrates an aspect of visual representation that is relevant to the thesis, challenging the traditional form and perception of photography – as brief, single exposures, viewed in two dimensions. They are slit-scan cameras, the 'tilt/shift' technique¹¹⁶, collages applied to three-dimensional forms, abstraction of images using total or partial removal of subjects or backgrounds and digitally blending different time periods onto one frame. For reasons I will explain within the text, each was either impractical to pursue or only partially answered the research question.

The second part evaluates three techniques that have become – at least partially – included in my practice. However, in the forms shown here they obscure the information I wish to record. The necessary balance between inclusion and excess dictated the clarity of the image, defining the scope of the extent to which I used them. They are extremely long exposures (measured in months or years), mass movement of people captured with a single exposure and multiple exposures layered on top of each other,

The third part analyses techniques that partially fulfil the research question. In themselves they are not worthy of more detailed studies, but they could be incorporated alongside other techniques as part of the practices examined in chapter five. These techniques are: moving cameras through spaces to produce sequences and comparisons of the perception of this technique with cinematic representations of movement through spaces, the concept of breaking the fourth wall as it can be applied to photographs using

¹¹⁶ Although named as such, this effect is produced by the tilt action, with or without any shift.

framing and focusing techniques, and cinematic examples of representing the materiality and construction of buildings,

The fourth part of this chapter deals with temporality as revealed by weather conditions, changing light and traces of human presence. All of these are included in my practice wherever they occur, but appear most noticeably in the collages. Finally I explain the organisation of my photography into three orientations of architectural location drawings: (cross-)section, plan and elevation.

Part One

Scanning cameras

Slit-scan cameras (popularly known as 'photo-finish' cameras) are constructed to record subjects' motion across an extremely narrow field of view.¹¹⁷ Inverting the normal dimensions of time and space in a photograph, a range of time is stretched across the image at a fixed point in space. Thus an extremely narrow field of view is recorded along the horizontal axis. Instead of the normal capture of many points in space recorded for a brief instant of time, these cameras record a slender view over an elongated period. Static objects appear as streaks, whereas objects moving across the image faster than the 'scan' are compressed and those moving slower are stretched. Several photographers have adapted this technology for creative effects. Notably these include Adam Magyar's *Urban Flow* series (Magyar 2011) [Figure 50], Rob Carter's *Travelling Still* project (Carter 2011), Jonathan Shaw in his book *Time / Motion* (Shaw 2003) and Esteban Pastorino Díaz whose single exposure whole 35mm films 'develop the decisive moment...onto space, transforming time into a linear succession of entrapped moments' (Rodrigo Alonso quoted in Demos 2006, p 204), in this way 'the central perspective is nullified' (Díaz 2017) [Figure 51].

<http://www.saulgallery.com/artists/adam-magyar/urban-flow-2>

Figure 50: Adam Magyar *Urban Flow* (2011)

<http://www.estebanpastorinodiaz.com/estebanpastorinodiazpanoramicastransito.html>

Figure 51: Esteban Pastorino Díaz *Panoramica transito* (all 2005)

These techniques produce a distortion of movement, unfamiliar to the lived-experience. It is this lack of information of the surrounding context and unfamiliarity of

¹¹⁷ Digital versions record one vertical strip of pixels at a time, across the whole frame.

their images that makes them difficult to offer as commercial photography. They also preclude themselves due to the time and cost of the specialist equipment that would need to be made, which would have drastically reduced my range of experimental work. For these reasons I have excluded them from my practice. Nevertheless they are interesting, aesthetically pleasing and demonstrate how our notion of what constitutes photography – capturing a portion of time and space – is partly dependent on the camera and techniques employed.

Multiple capture cameras

I feel Tim McMillan's invention of the 'Timeslice' camera array in 1993 is worth including here because it highlights the limitations of conventional still images, by allowing changes *after capture* to camera viewpoint(s): Figure 52 Derek Trillo *Timeslice camera array*, Bradford (2015). These are multiple cameras arranged in arcs, synchronised to act in unison. They can create images where the action is frozen, yet the viewer can apparently move around the subject.¹¹⁸ Often seen in natural history broadcasts, an accumulation of these Timeslice array images, where each camera's image is delayed from the next, results in a time-lapse sequence, viewed as a rotating arc. In both scanning and multiple capture cameras, properties of the fixity of the photograph with which we are familiar are subverted: destabilising the notion that a photograph captures a view from a single position, recording the contents of a fixed frame for the duration of the exposure.



Figure 52: Derek Trillo, *Timeslice camera array*, Bradford (2015)

¹¹⁸ The view actually shifts seamlessly along the arc from one image to the next.

Tilt/shift ‘miniaturisation’, viewpoint and scale

Professional architectural photographers have traditionally used the ‘movements’ of large-format cameras (for instance tilting the front or back boards, or shifting the front board, horizontally and/or vertically) to manipulate focus and perspective in-camera.¹¹⁹ These are used to counteract the limitations of regular stills cameras, such as the plane of focus being aligned parallel to the film/sensor, or the convergence/divergence of parallel lines (such as the sides of buildings) when the camera is tilted. These ‘movements’ of the camera are still used in the digital era, either in specialist medium- or large-format cameras, or by the more limited movements within the shift lens’ assembly on DSLRs.¹²⁰

<http://www.olivobarbieri.it/> [site specific gallery]

Figure 53: Olivo Barbieri: Site specific series, *Piazza del Campo, Siena* (2005)

http://www.fotografiefestival.it/portfolio_page/olivo-barbieri-site-specific_roma-04-14/?lang=en

Figure 54: Olivo Barbieri: Site specific series, *Colosseum, Rome* (2004)

Creative use of these movements plays with the viewer’s perception of scale, creating a strip of sharply focused detail, surrounded by an area completely out of focus. This concentrates viewers’ attention on a specified area, creating the illusion that the subject’s scale is of a completely different order, recalling models of architecture.¹²¹ Olivo Barbieri’s Site Specific series (2003 – 2014) includes fine examples of this technique [Figures 53 and 54]. The experience of viewing these images initiates a brief period of illusion before the realisation of their true nature, that this is a real building, not a model. This creates a sense of fascination at the uncanny nature of seeing an overview that, unlike models, shows perfect details, colours and textures, providing subtle clues as to the image’s origins. To me, the value of this technique is the demonstration of the power of photography to disrupt our perceptions, questioning the reliability of our visual acuity. We are accustomed to areas of sharply delineated focus when viewing close-up images, so shift/tilt images are (initially) read as such. These images challenge the tenuous relationship within photography between reality and representation, producing an estrangement of perception. This concept of disseminating images that questions the viewer’s perception is a topic I will examine further in chapter five, when reflecting on my own practice.

¹¹⁹ As have food, still life and advertising photographers.

¹²⁰ Digital single lens reflex cameras.

¹²¹ Consumer digital cameras often have a setting (variously labelled ‘miniature’ or ‘Diorama’) to re-create this effect but merely approximate the effect by blurring the top and bottom portions of the frame.

To produce this effect these images need an elevated viewpoint, to separate the base of the image from the camera. Thus they are shot ‘from the typical vantage point of someone regarding a model’ (Higgott and Wray 2012, p 185). This ‘bird’s eye view’ is a technique frequently employed by Barbieri, from high buildings or helicopters. Franziska Nori compares this to eighteenth century writers who ‘formulated their stories from the point of view of the omniscient narrator, who observes and studies the world in order to recognize [its] drawings and structures’, and further, that ‘it reveals another knowledge, transcending the dimensional relations between the buildings, dematerializing the architecture [...] revealing proportions, balances, voids, convergences and geometries (Nori 2010, p 13). The documentary photographer John Davies also employs this overview: his meticulous views of urban and industrial landscapes manage to show a large area and yet also show people and small traces of human activity.¹²² This is a difficult position to accomplish: both its actual elevation in practical terms, and the conjunction of the scale of the wider landscape and the human scale, rendered visible in a single frame.

Three-dimensional constructions

As photography’s two-dimensional limitations frustrate attempts to represent the three-dimensional environment, some artists have sought to produce a hybrid form, adhering images to surfaces of physical installations. Of the following two examples, one adheres to ‘realistic’ three-dimensional conventions; the other is arranged in an array for the viewer’s single viewpoint. Neither are forms that I have utilised, but in my collages I have explored the concept of following a view around a structure, playing with the formality of the standard vision of architectural photography, and its single point perspective. *The Ghetto* (1994) is a model of two squatted London streets by (resident) Tom Hunter (Hunter and London 2016) that exemplifies this marriage of two- and three-dimensional media. Hunter succeeds in producing a form that is sculptural and spatial in the wider view, yet retains properties of photography – tone, colour and the forms and textures suggested by lighting – when viewed in detail. Isidro Blasco’s photography is conventional in its capture; it is when he brings his multiple exposures together that the work takes on three-dimensional form (Blasco 2016). Unlike Hunter’s model that follows the orientation (approximately to scale) of the actual streets, Blasco constructs collages by mounting

¹²² For example see John Davies’ photograph *Runcorn Bridges, Cheshire* (1986).
<http://www.johndavies.uk.com/monton.htm>

prints onto card, then attaching them around timber frameworks. They are arranged towards one or more viewpoints, thereby emphasising their illusory qualities. In Blasco's series *Planets* the arrangements show 360-degree views of cities by mounting the images in a circle around a central void [Figure 55]. The images often wrap around the sides of the 'buildings' [Figure 55, right], adding to the three-dimensional representation. The series *Deconstructed Laneways* (Sydney, Australia 2011-2012) show alleys reconstructed at close to life-size (over seven metres high). The boards are angled to add real perspective to images that already display the (single-point) perspective of photographs. Each board is set at a different angle and the images on them are shot from different points, thus Blasco creates a multi-point perspective. These in turn are collaged together, mimicking a single view from certain viewpoints, yet revealing its true nature as the viewer moves around it. This fusion of images taken from different places and therefore shot at different times is a technique that combines the temporal and spatial to remind us of the illusory nature of photography: a record of *a* reality, plucked from so many others, individual to the photographer, their position, timing and editing. These are concepts I shall return to in the collages of chapter five.

http://isidroblasco.com/section/384548_PLANETS.html

Figure 55: Isidro Blasco, *Sydney, Australia* from the *Planets* series (2011)

Hunter and Blasco illustrate hybrid forms drawing from and situated between abstraction, re-construction, photography and the viewing experience. Each also draws attention to the production of new perspectives for the viewer, tied to the reality of the built environment, as well as photography's shortcomings in delivering a three-dimensional experience, or indeed a truly temporal or spatial one.

Nigel Henderson's folded 'stressed' photographs were manipulated in the darkroom, at the printing stage. Their form was based on Lazlo Moholy-Nagy's concept of vision in motion: 'seeing, feeling, and thinking in relationship[s] and not as a series of isolated phenomena. It instantaneously integrates and transmutes single elements into a coherent whole'. For Henderson 'The effect ... is in some degree to destroy the boundaries of the image, by appearing to lap them round the seeing eye, thus drawing it within the frame (Higgott and Wray 2012, p 219) [Figure 56]. The folding of the paper, and therefore the image, into three dimensions is in similar territory to the three-dimensional constructions shown in the last chapter. However, Henderson appears to

have deliberately folded walls and people onto separate sections, mimicking collaged works, subverting the photograph's two-dimensional form.¹²³

<http://www.tate.org.uk/art/archive/items/tga-9211-10-5a/henderson-glass-negative-of-stressed-photograph-showing-a-boy-on-a-bike-doodling>

Figure 56: Nigel Henderson, *Stressed photograph showing a boy on a bike 'doodling'* (circa 1950)

<https://architosh.com/2015/11/lumion-6-0-is-now-available/>

Figure 57: Uncredited (© Lumion 3D software), *Untitled* [silhouette populated CAD render] (2015)

Abstractions

Abstracting parts of the image by using cut-outs is a technique that can be applied to particular sections of the image (such as people) or, inversely, to the background. Cut-outs can take the form of either manually removing selected parts of a print, or by digitally altering its opacity. The latter may allow a faint image to remain, or could be changed to a silhouette of black, white or grey ground [Figure 57]. These options emphasise the presence of parts of the image, while reducing others; or abstracting them entirely, placing the emphasis on the solidity, shape and location of the chosen sections. For various reasons, this technique is used in CAD renders to anonymise people: to speed up compositing and processing, to reduce the cost of obtaining images of people (and the associated copyright and data protection issues), or simply to focus attention on the structures, while indicating the presence of people. I recognise the appeal of highlighting the people within the image, yet the people are highlighted without actually adding any information. This is the latest version of anonymous people introduced to constructed scenarios: previously Letraset figures were attached to drawings. More recently libraries of styled figures are chosen (such as 'Danish Hipsters'), directing the view towards a target audience, narrowing the development's focus to 'desirable' types. The abstraction of people has sound reasons, yet this can be also achieved by blurring their motion: at once highlighting the aspect of movement and circumventing the need to anonymise people in post-production. The resultant images would appear more natural and less contrived to the viewer, which could draw the viewer in to the work.

The abstraction of people from my photographs is a concept that I have experimented with. Initially looking to show people and their lines of movement, almost

¹²³ Although this effect is lost on this page, and by all other two-dimensional representations.

regardless of the architectural framework within which they were framed. Following a suggestion to show the people *without* the architecture, I settled on a compromise between abstraction and information.¹²⁴ The practice distilled to a balance of opacity that rendered the people at one hundred per cent and their surroundings at thirty per cent [Figure 58]. Ultimately although Figure 58's concept utilises the basic accumulation of human traffic that was pursued in later practice, it was a useful and informative experiment that was not pursued, as it appears too similar to CAD generated images. I also decided that the selective opacity did not suggest an alternative to commercial architectural photography that would be acceptable to many.

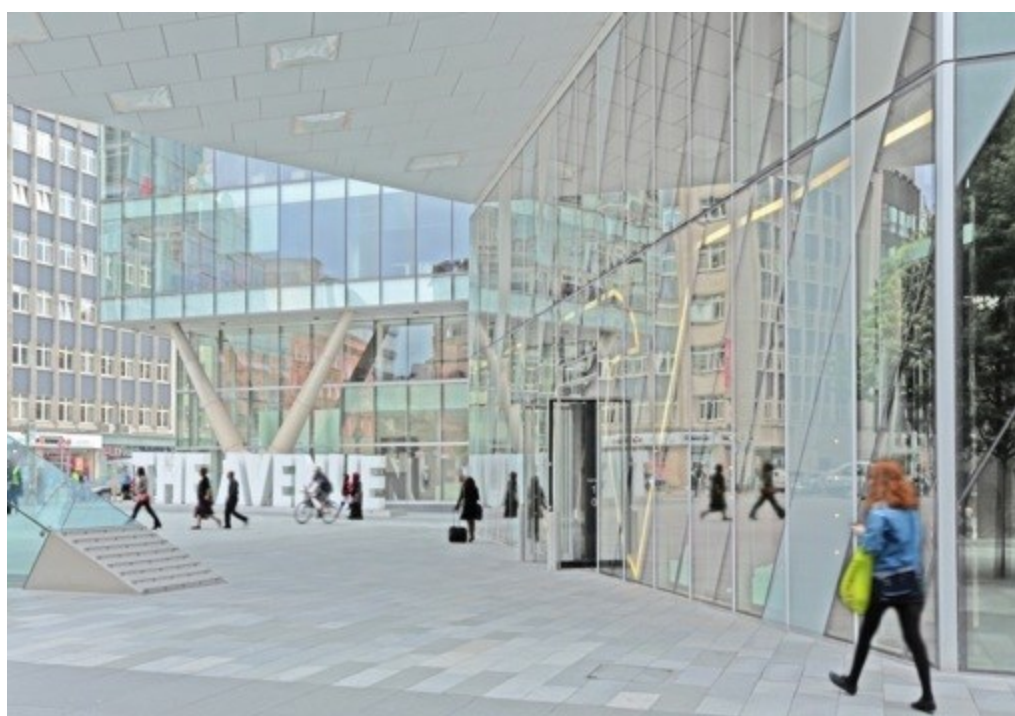


Figure 58: (P) D Trillo *The Avenue, Manchester* [partially transparent background] (2014)
5 exposures, 17/06/2014 14:14 – 14:15

This use of partial opacity has visual similarities to Olivo Barbieri's 'Site-specific_London 12'.¹²⁵ Barbieri's images for this commission are in two styles: black and white photographs with iconic buildings partially 'erased' [Figure 59, left], and those of Olympic stadia, either with their backgrounds removed completely, or their backgrounds faded to a low opacity [Figure 59 right].

<http://www.olivobarbieri.it/> [site specific_London 12 gallery]

Figure 59: Olivo Barbieri, *30 St Mary Axe* and *Olympic Observation Tower* both London (2012)

¹²⁴ Suggested by my Director of Studies, Eamonn Canniffe.

¹²⁵ Produced for the Cultural Olympiad of the 2012 London Olympics.

Lauren Heinz wrote that Barbieri's images 'both question our perception and document the constant flux of a place [London] he [Barbieri] describes as a 'living organism'' (Heinz and Barbieri 2012, p 28). The images play with perception, but the flux is less apparent as there is an absence of people and traffic. In fact there are no elements within the works that show movement. His treatment of the city centre buildings emphasises their shape and mass, while the studies of Olympic stadia appear model-like, once removed from the background that communicates their scale and context. The exploration into these techniques led to further research around ways in which people might be abstracted and rendered by digital techniques, particularly in the area of tracing motion. As with the silhouettes, cut-outs and transparent backgrounds, what I felt was missing was the essence of the lived experience. I prefer to make people visible within more 'conventional' imagery, but emphasise their presence by scale, proximity to the camera, and contrast with their background (whether by colour, density, blur or texture).

Digital blending

In my practice I have blended different shots into what appears to be a single exposure, a process I shall refer to as digital blending. Developments in digital imaging techniques have facilitated the combining of several exposures together more easily than previously: by exposing multiple vertical strips across the frame, separate layers may be coalesced into an almost seamless whole. It is therefore possible to blend different times across a frame.¹²⁶ In Stephen Wilkes' series *Day to Night* (Mead and Wilkes 2014) he shot cityscapes for between twelve and fifteen hours from fixed viewpoints, producing images that represent the whole day, shooting over one thousand exposures to produce each final image [Figure 60]. Wilkes explained that he melds both street- and landscape-photography, by choosing the moment to photograph individual frames to 'optimise the details' (Smyth 2013). Thus the grand view of both scale and time did not preclude the ability to draw attention to the minutiae of life as it unfolded before him. Wilkes' images heighten awareness of the range of time during which an image can be captured, yet the close proximity within a frame of both night and day (and all periods in between) appears cramped in frames that are similarly proportioned to the popular ratio of 3:2. A more gradual transition across a wider, panoramic frame could allow the viewer to 'travel' through the time period contained in the image, as their attention sweeps across. This stilling of time to allow the viewer to concentrate on each person individually is unlike our actual experience of crowds of people: that view is normally one where your attention

¹²⁶ For example to expose the left side of the frame during the morning and the right side at night.

might follow a single person, or concentrate on the arrival and departure of people through a particular space. To appreciate the whole of a large area with time to ponder on the details is a feature of photography with which we are familiar, yet the meticulously precise placement of people - almost equidistant from one another - accentuates a manufactured, contrived construction. They initially appear to be natural scenes, yet the arrangement of their elements appears incongruous. The seamless transition from day to night that Wilkes achieves is an illusory montage that strays further than I would prefer towards a distorted fabrication, if not a misrepresentation: what David Hockney once described as a 'Stalinist collage' (Hockney and Joyce 1988, p 166). What I prefer to appropriate from Wilkes' technique is the quality that makes the viewer aware of

<http://www.stephenwilkes.com/fine-art/day-to-night/526fcc74-7050-4eab-94e4-30740aa613db>

Figure 60: Stephen Wilkes *Shanghai* [Day to Night series] (2012)

the photographer's actions and of the photographic process – indeed of a peculiarly digital process. This is a trend that has increasingly manifested itself in 'post-photography'. Amongst the changes occurring in the first decade of this century Simon Bainbridge observed that 'there has been a definite swing against overtly documentary concerns'. Bainbridge quoted Martin Parr who stated that 'there seems to be a new tendency towards process-driven work, which is perhaps more concerned with deconstructing the language of photography than that of society as a whole' (Bainbridge 2010, p 64). An increased awareness of the process of photography, especially when overtly visible (to the viewer) in the work itself, indicates that increasingly in the 'digital era', artists seek to examine what photography is about. In the practice areas that follow I will also be open about the processes employed. This will necessitate negotiating a line somewhere between the creation and communication of the concept that I wish to convey and the retention of a certain degree of integrity in that work. As such, I must also allow the processes involved to be perceptible.

Part Two

Ultra-long exposures

Several photographers have utilised extremely long exposures to document a site over an extended period. Below are examples of several whose photographs draw attention to the exposure time, by use of the time or date in the title, or by a link between subject and time scale. I have utilised this idea by indicating the duration of my construction, or the number of exposures within its title. This also serves to notify the viewer of the

constructed nature of the image. In Hiroshi Sugimoto's *Theaters* series (Kellein and Sugimoto 1995) [Figure 61] the photograph's exposure time produces a blank, white screen, glowing from the darkness of the theatre's interior. Sugimoto draws attention to the exposure's duration, by encompassing the time span of the whole film in each shot. As Kerry Brougher wrote, 'Sugimoto distrusts the moment; it is far too flighty to be reliable enough to make art' (Brougher, Sugimoto et al. 2005, p 38). Sugimoto also highlights the specificity of each theatre that is unseen by the viewers of the film: although the film viewed is the same everywhere it is shown, the theatre is unique to each location.

<https://www.christies.com/lotfinder/Lot/hiroshi-sugimoto-b-1948-cabot-street-5143445-details.aspx>

Figure 61: Hiroshi Sugimoto, *Massachusetts* (1978)

German photographer Michael Wesely was commissioned to document the building of an extension to the Museum of Modern Art, New York. He exposed the images for the exact length of its construction, subtitling his images with the start and end dates (09.08.2001 – 2.5.2003) [Figure 62], emphasising the temporality of the photograph: its exposure time is a significant factor, as well as its framing of a particular time and place. Although long exposures are interesting, aesthetic 'impressions', they are not especially informative: the functions occurring are superimposed, fading into a single accumulated whole. The only subject within Wesely's images that records its own movement clearly is the sun. As each day the sun has a slightly different elevation, a series of arcs are etched across the sky, interrupted only by cloudy periods.

This simple registering of the sun's daily movements features in Justin Quinnell's six-month long exposures of the Clifton suspension bridge (Quinnell 2015) [Figure 63]. The absence of overlapping details produces simpler, less distracting images than Wesely's, emphasising the temporal nature of the bridge. It is within the remit of this thesis to record scenes over an extended period, but I value the subjects being visible, necessitating shorter exposures. The communication of the visible is a purpose of my practice, if not *the* purpose. Ultimately the visibility of subjects is dependent on how they have been photographed.

<https://tinyurl.com/vc3prwgx>

Figure 62: Michael Wesely (*09.08.2001 - 2.5.2003*) (2001-3)

Figure 63: Justin Quinnell, *Bristol, Clifton Bridge series* (2007-8)

Mass movement

Images utilising long exposures of a different order, typically between one thirtieth of a second and two seconds, blur movements, but people remain discernible. The length of the exposure time and the distance that subjects have travelled across the frame define the extent of blurring. Extending the exposure to more than ten seconds has traditionally been a technique employed to render people 'invisible', to 'de-clutter' architectural photographs. During these extended exposures, the length of time that moving people are present in any one part of the frame is insufficient, as a proportion of the overall exposure time, to allow them to register with any clarity in the image. While, by themselves, individual people may not afford sufficient movement to reveal the flow through a space, multiple people's presence in the same area may well register a 'flow', a blur en-masse, but only if the duration of their accumulated presence is a high enough proportion of the exposure time. Therefore exposures of this order can indicate the presence and movement of people; either mass movement in a single exposure, or an accumulation of movements of individuals. Although the photography of crowds of people is indicative of their movement, it is dependent upon their presence, as well as that particular instance of the exposure being characteristic of their direction. Even though a sufficiently dense number of people can be seen if the exposure is in the order of several seconds, exposures of greater than several minutes render the aggregated impression as a greyed area: as with Wesely's extreme exposures.



Figure 64: D Trillo *Mass movement 4*, Benzie Building (2017)

Layered pentimenti

Clear indications of multiple exposures emphasise their inevitably temporal dimension: by the recurrence of fixed elements in the frame and the ephemeral nature of the flow around buildings. Several artists have accumulated multiple exposures, stacked on top of each other in single frames, a technique I shall refer to as a 'layered pentimenti'.¹²⁷ I will highlight two who have aesthetically similar outcomes, albeit with different motives. Idris Khan's practice includes photographing multi-part documents, such as musical scores and the Qu'ran. In 2012 Khan was commissioned to photograph iconic buildings in London for the cultural Olympiad. Khan superimposed several of his own images of each site, along with others sourced from postcards (Bainbridge 2012, pp 20-21) [Figure 65].

<https://www.victoria-miro.com/artists/14-idris-khan/works/artworks15671/>

Figure 65: Idris Khan, *St. Pauls, London* (2012)

<https://oeildelaphotographie.com/en/getxophoto-photography-festival-2015-corinne-vionnet/>

Figure 66: Corinne Vionnet *Beijing* (2010)

¹²⁷ Originally *pentimento* [plural *pentimenti*] referred to traces of previous paintings on a canvas. More recently it has been used to describe histories of sites, layered over time (Butler 2007).

Corinne Vionnet's *Photo Opportunities* project (Vionnet 2012) collated images of famous tourist sites around the world from the image hosting and sharing website Flickr. This series suggests that tourists are attempting to (re)create the same views of these iconic sites, replicating images we know in advance from various media. These constructions also critique the endlessly repetitive nature of tourists' photography and the dissemination of their images via social media (Vionnet 2012). Choosing one point of a building common to each image as the focus to register every image, Vionnet produces layered pentimenti [Figure 66] that echo Khan's. Both Khan and Vionnet's work examines temporality via still images, but contains insufficient information for the purposes of this thesis. As with the ultra-long exposures mentioned previously, the impression is of an accumulation of moments over a long period of time, yet each new movement partially replaces and obscures the previous ones.

I have produced two different pentimenti. The first is of a busy tourist attraction in York on a hill that is consistently shaped when viewed from each of four sides. In figure 67 (P) the ground level drops over four metres across the site, which made alignment difficult and resulted in cropping of the overall image. The second was of a regularly shaped bandstand [Figure 68 (P)] that was almost symmetrical across perpendicular axes. The symmetry and scale made the structure easier to align. In both images I have taken the component exposures at times when there were people passing. Compared to the layers of Vionnet's and Khan's images, the lower number of exposures (four) ensured that the building's features and individual people were still visible. Some people see this clarity as distracting, preferring the impressionistic style of Khan and Vionnet, while others see the people as grounding the images in their location.



Figure 67: (P) D Trillo *Clifford's Tower, York* (2016) 4 exposures, 26/11/2016 12:17 – 12:49



Figure 68: (P) D Trillo *Bandstand, Victoria Park, Denton* (2017) [after Jon Spencer]
4 exposures, 27/04/2017 14:56 – 15:01

In both cases I found that the regularity of the viewpoints afforded an all-encompassing survey of the structure's location and passing people. The temporal nature of the image is evident in the multiple exposures and the appearance indicates the movement of people and of the camera. However, the layered nature of the images

obscures successive images as each is laid on top of the other (as with the layered pentimenti). Therefore this was not pursued as final practice beyond these experiments.

Part Three

Series: progression through buildings

Photography is a medium that can utilise its speed of production and mobility to produce images in a (relatively) short space of time, allowing related series to be produced together. In 1932 László Moholy-Nagy stated that by 'concatenation of its separate but inseparable parts a photographic series inspired by a definite purpose can become at once the most potent weapon and the tenderest lyric' (Smyth 2012, p 17). Thus bodies of work that show related images, in series, are a regular form of presentation, by book, article or exhibition.¹²⁸ A 'moving' series would be a method of producing an alternative to traditional architectural photography; indeed showing multiple images of one site is part of my practice. However, the emphasis in my practice is to address the challenge of revealing temporality and motion within single frames: as alternatives to the iconic, isolated, pristine style of commercial representation. Hence the journey through the site, producing separate images has not been followed.

The de-construction of movement into individual still images, as explored and illustrated by Etienne-Jules Marey and others (chapter three), shows sequential changes in positions, in what we could now compare to film-stills. To read the actions within these images requires the observer to remember consecutive frames and note the changes in the next frame. This construction by the viewer is a temporal act in itself, dependent upon the viewer's perception and memory to succeed. The distinction I wish to make here is between a series that produces an indication of temporality and movement (as with Marey's), and a body of work that emphasise their communicative qualities by use of repetition of the theme and by sequencing and narrative. Although I am happy to conflate images at one or more sites into a collection, each must also stand by itself to illustrate the premise of the thesis: a communication via single images, unless (as I will show later) they produce a contiguous sequence – a collage – within one (resultant) frame.

¹²⁸ This is particularly commonplace within the 'documentary' genre.

Cinematic tracking

Leaving the restrictions of the fixed point of capture – and with it the single point perspective – introduces images from the viewpoint of a moving observer. This follows the representations of cities (observed) in motion [chapter one] and cinema’s animation effect that creates the perception of motion [chapter three]. In my practice I see the movement of the camera as inevitably leading to a construction of different frames in a way that is spatially far more complex than a single point of capture would dictate. The resultant assembly, whether by perception, imagination or memory is closely allied to collages and other forms of linear representation. In the earliest exhibited cinema films the camera position was static: the (silent) action flowed in front of the camera/observer. The fifty seconds long film *L’Arrivée D’un Train en Gare de La Ciotat* by the Lumière brothers was first shown in January 1896 (Lumière and Lumière 1896). Despite the fixed view, the audience members’ perception of the train moving towards them from the screen appeared real enough to cause panic: Each visual technique is assimilated into the audience’s consciousness only when they become familiar.¹²⁹ Soon after these initial experiments cameras were attached to moving objects such as trains in so-called ‘phantom-rides’ (as the train, camera and operator are not seen), for example *View from an Engine Front, Barnstaple* (Unknown 1898). Cameras were later mounted on dollies on tracks of their own, ensuring the camera’s smooth motion through the set.¹³⁰

It is the progression of the viewer moving in space and time, even if both spatial and temporal aspects are pre-determined by the film-maker, which is perhaps closest to a lived-experience that could be re-created by ‘photographic’ means. This experience of walking through or around a building provides a succession of viewpoints, accumulated via memory. Architectural photographer Ezra Stoller prepared for his photography by visiting the building in advance, to understand it as a ‘spatial experience [...] one must wander through it and about it until its organization becomes clear’. For Stoller architectural photography is ‘an intellectual discipline above all rather than an exercise in spontaneity’ (Busch 1987, p 15). By contrast, the limitations of experiencing buildings via still images is perhaps best described by Bruno Zevi, who wrote that

A photograph records a building statically, as seen from a single standpoint, and excludes the dynamic, almost musical, succession of points of view movingly experienced by the observer as he walks in and around a building.

Each photograph is like a single phrase taken out of the context of a

¹²⁹ For an account of the assimilation of successive visual technologies see Chris Otter (2008).

¹³⁰ Hence the term we still use: a ‘tracking shot’.

symphony or of a poem, a single frozen gesture of an intricate ballet, where the essential value must be sought in the movement and totality of the work. Whatever the number of still photographs, there is no sense of dynamic motion (Zevi 1974, p 58).

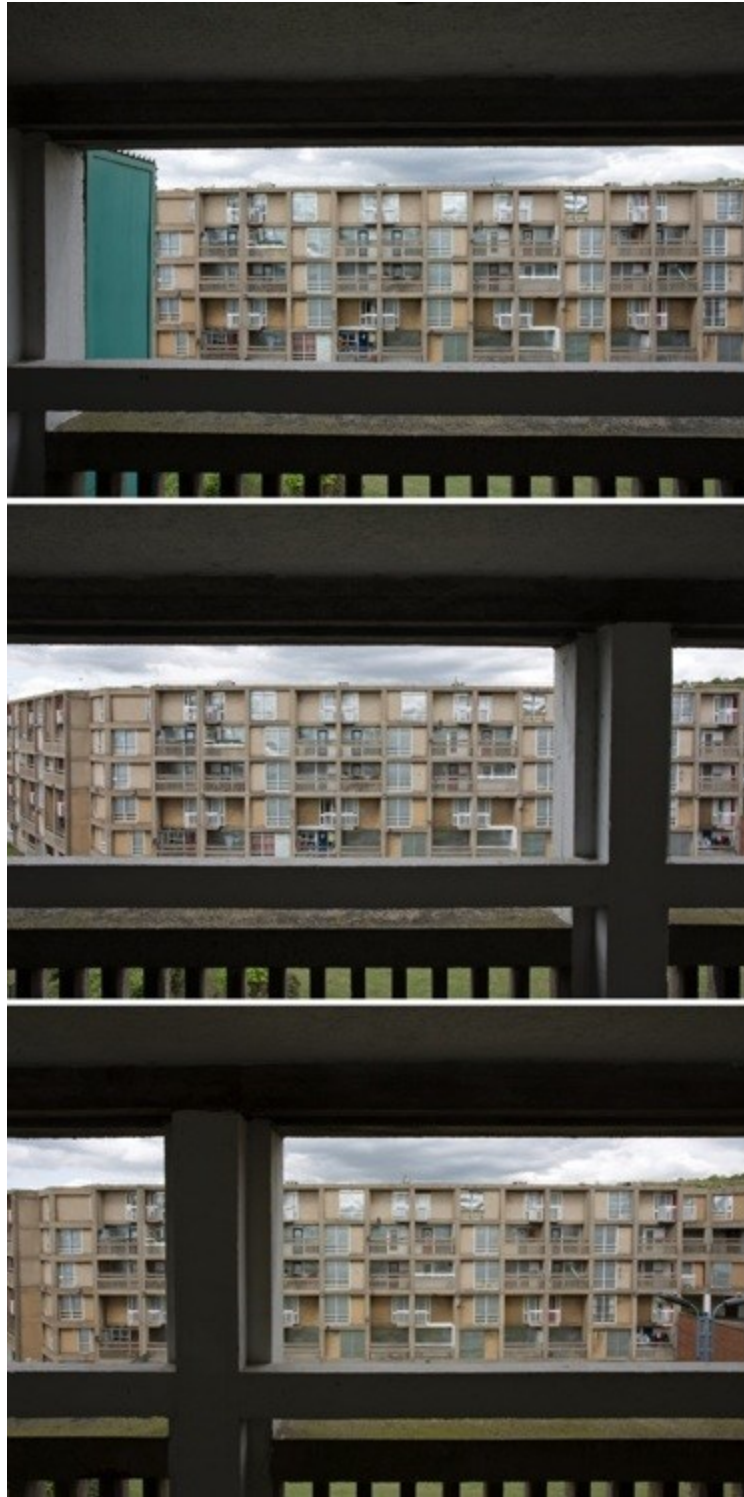


Figure 69: D Trillo, *Park Hill Flats, Sheffield [Triptych]* (2015)

While shooting series of successive images taken while moving through a building, I found that the choice of positions to take the images and the choice of viewpoints was

so arbitrary that the impression was one of a highly selective editing of a cinematic journey [Figure 69].¹³¹ Although this is the remit of stills images, the impression of the restriction of views to such a small proportion of what would be shown by a film is heightened by this side-by-side comparison to cinema: the successive frames reminiscent of film stills. I also found that the actions involved were similar to those I have experienced when constructing panoramic views from multiple images. Thus the recreation of motion through spaces was too limited by the small proportion of image captures, when compared to the vast number of possibilities. To return to the research question, this succession of stills along a route is once again a dissatisfying alternative to conventional architectural photography, as based on single frame representations. This is because it is not a direct alternative, relying too heavily on the imagination and experience of the viewer to reconstruct the vision that the photographer had.

In his article *Lights, camera, architecture!* (Rapp 2015), Davide Rapp draws attention to director Sergei Eisenstein's treatise *Montage and Architecture* (1937-40). Rapp summarises the parallels that Eisenstein draws between the successive views of architecture as revealed by the viewer's movement with those of cinema:

by moving physically through the architectural space, the human gaze defines and orders different points of view, thus realising a mental assembly similar to that of the cinematic experience. Vice versa, in a cinema, the spectator mentally rebuilds a fictional space through the sequence of portions shown by the film (Rapp 2015, p 22).

Although documenting physically similar journeys, the two views are essentially different in that one is directed by the viewer; the other by the director and this one is always played out in the same sequence. In Alfred Hitchcock's penultimate film *Frenzy* (Hitchcock 1972), the camera leaves the serial killer with what is about to become his final victim. In a single take the camera backs down two flights of stairs, through the hallway and out into the street. Leaving the building the sounds inside recede, to be subsumed by the noises of the street and Covent Garden market. As the market-traders and porters pass along the street, between the camera and the doorway, the viewer becomes increasingly aware that the cries of the victim are inaudible at street level. The director simultaneously uses a physical and aural distancing to illustrate the victim's isolation. The reversing motion of the camera means that we are made aware of the retreating locations we face, rather than heading away to leave them (literally) behind.

¹³¹ This sequence was shot moving the camera from left to right (relative to the image) and would be better viewed in that arrangement, rather than top to bottom as dictated here by the vertical A4 thesis format.

The motion through the building – both revealing and concealing as we withdraw – is a ‘continuous *promenade architecturale*’ (Rapp 2015, p 23): successive disclosures of stairway, landing, stairway, hallway, doorway, façade, pavement and street. The ability of the moving camera to define the limitations of the still image is underlined in such long, unbroken takes made by hand-held cameras.¹³² It is impossible to replicate that experience within still photography: even relying on successive still images and the viewer’s memory, the experience of the viewer’s motion through spaces will always be expressed more convincingly within the realm of cinema. Cinema directs the viewer’s gaze, whereas successive photographs rely on (selective) memory. Photography ‘grasps what is given as a spatial (or temporal) continuum; [whereas] memory images retain what is given only in so far as it has significance’ (Kracauer 1993, p 425). Through the unconcealed construction of images from multiple, successive exposures I emphasise the temporal dimension of my practice, to ensure the viewer is aware of the image as an image: edited, mediated and created. I see this awareness of the viewer and my honesty in conveying my methods as an essential element of my practice, minimising the ‘deception’ of architectural photography.

The ‘fourth wall’

The photographic representation of architecture is directed to interpreting spaces, form and (less often) texture. The materialities of the building – edges, divisions, thickness and joints – are properties that are generally ignored. When made aware of the materiality it feels like breaking, to use a theatrical term, the ‘fourth wall’. To make the viewer aware of the material transitions induces the self-awareness of the voyeur: we are no longer viewing a scene as if we are there, our ‘disbelief’ suspended. We are aware of the scene’s mediation via the camera, aware of viewing a *photograph*, not the building.

Rapp describes several cinematic sequences that feature the materiality of a building as a key feature in the scene (Rapp 2015). The shot from the ceiling of Travis Bickle’s room (played by Robert De Niro) in Martin Scorsese’s *Taxi Driver* (Scorsese 1976) shows a view we are aware that we could not see, unless our eyes were located in the centre of the ceiling. In Gareth Evans’ ‘The Raid’ (Evans 2011), a cavity wall is shown from above, revealing the protagonist hiding behind an ominously thin sheet of plasterboard, from a machete-wielding criminal. It is the impossibility of these views that makes us

¹³² Tom Gunning’s *Hitchcock and the Picture in the Frame* explores this technique more fully: Gunning (2007). Steven Jacobs’ *The wrong house: the architecture of Alfred Hitchcock* examines Hitchcock as an architect – his sets, locations and use of architectural details – in the style of an architectural monograph.

aware of the fact that we are viewing them, not witnessing them: partly by what is revealed (that normally would not be) and partly by the location from where we appear to be seeing that view. With a day or more of the budget and crew afforded to cinema's production, stills photography can be constructed that could appear to be natural (such as Annie Liebovitz's celebrity portraits), or could simulate a fully orchestrated cinematic still (such as Gregory Crewdson's street scenes). Alternatively, with a lower budget, an image styled as a photogram can be produced (for example Cindy Sherman's *Film Stills* series). It is the extent to which the viewer is made aware of these constructions, by the clues included in the scene, that determines the balance between the mystery afforded by illusion and the reality of our voyeurism.



Figure 70: D Trillo, *Earl's Palace, Kirkwall, Orkney* (2009)

Some photographs can make us aware that we are seeing a photograph, rather than what it depicts, such as where a detail of the structure of a building is within the frame, close to the camera. This heightens the viewer's awareness of the structure and contextualises the scene. The use of a doorway, arch, window or shadow to frame a view – in addition to the photograph's own frame – can be a pictorial device, yet it also affords this contrast. Figure 70 shows a view framed by part of its own structure. A subtler and seemingly accidental use of proximity, focusing and partial obscuring of a scene is exemplified by Saul Leiter's fashion photography in the style of candid street photography

[Figure 71]. In this image the viewer is separated from the subject as if a voyeur: aware of the image as a photographic depiction, while simultaneously being offered a view that appears to be a fleeting glimpse amongst the confusion of the streetscape.

As Steven Gartside perceived, 'in any urban imagery, there is always some kind of negotiation in the formation of distance-object-space. In books of architecture the tendency is for distance [and the lack of contextualising details across that distance] to turn architecture into object. The building is there to be examined, [...] presented as an object separated from everyday use' (Gartside and Gathercole 2006, p 53). The sequence of images in Figure 69 deliberately included the natural framing of the balcony's apertures within the photograph's frame. The facing building is no longer the singular object, removed from its context. The improvised, additional frame provides clues to the materials, texture and construction of the building opposite. It may even be possible to deduce that this frame's structure and its subject are similar, in fact one continuous complex.

<https://www.harpersbazaar.com/uk/culture/going-out/news/g22517/bazaar-private-view-saul-leiter/?slide=9>

Figure 71: Saul Leiter, *Green Coat, New York* [Harper's Bazaar commission] (1959)

I referred earlier to Sergei Eisenstein's description of our capacity to assimilate successive views of architecture, and the translation of film sequences into a coherent narrative. As a manifestation of the ordering of complex, diverse views into an interconnected, unified whole Rapp compared the formal language of architectural representations with sequences in Stanley Kubrick's *The Shining* (1980)

The complexity of space [...] reassembles in the mind of the spectator through the juxtaposition of multiple points of view, coherently with the action and the position of objects and actors. The succession of three single points of view: Jack Torrance overlooking a scale model of a labyrinth, a bird's eye view of the labyrinth itself, and the steady-cam shot [...] navigating the maze, introduces and explores the labyrinth [...] through a series of approximations like a sequence of architectural drawings: a scale model, a plan and an interior perspective.

By viewing the scenes in ways akin to two-dimensional representations, an order is imposed – or selected – one that makes sense of this complex three-dimensional form, directed towards what are two-dimensional media (film and drawing).

Part Four

Weather

One of the recurring motifs of commercial architectural photography is the choice of fine weather for commissions at the point of completion. Breaking with this convention, John Donat's 1968 image of Boot's headquarters in Nottingham is teasingly captioned *Why does it never rain in the Architectural Review?* [Figure 10] (Elwall 2004a, p 190). This is clearly shot in a documentary style, taken (literally) on a human level, where people are prominent in scale and position. Although this typifies the 'Manplan' series of commissions (as discussed in chapter one), it is the subjects' umbrellas and their reflections on the wet ground that further removes this image from the conventional. This echoes an earlier tradition used in watercolour paintings of architecture: the technique of adding reflections to fill foregrounds was used by painters such as Cyril A. Farey in the first half of the twentieth century. The reflections connect the (fore)ground with the building, aligned directly with the camera's viewpoint [Figure 72].

<https://cdn.globalauctionplatform.com/3cd4e01c-690a-439f-9b3b-a5fd00d5b164/d945183d-401a-4026-d907-bf1f906db42a/original.jpg>

Figure 72: Cyril A. Farey, *Royal Insurance Company Limited, Plymouth* (1949)

Depicting buildings in changing light and weather conditions provides a far broader representation of the site than a solitary view does. Claude Monet painted Rouen Cathedral more than thirty times, which when viewed together show the variety of different interpretations that are possible from one viewpoint of one building: Figure 73 Claude Monet *Rouen Cathedral* series (1892-1894). The multiple images illustrate the changes over time that result in a dynamic representation that would not be revealed by a single image.

Manifestations of the wind are particularly effective at emphasising how static buildings are, in contrast to the movements of their surroundings. When experimenting with images that include visual references to the weather (trees, leaves, snow, moving clouds etc.) [Figure 74 *Pear Mill, 23mph gusting to 43mph* (2017)], I was always drawn back to the 'populated' notion of the thesis: that these external elements are intrinsic to the life of architecture, their ephemeral nature exemplifying the temporal, but this is in

addition to the building's functions for the human aspect. Therefore I decided to include these aspects in the later studies, wherever they occurred naturally, rather than dedicating further research to the effects of weather in unpopulated views.



Figure 73: Claude Monet *Rouen Cathedral* [series] (1892-1894)
[out of copyright]



Figure 74: D Trillo, *Pear Mill, Stockport* (2017) wind 23mph, gusting to 43mph. One exposure of 20 seconds

Traces of movement through the frame

As we saw in the last chapter, the recording of movement using point light sources to score traces over the course of the exposure was used by Marey, and subsequently for the analysis of methods in workplaces.¹³³ As the subjects in the experiments were conscious of their participation, these methods would produce unnatural behaviour.¹³⁴ As I am seeking methods that are closer to lived experience I would prefer to record movement in less contrived ways. Although these images have visual similarities to the light trails of traffic seen in conventional dusk, or night photographs of building exteriors, the essential difference between these two methods is that the light trails left by traffic follow a course that is unaffected when photographed: as natural as the paths available to the traffic will allow. Dagonnet described Marey's work as 'A Passion for the Trace' (Dagonnet 1992), encapsulating the notion of the transcription of movement for later study. I want to mention other ways in which traces can be made, but this time by phenomena that do not rely on lit subjects, night time exposures or studio conditions.

The wear seen on many surfaces that are regularly handled, or walked on, produces visible evidence of our passing. In the case of foot traffic this may be seen when wet patches migrate across dry areas, wear and/or dirt is traced along the ground, or by

¹³³ Including traces of lights that were attached to participants in the (ergonomic) experiments of Frank & Lillian Gilbreth and Robert Stelling.

¹³⁴ And would also involve the administration of requests, permissions and copyright agreements

desire paths: the routes chosen by people, regardless of the prescribed course, that result in visible tracks. These are commonly seen where grass is worn away, as in Figure 75, Derek Trillo: *Desire path at MBS, Manchester* (2015), or by more ephemeral traces such as the sublime snow-scape Figure 76, Andre Kertesz *Washington Square, New York* (1966). Where traces of movement persist they could be included in my practice, but my choice of locations does not rely on their existence.

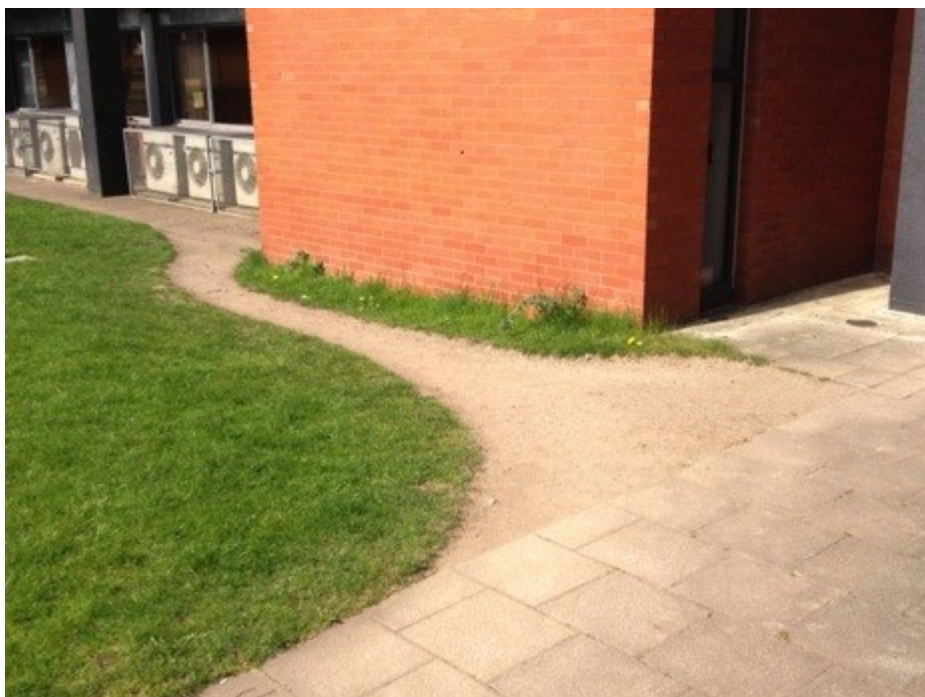


Figure 75: Derek Trillo: *Desire path at MBS, Manchester* (2015)

<https://www.artsy.net/artwork/andre-kertesz-washington-square>

Figure 76: Andre Kertesz *Washington Square, New York* (1966)

In Jacques Tati's film *Mon Oncle* (1958) (Tati 1958), several extended scenes were recorded where the camera position and angle of view were both fixed.¹³⁵ In one scene Tati's character Monsieur Hulot enters the building in which he lives at ground level. He then proceeds towards his apartment, appearing at various windows and balconies. In total we see Hulot appear ten times in just one minute (Tati 1958). The viewer can trace his steady, if labyrinthine progress through the characterful, dilapidated building. Hulot's discontinuous appearances, and the viewer's anticipation of where he may reappear next, emphasise the episodic temporal flow of the scene. The motionless camera shows his convoluted route, drawn out across the frame. It is this unchanging framing that provokes the sense of an observer viewing the passage of a person through space(s), as

¹³⁵ This technique was also used in Tati's earlier film *Les Vacances de Monsieur Hulot* (1953).

opposed to the camera following the subject either by panning or (as was increasingly common at this time), by tracking (the camera accompanying the subject). I experimented with use of a fixed frame and multiple occurrences of subjects in my practice to produce traces of motion, as seen in chapter three. Traces may also be visible in a single exposure, as in chapter three (Figures 34 and 35), and earlier in this chapter [Figures 62, 63 and 64], but these do not allow for the accumulation of different people across similar routes, to balance variations in the flow.

Elevation, plan and section

Any single visual representation of architecture is necessarily a partial one, from which we can attempt to extrapolate a structure and its associated spaces and uses. The simplest of formal architectural drawings are those used for construction: plans, sections and elevations. It was suggested I organise my practice for this thesis by utilising these three modes of representation.¹³⁶ I conducted a series of experiments to assess the effects of restricting views to these conventions. I also ran a workshop with second year students from Manchester School of Architecture's M. Arch. course (17/11/2014) [Figures 77 and 78]. The results from both of these showed that such partial representations are hampered by the limited positions that the camera can be placed in: while elevation views are often possible, (internal) plan views require high ceilings and a convenient vantage point, such as above an atrium.



Figure 77: Ahmad Hakim, *Elevation*, Bridgeford Street Building, University of Manchester (2014)
By kind permission of Ahmad Hakim © A Hakim (2014)

¹³⁶ By Dr. Ray Lucas, Manchester School of Architecture, The University of Manchester. This was to aid clarity of comparisons between different photographic techniques, with less distraction caused by differences in viewpoints.

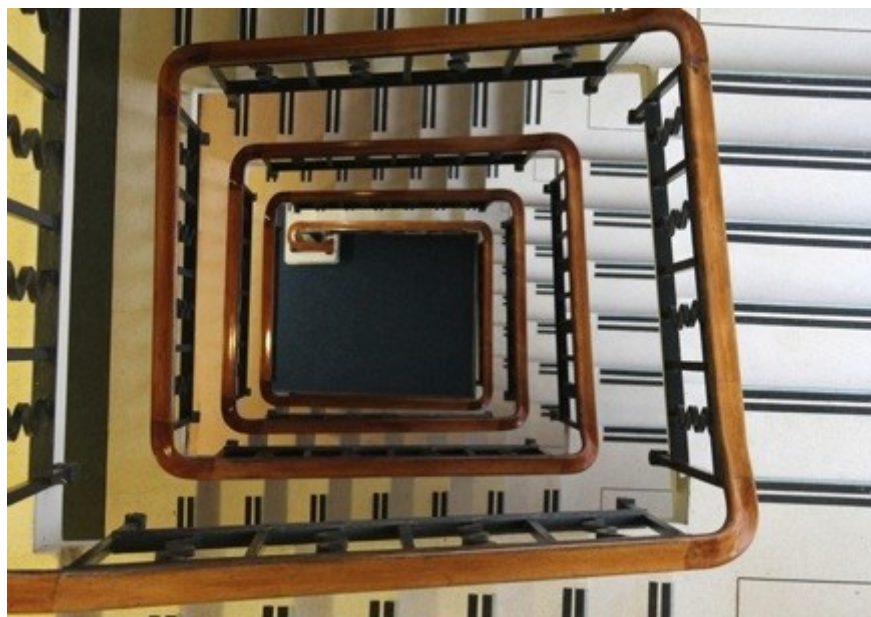


Figure 78: Ahmad Safri, *Plan view*, Samuel Alexander Building, The University of Manchester (2014)
By kind permission of Ahmad Safri © A Safri (2014)

The possibilities for sections are similarly limited to those visible. The drawing's slice through the structure – that is so revealing of proportions, divisions and material thicknesses – is rarely seen where you may desire: often it is only during construction and demolition that such views are visible.

<http://www.juergenhill.com/Seiten/in/school.html>

and

<http://www.juergenhill.com/Seiten/in/surg.html>

Figure 79: Juergen Chill, *School* (2006) and *Surgery* (2006)

In my research I found several examples of methods employed to produce plan images, albeit of single spaces rather than the plan view's full coverage of a building. Juergen Chill (Chill 2017) produced three series between 2006 and 2009: *in* [Figure 79] (business and domestic spaces, 2006), *Zellen* (prison cells, 2006–07) and *Bordelle* (individual rooms in brothels, 2009). Each of Chill's projects underlines the physical similarities between rooms with similar functions, as well as the individual personalisation of those spaces.

Menno Aden's similar series – *Room Portraits* – used multiple exposures that were stitched together in post-production, producing 'flattened two-dimensional scale models' [perspective plans] (Aden 2012) [Figure 80]. *Room portraits* is more ambitious than Chill's projects, both in scale and in the content of the various interiors, showing indications of the ergonomic layout and functions of the spaces. These 'aerial' images draw attention to

their surreal camera position, particularly in Aden's wider-angled images that exaggerate the room's perspective. Although happy to borrow the revealing nature of the 'aerial' view, I prefer to restrict my own practice to less wide views, to retain some feeling of normality in what is a difficult balance between the informative nature of a vertical perspective and the awareness of the improbable viewpoint that this view generates.

<https://www.dezeen.com/2012/06/12/room-portraits-by-menno-aden/>

Figure 80: Menno Aden, *Untitled*, Berlin, [Room Portraits series] (2012)

Despite these limitations, the formality of ordering practice into the recognisable sub-sections of elevation, plan and section allowed a comparison with non-photographic representations, and the challenge threw up some interesting similarities with examples from other media; particularly within cinema. As this method of organising image-taking practice allows a comparison across images and sites I have pursued it in my later practice. Therefore I will make a more detailed assessment of my contextual influences and reflections in chapter five.

In the next chapter I explore several techniques in greater depth: multiple exposures of one scene accumulated together in the same frame, multiple images formed by transparency and reflections (in sections and elevations), multi-roomed and/or multi-floored sections and elevations and finally, collaged constructions that are explicitly separate, joined images (emphasising that component images were shot at different times). All techniques capture specific moments over an extended period, compressed together into photographs. They also utilise many of the techniques explored in this chapter.

Chapter Five

Practice-driven critiques

This final chapter is a series of analyses of the compromises made between different forms of representation, each displaying certain properties to contextualise buildings. For each example I critique the property or properties involved and the decisions made to negotiate between inclusion and excess. Each of these areas is illustrated by examples of practice that I feel best communicate the concepts that I set out to explore at the start of the research. For each area under consideration I will refer back to the evidence in the previous chapters that support these aims.

Figure 81 (P) is typical of the multiple exposure photographs I made early in the practice: at ground level, only two exposures and, necessitated by the camera's position, using a very wide angled lens. To improve the view of flow and spatial relationships I moved to higher vantage points (where possible) and greater distance from the subjects, as I will illustrate later.¹³⁷ The camera position and field of view in this image gives a dramatic exaggeration of perspective and a visible difference in blurring between subjects near to the camera and those further away. This dynamic impression of perspective and movement illustrates the environment of a busy platform from the human scale and human viewpoint. The passing people do not obscure the architecture, but their scale and the blurring of their forms constitute a significant proportion of the frame, dominating the view.

¹³⁷ See Appendix Two for a summary of the spatial relationships between low-level and high-level vantage points.



Figure 81: (P) D Trillo *Platforms 4 and 5 Piccadilly Station, Manchester* (2017) 3 exposures, 21/04/2017 13:14 – 13:15

Temporal images by compositing multiple exposures

Images populated with people from separate exposures have been a recurring technique throughout this practice (often mixed with other techniques). As my aim was towards a temporal, animated, inclusive and more 'realistic' representation, the first three of these descriptions are satisfied, but 'realism' is more contentious. In the 1990s digital imaging was widely seen as introducing an era of image construction and manipulation in which we could no longer rely on the veracity of any images. I will leave the digital/analogue debate for others as it has (hopefully) already run its course.¹³⁸ The ways in which I take images has altered little during those changes; it is the post-production techniques and images' dissemination that have altered irrevocably. The digitally produced constructions in this practice have taken two routes: on one hand are the single occurrences of people in a frame, where the framing and view are unaltered. They have the appearance of a traditional (single exposure) photograph, but, when taken to excess, may appear contrived and false.¹³⁹ The other constructions are from separate frames that are overtly multiple exposures – and therefore purposely show that they are taken at different times.

¹³⁸ The change in producing photographs [as separate from the dissemination of images after the photograph is taken] – analogue versus digital – has been a pet topic of non-photographing writers and critics who see the technology as taking/making the images, ignoring the photographer's input (as discussed earlier). The cameras are still boxes with lenses and a method of capturing that image. The main 'settings' are still the shutter speed and aperture controls. The photographer makes all of the other decisions. For well-informed reading on the changes due to digital technologies see McQuire (1998), Brind et al. (2007), and Green and Lowry (2006).

¹³⁹ See Stephen Wilkes's digitally 'blended' image in chapter four.

I will come to these collages later, but first I want to assess and contextualise the single frame images.

As we saw in chapter three, the de-construction of movement and its subsequent re-construction (as in chronophotography) produces 'cinematic' stills, between stasis and motion: that is re-animated by our perception. Digitally accumulating layers of images allows spatially separated figures in a scene to appear contiguous and concurrent. This notion of constructing images from separate elements, possibly accumulated over a lengthy period of time, is not a new one. Photographers utilised multiple exposures, collated into single frames, very early in the history of photography. For example, Swedish photographer Oscar Rejlander's *The Two Ways of Life* (1857) [Figure 82] combined together thirty-two separate negatives at the printing stage. This produced an ensemble of posed actors that (allegorically) demonstrated the choice of the paths towards good and evil.

Although digital constructions are frequently cited as being false, unreliable or deceptive, it is not the technology (analogue or digital) that deceives the viewer, but those who use the technology. The methods and techniques may have changed, but the intentions and representations are still in the hands of the author; and still dependent on the author's choice of what they are communicating, and in what form and context that evidence will be seen.



Figure 82: Oscar Rejlander, *The Two Ways of Life* (1857)
[out of copyright]

There are a growing number of practitioners who produce digital constructions edited to show accumulated actions over a period of time, although in almost all cases

they illustrate people without reference to architecture. Colin Thomas' *The Wrekin*, *Shropshire Days* series (Thomas 2011) [Figure 83] utilises digital techniques directly comparable with the construction of Reijlander's image as noted above. Malcolm Glover is another exponent of this technique, exemplified in his *Timescapes* series (Glover 2012). Similarly, Mitra Tabrizian's *Beyond the Limits* (Tabrizian and Hall 2004) and *Another Country* (Tabrizian, Bhabha et al. 2012) use digital accumulations from separate exposures. These differ from Thomas' and Glover's as her constructions are usually staged. This is either for commercial work or when photographing in her native Iran, for legal reasons.¹⁴⁰

These practitioners are close to my field of practice as they use multiple image captures and digital constructions, although in their practice the subjects generally appear static. Each 'condenses time' by editing events into single frames over periods that are significantly longer than the exposure times of the majority of photographs.



Figure 83: Colin Thomas *The Wrekin* [from the *Shropshire Days* series] (2009)
By kind permission of Colin Thomas, © Colin Thomas 2009

The closest project to my chosen technique for accumulations in single frames is Esther Hovers' *False Positives* (2016), which is based on the triggers for automatic recognition by surveillance software of 'subversive' activity on the street. She combined separate images of people to replicate each of these conditional 'triggers' to critique observation, surveillance and 'the control exerted over public space' (Hovers 2017)

¹⁴⁰ It is illegal to assemble large groups in public places in Iran.

[Figure 84]. The people in Hovers' images are moving within an urban environment and their movement, or their spatial relationships, are the subject of the images. The difference between these and my own constructions is that Hovers' images are about the observation of the people, whereas mine are concerned with the people's movement: specifically as it relates to the architecture. Hovers' titles allude to the duration over which her images were captured to construct the final artwork, as do several of my own (and as noted previously about Michael Wesely and others). The implied nature of their concentration of 'time' creates an unnerving effect, confusing the viewer's perception.

Iain Borden suggests dialectical images as a method of introducing a different temporal dimension to architectural photography: 'dialectical imagery [...] tends to destabilise time, making it discontinuous, pushing it outside historical, periodised time' (Borden 2007, p 66). The multiple temporalities of my practice also form a discontinuous representation, but one that is designed to communicate an overall impression, rather than a disparate pairing. Paul Graham's expression the 'folding of time' serves to illustrate the process involved in gathering moments together.¹⁴¹ He advances that

perhaps we can agree that through force of vision these artists strive to pierce the opaque threshold of the *now*, to express something of the *thus* and *so* of life at the point they recognised it. They struggle through photography to define these moments and bring them forward in time to us, to the here and now, so that with the clarity of hindsight, we may glimpse something of what it was they perceived. Perhaps here we have stumbled upon a partial, but nonetheless astonishing description of the creative act at the heart of serious photography: nothing less than the measuring and folding of the cloth of time itself (Graham 2010).

<https://estherhovers.com/False-Positives-1> [third image]

Figure 84: Esther Hovers *Overview E: 6 minutes 2 seconds* (2016)

I see this folding of time as a compressing or condensing of incidences, of edited moments. Although folding of cloth might suggest pleating, I believe Graham does not suggest a regular folding, as selections would be too random. I see this folding as being determined by choices: which moments to shoot, which of these to keep for the final selections and which of these compressed selections to display. Figure 86 (P), a triptych of views of the Benzie building, shows composites from different times. These three views

¹⁴¹ My reading of Graham's text is that he refers to photography in general, as collecting moments and bringing them together in collections or series, not the construction of this act into one frame that I use his words to illustrate.

all accumulate every person passing in twenty minutes. They are taken on the same day, spaced only three or four minutes apart. They show an 'average' number of people, aggregated over an extended period, yet each does not show *the* average. As three equal periods, taken soon after each other, they illustrate three different impressions: each being an equally valid *representation*. This comparison is shown to illustrate that each edited selection, each composite, is *a* representation, one of an infinite number, not *the* representation. These therefore are (at best) samples, only partially indicative of the life of the building.

Beatriz Colomina wrote of the order of such altered realities when viewing multiple, related images together, that 'the manipulation of two realities – the superimposition of two stills, both traces of material realities – produces something that is already outside the logic of "realism." Rather than represent reality, it produces a new reality' (Colomina 1996, p 80). The notion of reality is therefore suggested as a negotiated concept, forming a communication between producer and viewer that is of a different order from traditional views.

Graham's book *The Present* (Graham 2012) depicts linked pairs of images as diptychs [Figure 85]. Shot only moments apart, their subjects can often be seen in both frames. Graham highlights the (in)decisive nature of the moment, by showing that these moments are reproducible: different, yet similar. Each is framed by the same location and almost at the same time, but with a different, manifest temporality, commenting on the sub-genre (street photography) that produced the term 'decisive moment', as well as how the traditional temporality of photography is subverted merely by placing two or more images together. John Maclean's book *Two and Two* (MacLean 2010) (Maclean 2016), treads similar territory, without the focus of Graham's text (and title). He was particularly influenced by Robert Rauschenberg's twin paintings *Factum I* and *Factum II* (1957). These almost matching paintings were Rauschenberg's reaction to the myth of spontaneity that was particularly in vogue at that time in American art (Hodgson 2010), producing 'a perfect and ruthless critique of the very notion of accident' (Hughes 2006).

<http://visualcultureblog.com/2012/08/the-present-by-paul-graham/>

Figure 85: Paul Graham *Penn Station 4th April 2010, 2.30.31 pm*, New York (2010)

The images in Figure 86 are not truly vertically shot: a 'plan' view is incongruous and difficult to produce (to access), but examples of 'bird's-eye' views show spatial relationships and movements of people across the floor plan more successfully than

horizontal views. These views are likely to be only partially vertical, closer to an overview, shot from high ground or buildings: distanced from the subjects and therefore somewhat separate and objective.

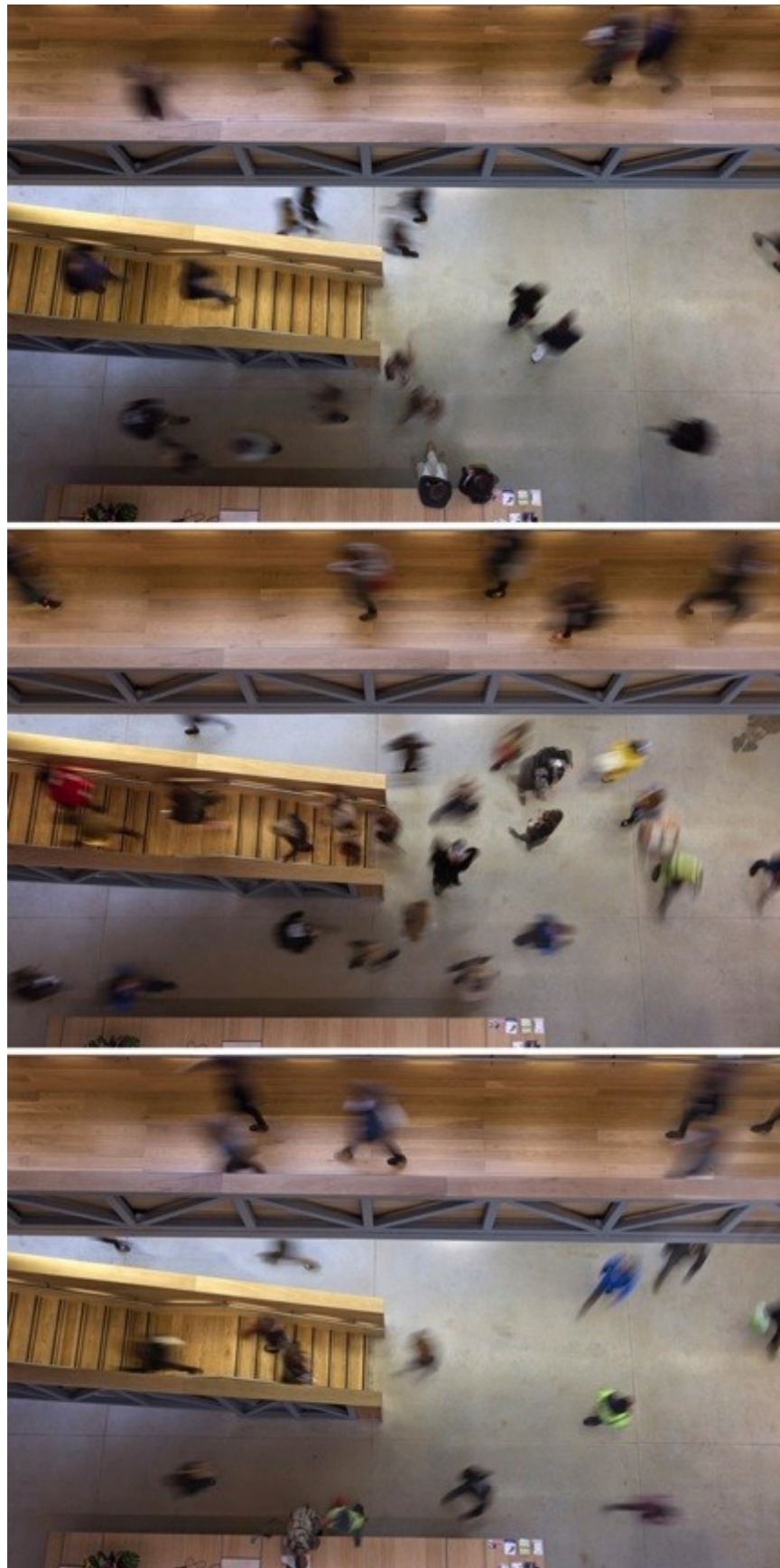


Figure 86: (P) D Trillo, *Benzie triptych* (all 08/11/2013): Top 8 exposures, 12:00 – 12:20. Middle 13 exposures, 12:23 – 12:43. Bottom 6 exposures, 12:47 – 13:07. Each accumulated over twenty minute periods.

The inclusion of contextual, human information can become complex, so I prefer to show relatively few people, quite small in comparison to the frame. Therefore the

images need to be exhibited on a large scale to see the people clearly. John Davies and Gabriele Basilico are two of the finest exponents of creating overviews from high vantage points, while still retaining clarity of the people illustrated [Figures 87 and 88]. Within their images the relationship between structures, ground and people is carefully selected: height of viewpoint, distance to subject and the angle of view being particularly influential.

<http://www.johndavies.uk.com/monton.htm>

Figure 87: John Davies, *Runcorn Bridges*, Cheshire (1986)

http://store.fondazionefotografia.org/wp-content/uploads/2013/10/480965_431386073593678_978703786_n.jpg

Figure 88: Gabriele Basilico, *Lausanne* (1987)

Sections and elevations

As I developed the practice the multi-roomed, and/or multi-floored views of sections and façades threw up challenges to accepted perceptions of single perspectives. These could be individual frames (that each have multiple exposures of people) [figure 49 (P) in chapter 3], or each room or floor could be a separate frame, joined (collaged) together in post-production [Figure 89 (P)]. These spaces are separate, yet (physically) connected: the ‘connections’, or divisions, exhibiting the fourth wall [as discussed in chapter four] that emphasise connections that are not always immediately apparent to their occupants. They have a different spatial relationship to single room or elevation views: parallel, concurrent, and yet not wholly contiguous. Occupants are aware of this (if asked), but not normally conscious of it, unless in visual or audible contact. Both Figures 89 and 90 were shot at twilight, revealing the dual visibility of exterior and interior. The images were shot across sessions over three days [following an earlier commission to photograph this building in 2006]. Figure 90 (P) draws together multiple images of the same building from a closer viewpoint than Figure 89, altering the spatial relationship between frame, building and people. It shows a first-floor office worker in multiple positions preparing to leave for the day, a cleaner dusting window sills, a worker checking his shoes, another traversing the foyer and pedestrians and cyclists leaving traces of their ephemeral images outside. Figure 89 shows the full height of the building, but at a greater distance, exhibiting the relatively small scale of people. This produces a better compromise for ‘alternatives’ to commercial practice as the people are visible, yet offer minimal distraction.



Figure 89: (P) D Trillo *RBS Façade composite*, 5 exposures (2017) 5 exposures, 30/01/2017 17:04 – 17:10



Figure 90: (P) D Trillo *RBS detail* (11 exposures) (2017) 11 exposures, 31/01/2017 16:49 –16:55

For the film *Playtime* (1967) Jacques Tati¹⁴² and architect Eugène Roman created sets consisting of real construction materials (glass and concrete) at Saint-Maurice, Paris. The film's crippling expense created an environment of, and about, urban space like no other: as Brian Gibson eulogised, a 'cinema-altering journey through time and space' (Gibson 2013). Typical of Tati's direction, many scenes are 'held for so long that the eye can wander about the frame' (Campany 2013), emphasising the complicity of the viewer

¹⁴² Jacques Tatischeff.

in observing the techniques Tati uses to allow his allegories to unfold. Jonathan Romney wrote that ‘No other film uses space, architecture and crowds quite like this, [...it is] a film minutely and comprehensively thought-out in three dimensions’ (Romney 2014). It is a running commentary on the proliferation of urban sprawl and identikit spaces across multiple countries: a precursor to the globalisation seen in subsequent decades.¹⁴³ In one scene we see two identical apartments, side by side [Figure 91]: the audience is excluded outside, as voyeurs, the separation emphasised by the lack of sounds from within.¹⁴⁴ We see completely different scenarios acted out, oblivious to each other in what are otherwise identical spaces (Tati 2004 49m 30s). Later, four rooms are seen, each in a different apartment, each with different lives lived in them, yet seemingly in a continuous space as the dividing interior walls are obscured (Tati 2004 51m 20s).

<https://ksamaarchvis.wordpress.com/2016/12/06/absurdities-of-modernity-playtime/#jp-carousel-1235>

Figure 91: Jacques Tati, film still from *Playtime* (1967)

These scenes show concurrent events (on the same ‘time-line’) filmed together, yet if we attempt to watch the scenarios unfold, we need to concentrate on one compartment at a time.¹⁴⁵ In this way the directors emphasise the discrete nature of parallel lives lived out in a connected environment, facilitated by the building’s structure (both proximity and separation). It is the jolt to the viewers’ perception of time and space that has fascinated audiences and, for the same reasons, I pursued similar constructions within my practice.

There is an *implied* plurality of temporalities in these scenarios: one that is echoed by the actual plurality of people’s presence in the composite images I produce [Figures 81, 86, 89 and 90 for example]. The plural nature of these images is disconcerting, challenging our perception of a single view of the built environment, opening up the possibility of acknowledging multiple temporalities in a medium where recognising temporality is traditionally problematic.

¹⁴³ A poster ‘Fly to London’ shows a tower block, bus and policeman: a format that is mimicked by the actual scene outside (with an identical building). Later there are multiple copies for many destinations, all shown with the same building (U.S.A., Hawaii, Mexico, Stockholm, Japan can be seen (47m 33s).

¹⁴⁴ Throughout the film distance, scale and volume are also represented through sound.

¹⁴⁵ Preceding *Playtime*, but without Tati’s directorial eye for space and construction, is a scene in *The Ladies’ Man* (1961) Dir. Jerry Lewis: see <https://www.youtube.com/watch?v=C8xBUujFP0> From 1m 30s the view shifts across rooms showing dividing walls, from 3 minutes the camera pans away to show multiple levels (appears to be an atrium), from 5m 30s the shot widens to show whole ‘building’ with façade ‘cut-away’ (actually a specially constructed film set). It is akin to a lavish set for a Broadway production, open-fronted like a doll’s house, yet a construction of actual rooms.

The selective cropping of these façades and sections decontextualises the view, both from the remainder of the building and from the building's surroundings. Michael Wolf has exploited this effect in his series Architecture of Density [Figure 92]. Wolf excludes the 'horizon and sky to flatten the space to a relentless abstraction of urban expansion with no escape for the viewer's eye' (Wolf 2008, p 7). In Hugh Campbell's paper *The Façade Fills the Frame* he spoke of a 'disembodied viewpoint that is implicit in these images. The photographer is not present here – the trace of the presence, the evidence of a point of view, which we might inhabit as proxies, is not offered' (Campbell 2014). The flattened perspective implies a two-dimensional structure, but in some of Wolf's Chicago and Hong Kong images (and in Figures 89 and 90), the timing is such that the indoor and outdoor light levels are balanced. This adds to the transparency of the glass: lessening reflections and the most obvious, visual difference between inner and outer zones, allowing 'the surface [to] disappear and depth to open up beyond the façade' (Campbell 2014).

<http://archeyes.com/architecture-density-michael-wolf/>

Figure 92: Michael Wolf No. 39, Hong Kong (2005)

Multi-layered planes

Some sectional views and façade shots exhibit multi-layered planes (via transparency and/or reflections): they are often unavoidable in sectional and elevation photographs. In Figures 93 (P) and 94 (P) we can see reflections from and transparency through several windows. By disrupting the 'normal' view of subject before camera, these images play with the viewer's perception of depth, multiplicity and spatial cognisance. Similarly to other images in this practice they combine different exposures from different times. In these examples the people occur more than once: not the sequential chronophotography explored earlier, but an accumulated impression of figures that are in motion, but not in transit through the image. This directs the practice towards a different way of answering the research question, one that is more obviously a construction, yet also clearly populated and temporal. My concerns with the viability of this form are that it lacks the clarity of other modes within this practice. The five exposures for each image do not show direction or flow through the space; thus it is impossible to follow the order of movements. This makes an important point about the capacity of the practice to reveal temporality and movement. For different forms of movement – walking and running versus standing and sitting – different forms of the practice are suitable for given

situations, contingent on the actions of those observed, irrespective of the architecture involved. The different forms of practice offer solutions to different scenarios, but there is no single form that is ideal for all eventualities.



Figure 93: (P) D Trillo *Benzie reflections 4* (2014) 5 exposures, 13/05/2013 15:19 – 15:21



Figure 94: (P) D Trillo *Benzie reflections 2* (2014) 5 exposures, 13/05/2013 15:23 – 15:26

Returning to Tati's *Playtime*, the opening sequence leads us through what appears to be an office block, then appears to be a hospital, later revealed to be an airport: all sites of transit and transition – stop, wait, move, through. People's routes through spaces explore the regularity of modern buildings' constructions: they walk in straight lines, turning at right angles (the opposite of the desire paths shown earlier). This examination of the uniformity of construction is also played out in the use of glass: to shut out the cacophony of the melee outside, or the cacophony of a restaurant when seen from outside. A 'trompe l'œil' created by multiple reflections in float glass is a reminder of the unreliability of visual observation: we are not sure whether people and objects are behind or in front of the glass, or indeed in which glass we are seeing their reflections. To reinforce this sensation in *Playtime*, people sometimes walking into glass doors/windows or appear to walk through (where we think we see) glass. In one scene a doorman repeatedly 'opens' a non-existent glass door that has already shattered (actually moving only the door handle). The feeling of unease provoked by these views is why I have included them here.

Saul Leiter and Lee Friedlander are two photographers who have exploited this technique in their images, although they were preceded by Édouard Manet's *A Bar at the Folies-Bergère* (1882) [Figure 95]. Manet's painting was Jeff Wall's inspiration for *Picture For Women* (1979) [Figure 96]. Wall's picture has had extensive critical analysis because it was the first photograph to break into the international large print art market. Both images feature the superimposition of figures behind and in front of the camera, in unsettling compositions that appear impossible. Manet had the advantage of painting figures where he wanted them, whereas Wall had to rely on skilful positioning of camera, mirror and participants. For Wall, it is the 'location of the camera which most often determines the character of the particular space – physically you are transferred right there' (Campany 2011, p 4). Wall refers to the arrangement of planes and distances in the image as 'spectatorial relations' that 'partly confuses and obscures spatial and perspectival relationships' (Campany 2011, pp 49 and 52). As with the earlier plurality of temporalities offered by sections and façades, these images draw attention to the less than total account offered by photography, the reliance on viewers' perception, assimilation and memory. They therefore focus attention towards the 'social structures of looking' (Campany 2011, pp 53 and 57) or, as John Berger once termed it, 'examining the structure of appearances' (Hockney and Wechsler 1984, p 40), a further de-stabilising effect of the photograph on our perception of space and distance.



Figure 95: Edouard Manet *A Bar at the Folies-Bergère* (1882)
[out of copyright]

<http://www.tate.org.uk/whats-on/tate-modern/exhibition/jeff-wall/jeff-wall-room-guide/jeff-wall-room-guide-room-1>

Figure 96: Jeff Wall *Picture for Women* (1979)

David Hockney described his fascination with the disturbing effect of transparency and reflection as being 'interested in surfaces of no surface, like mirrors and water [...] Are you seeing the surface of the water or through the water? It's fascinating when you try to analyse what your eyes are actually seeing' (Hockney and Haworth-Booth 1983, p 12). Hockney pinpoints the attraction these distortions hold for those interested in the way we see, the ways in which our faculties can be revealed as being unreliable, often in conflict with our memories and imagination.

https://www.infocusgalerie.com/en/photographers/kellner_thomas_902c1

Figure 97: Thomas Kellner *Neues Rathaus, Munich* (2002)

Collages

Photographic collages can be formally arranged (creating panoramas), informal such as Thomas Kellner's film-strip collages [Figure 97] (Kellner 2003), or somewhere in between: the informal opening the possibility of being deliberately 'inaccurate' (for example by moving the camera, changing scale within the shot). In the series *Pathfinder*, Sohei Nishino's cartographic style is produced by painstakingly assembling thousands of images after spending months walking around a city: the multiple viewpoints and ever-changing perspectives follow the tradition of Japanese map-making and scroll-paintings [Figure 98].

<http://soheinishino.net/dioramamap-berlin/>

Figure 98: Sohei Nishino *Berlin: August – December 2011* (2011)

Linear collages are often folded into accordion-fold books, as in the case of Ed Ruscha's *Every Building on the Sunset Strip, Los Angeles (1966)* (Ruscha 1966) is noted for the formality of its regular, perpendicular frames and the informality of their timing and lighting [Figure 99]. A 7.6m (27 feet) long, continuous strip, it specifically references its location in Los Angeles, it is a series of photographs taken from the perspective of the passing car: not a single viewpoint, but a succession of deadpan, frontal, 'real estate' style images of every building on 'the strip'.¹⁴⁶ The flat, frontal style was reminiscent of Walker Evans' photographs of vernacular buildings of rural America from the 1930s. Ruscha's book reflected the unchecked urban sprawl: the low-rise, anonymous and seemingly endless ribbon developments spreading across America.¹⁴⁷ Each side of the street was shown as top and bottom strips, vertically opposed. This breaks the frontal, orthogonal projection, reminding the viewer of the two-dimensional nature of the page: at once indicative of viewing the building(s), looking down we see the view that 'should' be behind us, yet is in the same plane, but vertically reversed, necessitating the rotation of the strip to view 'upright'.

<https://www.artgallery.nsw.gov.au/collection/works/429.2008.a-bbb/>

Figure 99: Edward Ruscha *Every Building on the Sunset Strip, Los Angeles (1966)* (1966)

I see a link here with the history of urban photo-books, particularly the 'panoramistic' booklets popular in the late 19th century, as Steven Jacobs notes (Jacobs 2012, p 215), but also with linear road maps of the 18th century. This arrangement on the

¹⁴⁶ Robert Venturi referenced this book in his photo-montage of Las Vegas gas stations (Jacobs 2012, p 214).

¹⁴⁷ Preceding the 'New Topographics' exhibition by a decade.

page of buildings in two-dimensions, without recourse to projections that mimic three-dimensional perspectives precedes renaissance art, but is also seen in naïve art, such as Alfred Wallis' paintings of Cornish fishing villages [Figure 100].

<http://www.tate.org.uk/art/artworks/wallis-houses-at-st-ives-cornwall-t00239>

Figure 100: Alfred Wallis *Houses at St. Ives* (c. 1934)

I have made collages (Figure 101 (P)) that are not attempting to merge separate images seamlessly (as in Figure 89), but instead are openly temporal, as revealed by the gaps between the frames. Their separate temporal nature is also shown by visible differences that frames are shot at different times: lighting (exposure and colour temperature), the discontinuity of lines and moving bodies cut off at frame edges (people, traffic, clouds, planes). Referring back to John Donat's term for a photograph: 'a slice of time', is a temporal choice, but it is only a partial sample. Collages therefore are multiple, partial samples, shown together, reinforcing the agency of the editor who places these images together, and increasing the averaging effect of their accumulation of movements.



Figure 101: (P) D Trillo *University of Manchester collage 1* (detail) (2017)
13 exposures (within detail), 28/04/2017 10:12 – 10:19

Figure 101 (P) represents a composite image made by a 'moving' camera, progressing along the road and free to select areas of the buildings at any height. The construction comprises images in two or three rows, without regard for the formality of parallel, vertical lines (as in Figure 89). The freedom of expression is closer to Kellner's style, with blatant misalignments and noticeably temporally separated exposures. This is seen most evidently in the mismatched blocks of sky: a clear message that the component images are taken at different times, emphasising the construction's temporality.

Once freed of the single-point perspective, collages of photographs are closer to the multiple viewpoints exhibited by painting and drawing [see chapter two] – constructed, edited, temporal and, most notably, spatially independent of photography's anchor in the '(only) here and (only) now'. This is a representation from a mobile viewpoint, reflecting East Asian art (notably Chinese and Japanese scroll paintings) and the use of moving scanning cameras as noted in chapter four. Figure 101 (P) was an attempt to embrace the free-form of Kellner's collages, but also David Hockney's 'joiners': his multiple image collages constructed (originally) with Polaroid 'instant' prints. It does not exhibit the formal conventions of commercial architectural photography and therefore I did not pursue this technique any further in this form.

The painter's eye

Collages with a regularity of shooting and construction form a more coherent final image, none more so than the early grid collages by David Hockney that he termed 'joiners'.¹⁴⁸ Hockney's skill as an artist produced articulate composites that took on a 'life' beyond their individual parts. Hockney said his Polaroid collage grids were made by 'assay and correction, approximation and refinement, venture and return' (Hockney and Wechsler 1984, p 13).¹⁴⁹ There are distinct parallels with the drawing and painting processes familiar to Hockney: duration, manipulation of positions and scale and movement around the area of the image. It was this process that separated them from conventional photography: 'these photographs are not principally about their subjects. [Not] so much about things as they are about *the way things catch your eye* [his emphasis]. I don't believe I ever thought as much about vision, about how we see, as I have during the last several months' (Hockney and Wechsler 1984, p 16). The 'joiners' produced an 'illusion of

¹⁴⁸ Mainly produced between 1981 and 1983.

¹⁴⁹ Referring to the exhibition 'Drawing with a camera', Knoedler Gallery, New York, 1982.

space [Hockney] hadn't seen in a photograph before' (Wright 2014, 1hr 8m). I feel that this process was, for Hockney, a departure that took him beyond his experiences with drawing and painting. Lawrence Wechsler commented on Hockney's collages as being 'a school for vision. For Hockney, vision consists of a continuous accumulation of details perceived across time and synthesized into a larger, continuously metamorphosing whole' (Hockney and Wechsler 1984, p 16). Hockney explained that during production of the collages he realised 'how much thinking goes into seeing – into ordering and reordering the endless sequence of details which our eyes deliver to our mind. [...] The general perspective is built up from hundreds of micro-perspectives. Which is to say, memory plays a crucial role in perception [...] my eyes catch this or that detail—they really can't keep any wide field in focus all at once—and it's only my memory of the immediately previous details which allows me to form a continuous image of the world' (Hockney and Wechsler 1984, p 16). As represented by his collages, this is a separation of human vision from single-point perspective, by use of a single lens that, for Hockney, is closer to the experience of seeing and understanding the world, than any single photograph. Comparing his depictions of movement with Marcel Duchamp's *Nude descending a staircase*, he noted that Duchamp's 'point of view was fixed in one place – only the subject was moving. Here I'm trying to convey what it's like for both viewer and subject to be moving through space' (Hockney and Wechsler 1984, p 33).

I contend that there are other factors that differentiate photography from our vision: The human eye constantly refocuses as its attention moves around a view. In Hockney's 'Steering wheel, October 1982' [Figure 102], each part of the collage - the driver's view – is in focus and similarly exposed. The wheel, the desert's horizon in bright sunlight, the road signs, the rear view in the mirror and Hockney's own legs in the dark foot-well are all sharp and evenly-toned. This mimics the action of the human eye as it refocuses and adjusts the iris to compensate for brightness. In this way, the final image is not how we see the overall view, but it replicates our perception of how we see it, as each detail appears to match the tone and focus we experience.

For Hockney the popularisation of photography precipitated Picasso and Braque to produce Cubism, to tackle the 'flaw[s] in the camera [about] perception and time' (Hockney and Wechsler 1984, p 19). It was the cubist notion of abandoning the 'window' (barrier) view of the Western, camera obscura tradition, for the Oriental view of the doorway (portal) that persuaded him to move from the fixed-framed, white-bordered Polaroid prints, to flush-printed (full-bleed) prints (Hockney and Wechsler 1984, p 20).

Hockney felt he was 'drawing the collages twice' (Hockney and Wechsler 1984, p 21): once when framing the shots, and again when editing and arranging the collages. This is an explicit referencing of the collages as processes that follow his practise of painting, but I decided that my desire to be clear about the collage's construction (and with it, its temporality) meant that I prefer the inclusion of the white spaces.

<http://art.daimler.com/en/artwork/david-hockney-the-steering-wheel-3-1982/>

Figure 102: David Hockney *The Steering Wheel* (1982)

The image that was decisive in choosing the later collages' format was Olivo Barbieri's *Napoli* 2005 [Figure 103]: a series of vertical images that produce a controlled panorama. Barbieri chooses a precise and limited depth of field, placing his emphasis firmly on the people, not the architecture, whereas I prefer a far deeper depth to the image and some blurring to indicate movement. It is the spacing of the images that speaks directly of separate frames, each one capable of functioning as an image in its own right. Through this series I approached many of the later collages as linked yet discrete images, forming a panorama of multiple viewpoints, clearly shot as individual exposures.



Figure 103: Olivo Barbieri *Piazza del Plebiscito, Napoli* (2005)
By kind permission of Olivo Barbieri

A more formal approach

To find a better balance in the practice between formality and informality, I made collages where the verticals were parallel, the height was normally contained within a single row of images and the horizontal lines were more closely aligned together [Figure 104 (P)]. The rectilinear approach assumes the style of traditional architectural photography, but the collage construction retains the temporal, episodic method. In several frames I also include people close to the camera, as a way of 'breaking the fourth

wall', of reminding the viewer that this is a photograph – mediated, constructed, edited – not a building. When examined individually the sections appear quite traditional (with the exception of the two people nearest to the camera), albeit with awkwardly cropped sides. Without the serial joins and subsequent framing each image could pass for a formal interpretation of the elevation. It is with the amalgamation of its construction into a panorama that the image as a whole becomes more abstract, more clearly a construction.



Figure 104: (P) D Trillo *University of Manchester collage 2 (detail)* (2017)
9 exposures in 5 sections (within detail) in two visits, 13/08/2017 10:52 and 01/09 10:15.
[The original image spans 9 sections]

In later collages I experimented with moving the camera around the building [Figure 105 (P)]. The multi-point perspectives are difficult to align coherently, but I felt that it was necessary to try to do this because without those connections the images become a series, rather than a collage. While the result may not be close to human vision, or experience (the diverse and somewhat erratic nature of which was noted previously) it does present, in a 'single' image, a discontinuous visualisation, with the formality of traditional architectural photography within each separately framed section (as noted for Figure 104 (P)). The proximity of people in this second image is more distracting than many of the sections within Figure 104 (P) as that image is separated from the majority of the people by the road. This distancing from the building and the proximity of people affects the relative size in the frame of each. This relationship was studied at the beginning of this chapter and is summarised in the appendices.



Figure 105: (P) D Trillo *Central Library collage 2* (2017) 8 exposures, 13/08/2017 11:32 – 12:10

How we see

Although an avid user of photography, both socially and as preparation for his paintings (Hockney and Haworth-Booth 1983, p 9),¹⁵⁰ Hockney was originally dismissive of the medium. He ‘always distrusted the claims [...] to its greater reality or authenticity’. In particular, he was frustrated by the distortions of wide-angle lenses, the ‘falsification [that depicted] something you never actually saw. [As] Your eye never sees that much in one glance. It’s not true to life.’ (Hockney and Wechsler 1984, p 8). Hockney saw the medium as if ‘looking at the world from the point of view of a paralysed Cyclops – *for a split second*.¹⁵¹ But that’s not what it’s like to live in the world or to convey the experience of living in the world’ (Hockney and Wechsler 1984, p 9).¹⁵² This description is revealing in several ways, each of which is relevant to this thesis. The lack of ‘realism’ is that it never matches our actual view with our own eyes. This is not merely a physical entity, it is also cultural and psychological: as John Berger stated, ‘the process of seeing [...] is less spontaneous and natural than we tend to believe, [...] a large part of seeing depends upon habit and convention’ (Berger 1972a). As indicated earlier, the angle of view of most lenses does not correlate to human vision; they are either wider, or narrower than our field of view.¹⁵³ It is a fact compounded and indeed complicated by the duality (unlike the Cyclops) of our view; that each eye has one angle of view, yet the combined field of view is far greater. We also concentrate our (binocular) vision on a smaller field within this wide area: one that is constantly changing as we scan a scene. It is

¹⁵⁰ Preceding paintings with dozens of photographs and sketches.

¹⁵¹ His emphasis.

¹⁵² Hockney alludes (by contrast) to the time spent building up a painting or drawing that I emphasised in chapter two.

¹⁵³ As discussed in chapter one.

these saccadic motions that Hockney highlights as being absent in photography, as being 'paralysed' by photography.¹⁵⁴ The third aspect is duration: photography 'sees' for a fixed period, forever limiting the duration of the view in the resultant photograph. Whilst within this thesis I have highlighted the extended exposure times utilised by certain practitioners, it is the split-second exposure that we most associate with (modern) photography's exposures. Thus, in one sentence, Hockney ascribes three limitations of conventional photography to convey realism: field of view, plurality and (saccadic) motion of concentration, and duration.

It is only a small leap to take this concept forward to the experience of architecture (or indeed any other complex view) to propose that painting, drawing and Hockney's 'joiners' might offer a more engaging experience than the single instant of the 'paralysed Cyclops'. For Hockney joiners are 'closer to how we actually see, [...] not all-at-once, but rather in discrete, separate glimpses which we then build up into our continuous experience of the world' (Hockney and Wechsler 1984, p 11). Thus the limitation of the single point perspective was dispensed with, or at least negotiated around. Movement was now possible around the subject(s), as were changes of scale to reflect the relative importance of features, and changes over time were encompassed, such that 'the entire process was just like drawing' (Hockney and Wechsler 1984, pp 12-13). Where a subject had occupied several positions over the duration of the captured images, Hockney found it was now possible to include multiple occurrences of the same subject in the collage, to indicate their movement (Hockney and Wechsler 1984, p 12) [Figure 106].

<https://theartstack.com/artist/david-hockney/pembroke-studios-london>

Figure 106: David Hockney *Interior, Pembroke studios, London* (detail) 1986

In Figure 106 we can see the subject's movement: his footsteps connecting his seated and standing positions. Wechsler uses the term 'line narratives' as representing the 'movement of people across space and of narrative across time' (Hockney and Wechsler 1984, pp 33-34). Wechsler adds that the resultant collages seem to 'draw even more directly on a much earlier source, the tradition of medieval painting in which one character moves through several incidents in his life across a single continuous landscape.' (Hockney and Wechsler 1984, p 35). In later collages Hockney leaves spaces

¹⁵⁴ Saccadic eye movements are a feature of normal vision: where the eye jumps to different points, building up a composite image from all of the smaller areas concentrated on as the eyes scan the field of vision. This is image is reliant on memory and is accumulated over a period of time.

within them and abandons the straight sides of the traditional frames. He uses lines of prints to depict 'movement through space' (Hockney and Wechsler 1984, p 32).

<https://gkang2.files.wordpress.com/2014/10/05.jpg>

Figure 107: David Hockney *Photographing Annie Leibovitz while she photographs me* (1983)

In Figure 107 Hockney depicts the exercise of Annie Leibovitz photographing him, her image on the right, as a process of trudging back and forth through the snow. He shows Leibovitz and her assistant several times, but it is in the depiction of footprints, as strips of prints [images] against the background, that emphasises the routes and the laborious nature of the process. The physical construction of the collage indicates movement, direction and temporality, while the whole image contrasts Leibovitz's objectified, stylised, de-contextualised moment with Hockney's temporal narrative. As such I find this collage is a metaphor for the processes I have depicted through the practice.

Taking time, viewing time

Hockney commented that the joiners 'had more presence than ordinary photographs. With five photos [...] you were forced to look five times. You couldn't help but look more carefully' (Hockney and Wechsler 1984, p 8). A property of the collage constructions is the time spent in their construction, an affirmation of their temporality, but also a time that bears a relationship to the time of viewing the resultant images. He offers that the half hour spent viewing a Canaletto painting of Venice, is being only a fraction of the days spent in its creation (Hockney and Wechsler 1984, p 9). This is significant to the processes debated here, as the exact replication of form and perspective indicate that Canaletto used a camera obscura.¹⁵⁵ The lineage from the renaissance painters' adoption of single-point perspective to photography's invention is where Hockney sees the possibility of the intervention of the creative hand to alter the details, crucial to the artwork's creation and consumption. Photography's fixing of a brief period of time is the point where that system altered irrevocably. The accumulation, or condensing of moments of time into collages is a way of circumventing this restriction of photography.¹⁵⁶

The duration of process in an artwork's creation is often unrelated to its consumption: films may take years to make, yet are generally consumed in one to two

¹⁵⁵ The forerunner of the photographic camera

¹⁵⁶ As I contended in chapter two.

hours. An advertising image may take only a day to produce yet can be viewed daily on a billboard for many months. Hockney suggested that a Rembrandt portrait took far longer to produce than we would spend consuming it at one viewing, imagining Rembrandt as 'observing, layering his observations, layering the time' (Hockney and Wechsler 1984, p 9). What is (arguably) Hockney's most famous painting, *A Bigger Splash* (1967), depicts the frozen instant of a splash following a man diving into a pool. He stated that it is a painting that shows a moment so brief as to be invisible in this form. It depicts a brief moment in the order of an action photograph. 'It only lasts a second, yet it took seven days to paint' (Wright 2014, 1hr 13m). I would prefer return to the earlier concept that he ascribes to painting (and drawing) – in opposition to photography – that each separate, discrete part of the image produces its own point of interest, not only of itself, but also in relation to each other and when combined as an integrated whole. It is this exploration of an image that takes time and attention; the time spent on its creation is related to the time spent on its consumption, yet it is by no means the close correlation that Hockney might have implied.

Conclusion

My conclusions are drawn from the architectural photography I am studying and researching, via my practice. The conclusions are therefore within that definition, rather than a broader definition of the whole of architectural photography. In this conclusion I quote from the previous chapters, drawing together the threads of the most significant points to review the results. I weigh these against my aims, along with their limitations to assess how the practice worked. I also re-evaluate Siegfried Kracauer's assertion that the modern city was uniquely manifested by cinema, as distinguished from photography, because film 'represent[s] [a] reality as it evolves in time' (Kracauer 1965 p 41). This is followed by a summary of the thesis' value and contribution, and finally by a brief indication of future developments.

In the field of enquiry (between architectural photography and photography of architecture) I maintain some of traditional architectural photography's values, often retaining the appearance of formal conventions (elevation, bird's-eye, (perspective) plan and section). The style originating in the early twentieth century was blended with the informal, non-photographic notions of representing the city (both seen in chapter one). Architecture's three other visual representations, as highlighted in chapter two (CAD, sketches and models) were shown to be animated and human(ised). This created a temporal, populated vision that was a significant influence on the practice; incorporating features I employed to redress the balance in photography's favour.

As our experience of architecture is normally closer to an amassing of small encounters over a prolonged period, this was replicated in the practice by the deconstruction of movement into separate, fleeting moments and their accrual: echoing the vision and the methods of chronographers. Photography is perhaps the ideal medium to gather these, as it has 'an innate proclivity for the aleatory, for fragments rather than wholes' (Green 2006, p 11). I united the multiple exposures of chronography with inspirations from fine art that resulted from the Bergsonian understandings of time; creative forms based on continuous flux. I therefore argued for the greater validity of an impression that is built up over time, to condense actions.

I return to Elwall's statement that what mainstream architectural photography lacks is a 'complementary viewpoint that considers buildings less as drawing-board creations and more as living organisms transformed through use' (Elwall 2004b, pp 25-26). The practice produces an illustration of this living organism, contrasted against the static structures of the building(s). Seeking to produce 'images which do not so much

record an object but have the potential to convey meaning' (Borden 2007, p 74), I employed multiple images, suggesting animation through their superimposition. These juxtapositions of 'traces of material realities' produced 'something that is already outside the logic of realism [...that] produces a new reality' (Colomina 1996, p 80). The signalling of temporality was most evident by the inclusion of multiple elements from different times; the combinations creating a different order of image experience from the single moment, from the individual still.

As Martha Braun wrote of Marey's images, 'overlapping forms effectively destroy the Renaissance canon of a single frame – single time space continuum [...using photography] to devise a visual expression for movement as it occurs along the double axis of time and space' (Braun and Marey 1992, p 254). This led to dynamic representations in art, the collation of multiple times and viewpoints of cubism, subsequently the source of Hockney's inspiration for his 'joiner' collages.

As shown in chapter three, changes in perception (facilitated by digital technology and user's agency in producing and sharing digital images) allows artists the freedom to experiment with new technologies, *and* to connect with their peers and the public at large. It is therefore possible to introduce digitally constructed images that may be read, considered and assessed against the conventional offerings.

My method of revealing these insights into movements and temporality is through Benjamin's 'optical unconscious', exploiting photography's 'dual role[s] of revelation and recognition' (Duganne 2015, p 98): to use photography to demonstrate a process of duration, not an instant. I established that the still image can be perceived to depict 'movement', due to blurring, the impossibility of action frozen in space, or from closely sequenced, multiple images. I am however reliant on the viewer to fill in the gaps between multiple exposures, to envisage the states between one and the next, projecting this onto an imagined trajectory.

These images' operate due to the collapse of time, with spatial changes being read as temporal changes, acting in unison to affect the way that a space is seen. This effect generates questions 'about the kind of perception a human being can have in the midst of living' (Hockney and Wechsler 1984, p 23).¹⁵⁷ The inclusion of people showing a human level was related to the Manplan series, Gabriele Basilico's, and John Davis' topographical views, as well as the Northern painters' traditions. This produced a 'sense [...] of their

¹⁵⁷ Hockney was referring to his collages with reference to the influence of cubism.

histories as buildings [...] constantly enhanced by the little human dramas being played out in and around them' (Dyer 2001)

As with Lowry, my method of selecting people as details was indicative of my impression of the location. From these painters' work I appropriated a 'concern with people [...with] figures who move through and round [the buildings, who are] full of human character' (Lowndes and Willett 1972, p 5). They offered commonplace encounters, enlivened by 'small tragi-comedies' (Clark and Wagner 2013, p 88). For my thesis' purposes this equates with John Donat's 'experience of a slice of time in the life of a building' (Elwall 1994, p 97), but it is still a mediated view.

Practice results in context

So what has it achieved? A critique of 'modernist utopianism'? A questioning of the architecture journal's predominant style? A championing of the middle ground between the purity/sanctity of design alone and the everyday experience? As previously discussed, some images such as Figure 48 could be reproduced in the mainstream press (with fewer planes), or Figure 89 (the full height of the RBS building). The formal representations of many images could suggest that they are not the fine art approach expected by a gallery audience. I see the practice as being conceptually aware, as with documentary approaches (such as Manplan), yet often with the traditional rectilinear formality of the Bechers' series: seen as polar opposites for most viewers. It also addresses the digitally conscious, digitally empowered generation that devours architecture online: by its (overt) construction, its concept and its likely mode of dissemination. This shift in consumption of images has prompted Tom Wilkinson to ask if 'critical photography thrives online [...] can it change the way we look at buildings?' (Wilkinson 2015, p 91). As such I see the practice as allied to the lineage that includes Manplan, but also Nigel Henderson, Olivo Barbieri and Mark Power, who have been published across exhibition venues and in the architectural press (although of course not all of their work is applicable across both settings).

My intention is that it could be an acceptable alternative to, or a commentary on, what is included in these forms of dissemination and on where the boundary lies between the two. It may find itself in a journal in some cases, possibly unnoticed. However this is not necessarily the goal, which is to stimulate debate: to show what is possible, to demonstrate a sliding scale between one form of practice and another, to illustrate the viability of these forms to adapt to different contexts for different clients

and audiences and to show that a polarised approach is not the only one. To illustrate that those previous drifts into less formal approaches are not necessarily an either/or scenario.

If we compare images in the Benzie building such as Figure 49 with the commissioned images shot by Hufton + Crow, we see that many are visually similar. They are however conceptually different as my practice's most significant approach is its temporal aspect, culled from longer periods than single exposures, edited both temporally and spatially. It also provides clues to its creation as a constructed, mediated entity.¹⁵⁸

To return to the criteria for the practice as specified on page one: does it answer – at least in part – the research question, and does it respond to critics' calls for change? I conclude that the practice responds to both of these in ways that challenge the orthodoxy – a 'critique of an image of architecture seen to be in charge of time and space'. Which begs the question of 'how much of the promotion of architecture as heroic image relies on maintaining specific concepts about photographic temporality?' (Mellor 2015, pp 39 and 114). Jeremy Till believes the answer is to 'reverse the equation: not to see time as held in architecture but to see architecture in time' (Till 2000): the temporal facet of my practice.

It is through the new concepts of what photography is, or can become, that possibilities exist for a re-evaluation of how photography represents and of how it can represent differently: this is via the constructions seen in Chapters Four and Five, the digital technologies that facilitate the techniques I have utilised, and the audience's assimilation of these technologies, as discussed in Chapter Three.

Limitations of the practice

My choice of still photography denies the possibility of actual animation, often seen as the 'defining characteristic of film' (Green 2006, p 12). While my pseudo-animation and blurring can persuasively suggest movement, implying temporality, this is only a perception. It is striking a balance 'between precise visual transcription and interpretation' (Busch 1987, p 71), negotiating a line somewhere between the creation and communication of the concept that I wish to convey and the retention of integrity in that work.

¹⁵⁸ See <https://www.archdaily.com/458040/manchester-school-of-art-feilden-clegg-bradley-studios>

The placing of the practice between two fields produces a series of compromises to be negotiated, such as in the ‘formation of distance-object-space’ relationships (Gartside and Gathercole 2006, p 53), for example as shown by the contrasts in spatial arrangements in Figures 49, 64, 69, 74, 81, 86, 92 and 105. The main compromise in this respect was between utilising a low-level camera to form a human-scale, human-centred view and the topographical, overview approach where people are seen at a scale that is almost incidental to the buildings. The former is within the scope of the term ‘photo-urbanism’, which has ‘been adopted to describe photography as a method to expand ways of seeing and perceiving the urban’ (Mellor 2015, p 27), from the street-level viewpoint advocated by Situationist International.¹⁵⁹ As such it resonates with Kracauer’s challenge and with the style of the Northern painters explored in chapter two, but it also draws attention from the architecture against which the people are framed. Photourbanism locates the research as a way of perceiving and thinking about the built environment differently: as a starting point, rather than an end result.

Forming constructed images resulted in their location being wrought between abstraction, re-construction, photography and the viewing experience, necessitating compromises. My images are not ‘accurate’ depictions, exhibiting photography’s indexical nature, to satiate the viewer’s concerns; they are representations of actual subjects, edited to display information. I exercise the artists’ licence to interpret, in order to inform, and to encapsulate multiple aspects while still retaining the integrity of the whole image. As indicated in the introduction, the practice is a continuous route picked carefully between excesses: stasis and ‘motion’, interpretation and description, formal and creative, commercial and documentary.

Problems of accessibility to vantage points that offer views equating to sections and plans have limited the types of buildings used for interiors. Modern, glass curtain walled buildings tend to dominate the exterior images to facilitate viewing the interiors. The practice is less successful with (generally older) architecture that presents reduced interior opportunities and exterior views that are restricted to showing people on external pathways and roads.

As I discussed previously, the averaging effect of accumulated moments provides a more balanced view than a single moment would, but is only ever a partial glimpse of the life of a building, as exemplified by the variations (on the same day) in Figure 86. Thus

¹⁵⁹ See Vidler, A. (2003). Photourbanism: Planning the City From Above and From Below, in *A companion to the city*. G. Bridge and S. Watson. (Eds) Oxford, Blackwell: 35-45.

the practice shows 'life' in a selected form, for a limited time, for a limited range of scenarios.

There are also limitations dictated by buildings whose type of use determines the volume of traffic that could be usefully illustrated by the techniques developed. Those with too many people – for example shopping malls or entertainment stadia – will only be shown by the 'mass movement' technique illustrated in chapter four. Too few people – such as in domestic interiors or automated factories – would have insufficient subjects.

Viewing the practice

The scale of the images, as viewed in whatever medium and mode of dissemination they are seen, has proved to be problematic. As the overview in the appendices suggests, the relative positioning of people, building and camera (including camera height) determines the scale of people compared to the building. Creating large-scale images that show many people is clearly only possible within a gallery setting, or by using the scalable zoom features of digital viewing (so often an unsatisfactory way of observing detail, particularly with the smaller scale of the mobile 'phone'). This limits the practice in terms of outlets unless certain types of image are used: either details of large-scale works, or those images where the people are foregrounded, close to the camera (for example in figure 105 rather than figure 104), creating an emphasis on the 'populated' aspect. This also limits the scale of buildings that can be illustrated on regular, printed pages and precludes panoramic works that span many separate frames. The large prints produced for the viva voce demonstrate this difficulty: although some would work equally well at the scale of a (printed) journal, the majority would not. The nature of the practice is not aimed at a gallery context as there is a formal quality to much of the work, perhaps too close to commercial architectural photography for this audience.

There has been a shift towards digital viewing of visual content, largely without its traditional context, such as via Pinterest, Flickr or Instagram. Further, the move of journals to online consumption, and the dissemination of articles via online only platforms, facilitates viewing this imagery in modes that are not dependent on print scale, format, viewing distance, or the cost of production: they are scalable, elastic and ephemeral.¹⁶⁰ Shrinking the practice to the scale of the vertical A4 page reduces visibility of the populated and temporal aspects, the purpose for which they were produced.

¹⁶⁰ For example the weblogs Dezeen (<https://www.dezeen.com/>) and Archdaily (<https://www.archdaily.com/>).

Generalisations

The thesis' premise generalises the style of 'mainstream/commercial' architectural photography as being uninhabited, sculptural shells. Some are clearly not and some photographers exhibit a range of approaches depending on their client's requirements. I am responding to the majority of this practice, as cited by numerous critics.¹⁶¹

I am hampered by my choice of medium due to photography's shortcomings in delivering a three-dimensional experience, or indeed a truly temporal or spatial one.¹⁶² As I stated in chapter four, Blasco's fusion of images taken from multiple viewpoints are consequently shot at different times, producing a technique that combines the temporal and spatial to remind us of the illusory nature of photography: a record of *a* reality, plucked from so many others, individual to the photographer, their position, timing and editing. My 'realities' are but one part of a continuum, one that when it is produced is continually superseded by new events, as Virginia Woolf wrote

'With her foot on the threshold she waited a moment longer in a scene which was vanishing even as she looked, and then, as she moved and [...] left the room, it changed, it shaped itself differently; it had become, she knew, giving one last look at it over her shoulder, already the past. ...always becoming. (Woolf 1927, p 80)

Geoffrey Batchen drew on this notion of transience, concluding that photographs are always 'something caught in the process of becoming' (Batchen 2003, p 29).

A reliance on the photographer's choices could be seen as a limitation, but equally some would view this as an asset of the work: to edit salient activities, summarised into a concise form, is often how we choose to consume information.

The challenge

I return here to David Green's analysis of Siegfried Kracauer's assertions that 'the flow of life', as shown by film, evokes the 'visual and sensory encounters of the urban milieu', 'synonymous with modernity' (Green 2006, p 12). As with the observational painting in Chapter Two, this immerses the landscape in 'evidence of the everyday, of people's messy histories and domestic routines' (Mellor 2015, p 304). Green advocates that the 'flow of life' was

'intended to unite Kracauer's theory of what was specific to film as a medium, with his belief in the cinema's natural propensity for the actual and the everyday.

¹⁶¹ Although the demand for this practice will not be of interest to viewers who are only interested in a building's form.

¹⁶² As I previously noted of Isidro Blasco's constructions.

The motif that encapsulated this convergence of form and content was that of the street' (Green 2006, p 12).

The concept of 'encapsulating the street' is close to my aims of conveying transience, dynamism and temporality within and around architecture. Therefore I shall briefly interrogate Kracauer's claims, by comparison with my practice, to offer an 'encapsulation', thus staking a claim for photography as a medium that could rival film in this respect. Kracauer stated that

'films tend to capture physical existence in its endlessness. Accordingly, one may also say that they have an affinity, evidently denied to photography, for the continuum of life or the "flow of life," which of course is identical with open-ended life (Kracauer 1965, p 71).

Despite Kracauer's claims – to 'endlessness', 'continuum' and open-ended life' – film is not a continuous activity, it is presented as pre-defined takes, with a beginning and an end. Therefore it is not endless, as the life of the street is, but compartmentalised: edited by directors and film-editors.¹⁶³ As film director Jen Luc Godard famously said 'photography is truth. The cinema is truth 24 times per second...A story should have a beginning, a middle and an end, but not necessarily in that order' (Gibbons 2011).

Kracauer continued:

'The concept *flow of life*, then, covers the stream of material situations and happenings with all that they intimate [...] The street in the extended sense of the word is not only the arena of fleeting impressions and chance encounters but a place where the flow of life is bound to assert itself' (Kracauer 1965, p 71).

'What appears [...] are not so much sharp-contoured individuals engaged in this or that definable pursuit as loose throngs of sketchy, completely indeterminate figures. Each has a story, yet the story is not given. (Kracauer 1965, p 72).

The *specific* people and their stories do not exemplify the street, as none can justly be described as typical. It is the accumulation of the multitude, or at least a representative sample, that typifies the street: summarised, edited and fragmentary. I contend that the following illustrations (details from my practice) capture these 'loose throngs of sketchy, completely indeterminate figures', each with a story to tell: Figures 108 (P) and 109 (P). Both of these figures are details of larger images. As such they serve to demonstrate that in order to illustrate these people clearly as a response to Kracauer's comments, I have resorted to expanding small sections of images: partly to show concentrate attention on

¹⁶³ As Bergson concluded, film produces an illusion of continuous movement (as I wrote in chapter three).

the details of the people, but also to make them visible at the scale of the A4 page. Within the wider original images the architecture is seen as static, contrasted against the blurred movement of the people. In these two examples of details the people dominate the view, the minimal presence of 'architecture' is fragmentary and therefore does not appear to be 'architectural photography'.¹⁶⁴



Figure 108: (P) D Trillo *Turing walkways 2* (2017) (detail) (2017) 6 exposures, 31/03/2017 13.27 – 13.35

¹⁶⁴ Even if the original, wider view of Figure 108 does.



Figure 109: (P) D Trillo *Benzie Triptych* (middle image, detail) (2017) 13 exposures, 08/11/2013 12:23 – 12:43

An essential element of my practice was to minimise the ‘deception’ of architectural photography, ‘because architectural photographs are a substitute for the experience of buildings for most of us’ (Elwall 2004a, p 190). I have ‘animated’ my practice by (digitally) combining still images from different moments of this flow. I then rely on the viewer’s perception of my techniques to see the *suggestion* of movement and, in doing so, to be aware of the temporality of its capture.

Value and contributions

The advantage of stills to amass details at different times affords the opportunity to pause for contemplation and decision-making. The use of multiple images illustrates the changes over time, resulting in a dynamic representation that would not be revealed by single images. I answer Kracauer’s challenge by arguing the case for photography to generate a representation of movement and temporality, the ‘dynamic view’ of my research question. All of the images echo Duchamp’s ‘interruptions within the momentum of everyday encounter’, gathered to form an impression: not Marey’s scientific observation, yet adhering to evidential rigour. Thus producing a *manifestation* of time, situated between commercial, scientific and artistic photographs, a personal impression of the ‘experience of the artist’.

Two anomalies were identified that informed the practice and shaped the aims of the practice's content. Firstly, the difference between the styles of mainstream architectural photography that originated in the inter-war period and the concurrent, vibrant and dynamic representations of the city in other media, such as film and painting. Secondly, the use of case studies to illustrate differences between architectural photography and populated visual representations in other media (CAD visualisations, models and sketches). The animated nature of the latter negating the notion of commercially driven work being necessarily objectified, pristine and sterile.

Future plans

I plan to produce elongated, multiple image panoramas, continuing with streetscapes for a short time, but moving on to workplaces. These would not be the studio experiments of Marey's chronophotographs, nor the Gilbreth's traces of lights (chapter three), both of which played a part in modern ergonomics and 'time and motion' studies. The emphasis would be on what is done there, showing people and their actions as accumulations within the wider view of their environment and the working processes as a whole. Ideally this would be within extensive enterprises, shown as large-scale prints to reveal the individuals as part of the larger continuum, but also visible as people, not merely traces within an experiment.

Post script

Finally I compare the thesis's results to Bertolt Brecht's criticism of architectural photography, one that related specifically to major industrial sites of productivity, human skill and endeavour. As

'less than ever does the mere reflection of reality reveal anything about reality. A photograph of the Krupp works or the A.E.G. tells us next to nothing about these institutions. Actual reality has slipped into the functional' (Benjamin 1979, p 255).

The practice of this thesis shows more of 'the institutions', as photography 'doesn't only show what *is* but rather what *happens*' (Hölzl 2010, p 99): future practice could expand this further.¹⁶⁵

¹⁶⁵ My emphasis.

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Appendix One

Techniques investigated to represent movement of people

Concept	Chronophotography: trace(s) made by multiple (brief) exposures of each subject	Composite: single exposures of multiple people in a fixed frame	Blurring: long exposures of each subject	Collage: multiple images of a site joined together
Technique	Successive exposures made rapidly of each person, on same frame	Many exposures taken of same view, from fixed viewpoint. The people are pasted together in one frame in post-production.	Long exposures (typically > 0.5s and < 2s) produce an extended trace of people.	Many images shot from different viewpoints, amalgamated into a 'single' image. Not tied to single point perspective.
Advantages	Traces movement further than a single exposure. Brief exposures allow better clarity of people to see details. Clear progression of route visible for period of exposures.	Accumulates an average of the movement of people over an extended period: typically between 10 and 25 minutes, depending on flow. A small amount of blur anonymises people and shows directional movement. Difficult to paste blurred people onto a busy area.	Flow of people traced over a (relatively) long distance, hence direction of flow is accurate. Blur emphasises movement.	'Patchwork' compositions without smooth joins signal accumulated, temporal nature of the technique. It is possible to vary scale and perspective for individual elements, e.g. showing multiple facets around corners, or emphasising details.
Disadvantages	Does not average flow of people over an extended period. People are not anonymous which causes ethical difficulties. Appears unnatural. Can be confusing to view if many people are recorded together.	Each person only recorded in one position. It is dependent on the photographer/editor to choose the exposures that reflect the flow in that space at that time.	People invisible if exposure times are too long. Difficult to paste multiple exposures into one frame, as traces are not well defined. Subjects may not appear to be people if blurring is excessive. Reliant on lighting and/or contrasting tones of subjects and background making subjects visible.	Multiple point perspective is not 'architectural'. 'Patchwork' style compositions do not line up lines within the image. Lack of accuracy of scale and alignment is unfamiliar and not easily assimilated.

Appendix Two

Viewpoints and aspects

	Elevation	Section	Plan or 'bird's eye'
Advantages	This familiar view of buildings is readily assimilated.	As with elevation, section is assimilated, as horizontal views are familiar.	The best option to show spatial distribution and flow.
Disadvantages	Unless camera is elevated, nearest objects and/or people obscure those behind, as the foreground masks the background. People or building features near the camera dominate the view, by comparison with the architecture. Spatial relationship difficult to gauge as 3rd dimension (depth) is flattened.	Spatial relationship equally difficult to show in flattened perspective. Columns, windows etc. obscure mid- and background. Viewing through glass confuses vision because of the fusion of transmissions and reflections. Difficult to access locations for true section: usually restricted to atria and stairwells.	Very difficult to position camera: raised, central and high enough to gain the distance required to view the area without distortion. Internally the viewpoint is usually restricted to atria unless camera is fixed to ceiling.