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A CUT IN ATTENTION: Reimagining attentional capacities for painting

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Submitted in fulfilment of the degree of
Doctor of Philosophy by Practice as Research in Fine Art

School of Arts, University of Kent

September 2022

word count: 42542

Abstract

This practice based PhD reimagines attentional capacities for painting. It asks how a contemporary painting practice can activate and critically engage with the limits and oscillations of attentional capacity. The cut in attention of the title instigates an interruption to restrictive models of attention, moving beyond expectations of attention that are idealised or characterised as though in deficit. Testing art historical and philosophical framings of attention against current cognitive and neuropsychological research, and in the context of wider social and economic levers for attentional manipulation, the attentional conditions of contemporary painting's production and reception are innovatively reevaluated.

Drawing on the exchange between attention and the processes of memory and imagination, a pictorially generated methodology allows the practice to work within an expanded space for painting that can both picture and prompt attentional response. In considering painting as a set of conventions and discourses already attuned to attentional capture and modification, alongside painting's potential to resist attentional compliance through attentiveness to material, spatial and durational possibilities, a more complex and socially embedded position for painting opens up. The multi modalities, fluctuations and temporality of attention and distraction are positioned as attentional resources for painting. Navigating between the externally reactive and internally reflective, between tactile and visual stimuli or the shifts between focus and dispersal, enable attention to operate here as both subject and method in a radical process of reimagining.

A CUT IN ATTENTION

Reimagining attentional capacities for painting

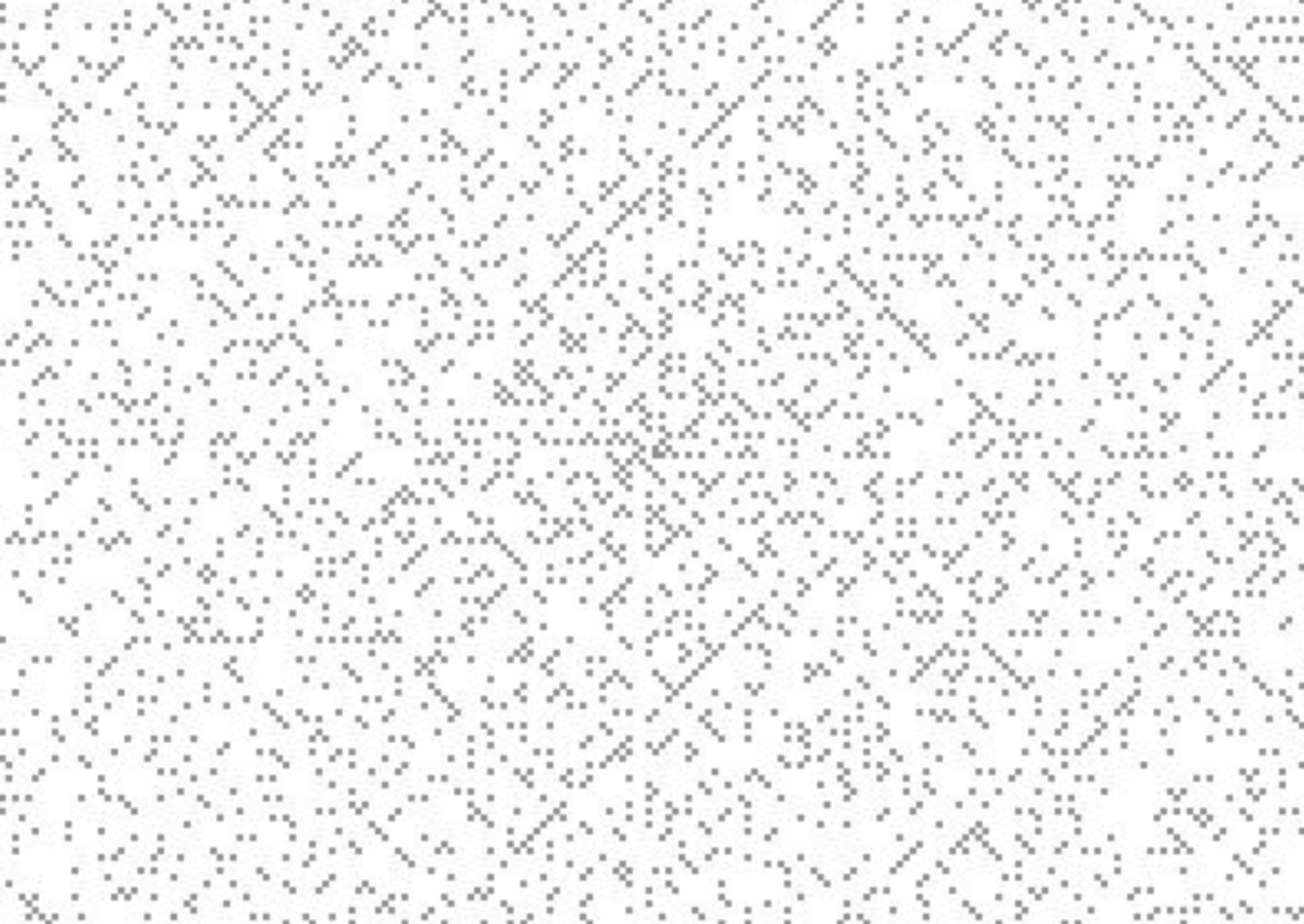


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preface

a note for readers and visitors

In reimagining attentional capacities for painting, the practice and writing have evolved in close correspondence. Both perform a double function of picturing and prompting attention conditioned responses.

The layout of the writing is a visualisation of and a prompt for attentional processes that have facilitated and directed the research. Decisions about format and sequence have a correlation to attentional experiences of selection, focus, fragmentation, distraction, division and dispersal. In the first instance, the writing points to the act of reading, as the practice outcomes point to the act of looking. The formatting of the text is thought of in terms of compositional elements; the conventions of preface, sidenotes, endnotes, in text citations and cross referencing direct and modulate a reader's attention across the page and through the durational commitment invited by an extended piece of writing (picture 0). These decisions reflect strategies deployed in the practice to orientate and re-orientate a visitor spatially and cognitively within an exhibition space. The ways the various sections of writing cross refer allow points of interruption and divergence to be built in. Similarly a component based approach to the practice is a concrete acknowledgment of the interdependencies between works and their spatial and durational porousness.

This approach to the writing and practice might be termed self conscious, or self-referential or a form of self demonstration (Rancière 2007: 71). It meets a definition of medium specificity as a 'pointing-to-itself' that is arguably still relevant for an evaluation of contemporary painting (Krauss 2011: 4). This preface, as a note for readers and visitors, aims to tune the reader's receptivity to the attentional scope proposed by the research. It points to itself as it outlines the various structural decisions that a reader is asked to navigate.

Two pictorially dependent devices are in play throughout the writing and the practice; firstly an art historical artefact and secondly an imagined protagonist. The artefact is a 2 panel work attributed to Renaissance painter Giovanni Bellini, painted circa 1500. The protagonist is French mathematician, Sophie Germain, 1776 - 1831. Each steers the engagement with attention in particular ways; the attentional requirements of the imagined protagonist, and the attentional potential provided by the artefact. Both the artefact and the protagonist have suggested the alternate roles of reader and visitor that visualise exchanges between reading and looking which are significant for the painting basis of the research process, and gather further traction through the context of pictorial conventions and a consideration of attentional experience (p59-61) [see also **BOOK and WINDOW**].

The writing opens with 2 introductions, *entry 1* and *entry 2*, conceived in parallel. Each begins with a personal memory that also has an attachment to the content of the work by Giovanni Bellini and a point of contact with the personal history of Sophie Germain. They offer alternative starting points for considering the attentional capacities we might bring to painting, each tracing a trajectory that is in some contradiction to the other in tonality and research proposition. As such, they mark an attentionally configured divergence within the research, one that could be characterised as a contradiction, but that a pictorially generated research methodology is able to hold together (p27-28). The tone shifts through the various sections of the writing, and the sense of distinct voices with different priorities or attentional focus is very intentional. For example, sharing 2 remembered fragments from early childhood in *entry 1* and *entry 2* invites an act of imagination on the part of the reader to empathetically tune into another's experience. They are suggestive of the attentional experience of reverie, as well as marking a divided attentional beginning. Whereas the central chapter, *A Cut in Attention: caught between reader and visitor* takes on the task of close analysis of a single art historical work, an approach that could be allied with focused attention. Then, a series of shorter self contained texts operate as though extended footnotes to this central chapter, but unlike standard footnotes whose purpose is to avoid interrupting the flow of a text, here the potential to perpetually interrupt is embraced. Listed as *Aperture, Book and Window, Fabric, Grid, Profiles*, they have been collectively considered as components that contribute to the research in shifting, overlapping and interlocking ways. Derived from pictured aspects of the Bellini work, they provide a pull back to the pictorial specifics of the art historical artefact while simultaneously facilitating digressions and tangential thoughts.

Additionally, *studio notes for Sophie Germain* intersperse the writing. There is a studio note in response to *Aperture, Book and Window, Fabric, Grid, Profiles*, and one for the concept of components more generally. They follow thought processes attached very directly to the practice, intersecting with but to the side of the arguments being developed elsewhere. They also orchestrate the visual documentation of the practice to give targeted but partial glimpses, and they allow for a shift in tone as painter speaks directly to mathematician. The thinking that supports these structural strategies is expanded on in the *Methodology* section.

A series of different referencing methods within the body of the text pull on a reader's attention. These follow standard academic conventions for citations, but with the volume adjusted to acknowledge their presence as strategic interruptions. I shall point to them as they have already appeared in this preface:

> **Components:** The extended footnotes, *Aperture, Book and Window, Fabric, Grid, Profiles*, appear in square brackets within the text. As they are formatted in bold and capitals they are more visually distracting than other in text citations. They use the phrase 'see also' to direct a reader more forcefully but do not give specific page numbers, allowing the reference to stay free floating. The first occurrence is on the first page of this preface, [see also **BOOK and WINDOW**], where the Book and Window component text offers an expanded analysis of exchanges between linguistic and visual priorities.

> **Picture References:** References to visual images other than documentation of the practice have an associative and imaginative function within the writing. Formatted simply like this (picture 0), if a reader wants to follow up the invitation of a visual association there is a numbered picture archive at the end of the text. So a reference to picture 0 which appears on the first page of this preface will be found to be an image from George Perec's *Species of Spaces and Other Pieces*. Perec draws attention to the spatial qualities of a page by positioning writing that refers to its placement, so 'I write, I inhabit my sheet of paper, I invest it, I travel across it. I incite *blanks, spaces* (jumps in the meaning: discontinuities, transitions, changes of key). I write in the margin. I start a new paragraph. I refer to a footnote' are all located in their designated area within a single page (Perec 1974: 11). This picture of Perec's strategic

placement of text within a page is followed by an image from Aby Warburg's *Bilderatlas Mnemosyne* as a pertinent example of pictures within a storage system (picture 1). The disruptive function of Warburg's layout and its 'ephemeral, temporary, transitory, volatile' qualities are significant for the research process and have informed the approach to picture references undertaken here (Didi-Huberman 2017: 305-306). A picture's placement within the archive has some of the algorithmic logic of a google search or a Warburg panel. This approach enables a visual reference to derive additional inference from its position much like a semantic net. As described by Margaret Boden in the context of computational structures and AI, the use of semantic nets is not primarily for logical problem solving, 'but for modelling spontaneous conceptual associations' (Boden 1992: 95). In this way the picture archive tracks visual references directly mentioned in the text but also archives images that are imaginatively present for me as I write and might otherwise be unshared. This strategy is one closely allied to the associative thinking that the practice draws on and the pictorial methodology the writing has been generated by.

> **Cross references:** Occasional cross references to specific pages within the text are simply indicated by the relevant page number in brackets like this (p27-28). The first instance of this is on the second page of this preface which points to *a note on picture*, a section in the *Methodology* that expands on the conditions of a pictorially generated research methodology.

> **Endnotes:** References to numbered *endnotes 0 - 9* indicate previously or concurrently published writing that has been generated by or forms a backdrop to the current research. They are marked in the text as an additional citation and simply indicated by (endnote 0) etc. For example, endnote 0 is for *grid narrative for Sophie Germain, 2022*, a small information booklet that supports an installation in the Sibson building, the School of Mathematics, Statistics and Actuarial Science at the University of Kent. The installation tests how the self definitions of painting might intersect with the communicative necessities of a number system, and activates a strategy that is relevant to Sophie Germain's role as a protagonist. Other endnotes indicate recent journal articles and writing in relation to exhibitions and projects.

> **Standard citations:** Standard use of bracketed citations within the text follow the Harvard system of author's surname, publication date and, when relevant, page number. These are supported by a bibliography. The first citation (Rancière 2007: 71) used on the first page of this preface is especially relevant to the overall approach I have taken. In *Painting in the Text* Jacques Rancière articulates a contradiction within painting that requires a sort of reiteration that he terms self demonstration; 'The art of painting is the specific realization of nothing but the possibilities contained in the very materiality of coloured matter and its support. But this realization must take the form of a self demonstration. The same surface must perform a dual task; it must only be itself and it must be the demonstration of the fact that it is only itself' (Rancière 2007: 71). Within the logics of painting based research, the question of self demonstration is taken seriously, and its consequences become more evident as the writing unfolds and the sensibilities of the practice become accessible.

In asking how the oscillating experiences of attention can steer a painting practice, and how attentional capacities for painting can be reimagined, the processes of storing and retrieving image and text have been pertinent. The intention of both the writing and the practice is to offer the reader and the visitor an open thought process that may be accessed differently each time.



entry 1

1 school table

'attention and distraction cannot be thought outside of a continuum in which the two ceaselessly flow into one another, as part of a social field in which the same imperatives and forces incite one and the other'

Jonathan Crary *Suspensions of Perception: Attention, Spectacle and Modern Culture* 2001: 51

'because it often happens that the understanding has only confused and imperfect perceptions of things, it is truly a cause of our errors.... It is therefore necessary to look for means to keep our perceptions from being confused and imperfect. And, because, as everyone knows, there is nothing that makes them clearer and more distinct than attentiveness, we must try to find the means to become more attentive than we are'

Nicolas Malebranche *The Search after Truth and Elucidations* 1674: 411-412

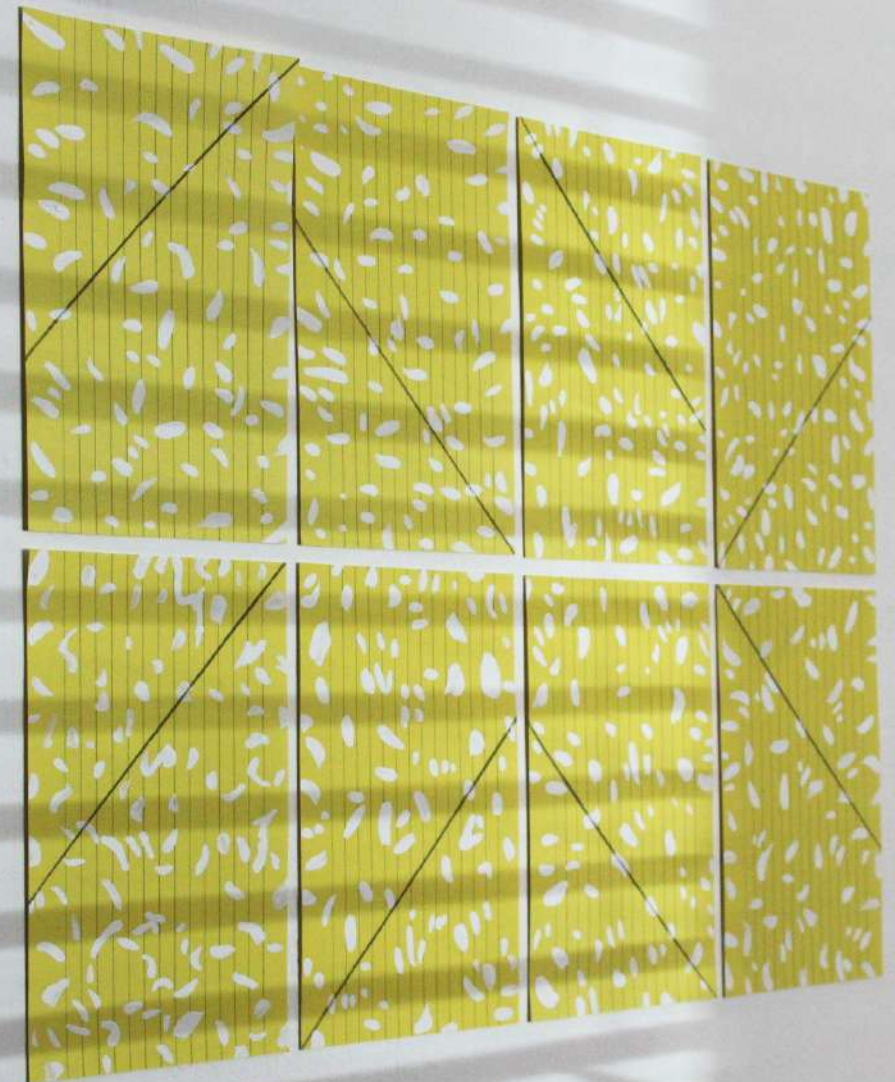
Bare arms pressed against the cool smoothness of a school table. Yellow formica with a soft grey flecked line. The rectangle of the table top marked edge to edge with this imprint. Tracing complex turns, the intricacies of pathways and enclosures across the surface.

Chin resting on arms in order to see in close up, the web of lines too small to follow by hand, even a finger tip is too big on that tiny scale. So tracking with eyes instead, the sharpness and blur of close scrutiny, the warm yellow filling a field of vision.

Attention is framed as the selective function of perception. It implies concentration, alertness and focus. In response to multiple stimuli our perception needs to prioritise, and the selectivity of attention can be viewed as evidence of choice or evidence of compliance; capturing and holding attention are loaded terms.

Our social, cultural and economic participation relies on our attentional capacities. The demand to pay attention infers that there is an appropriate attentional response within a specific context.

Index card grid system (detail) ink and pencil on index card



Understood as a perceptual process of exclusion, to discern relevance and to attach value, attention quickly enters the realm of judgement. In a classroom, being absorbed by the surface of a table might be characterised as distractedness, daydreaming or myopia, the intensity of focus misplaced. The attentional immersion of yellow scattered with grey shattered sharply by the demand to adhere to a more socially valued attentional norm: *Sit up and pay attention. Sit still and pay attention*, arms folded and eyes to the front.

Attention, as evidence of perception's selectivity, has a close affinity to the framing characteristics of painting. Painting is designed to capture and hold attention, and this attentional agenda has been formed in relation to power structures and value systems. The term apparatus as used by Michel Foucault or more forcefully by Louis Althusser, or as described here succinctly by Giorgio Agamben as 'a set of practices, bodies of knowledge, measures, institutions that aim to manage, govern, control and orient – in a way that purports to be useful – the behaviours, gestures and thoughts of human beings' (Agamben 2009: 12) (Althusser 1970) (Foucault 1977) is suggestive of this aspect of painting's investment

screen roll (detail) carbon transfer drawing



in manipulating the attentions of its viewers (endnote 8).

Painting considered as an apparatus makes it a useful visual and material indicator of our capacity for attentional conditioning in relation to imposed value systems. So although the procedural processing and visual stimuli of painting offers some of the attentive immersion experienced as a child absorbed in the colour and line of a school table, painting can also be understood as a set of visually honed conventions committed to the modulation of attention in line with wider social, economic and cultural expectations. This tension is key to understanding the attentional investments of painting and the attentional pulls experienced as a painter.

The social demand to pay attention implicitly acknowledges the fragility of attentional attachment. Concerns about attentional capacities and our perceptual limitations are there in the earliest literature on attention. Augustine of Hippo in the 4th Century positioned the temporality of human attention in flawed contrast to the attested constancy of divine attention. Nicolas Malebranche writing in 1674, worried about confused



studio box printed papers

and imperfect perception, and called for the clarity of attention as an antidote. Immanuel Kant's 1781 call for unity in perceptual synthesis had an urgency because 'otherwise it would be possible for appearances to crowd in on the soul'. (Augustine 426) (Malebranche 1674: 411-412) (Kant 1781: A111)

William James, at the forefront of the new discipline of experimental psychology in the late nineteenth century, positioned attention as a marker for human effectiveness and asserted the necessity to take conscious control over a wandering mind (James 1890: ch 11). Yet the responsibility placed on attention to achieve clarity was already being countered by early experimental studies of attentional response that had begun to identify the voluntary and involuntary aspects of attentional processes (Pillsbury 1908) and worries arose about how conscious choice could be overridden by inbuilt attentional reflexes. Pedagogical concerns around the capacities of attention in relation to the retention and recall of information were clearly articulated by the early 20th Century (Crary 2001: 29, 51) (Olin 1992: 162) . Likewise, contemporary concerns with attention are often articulated in terms of a deficit. Amidst

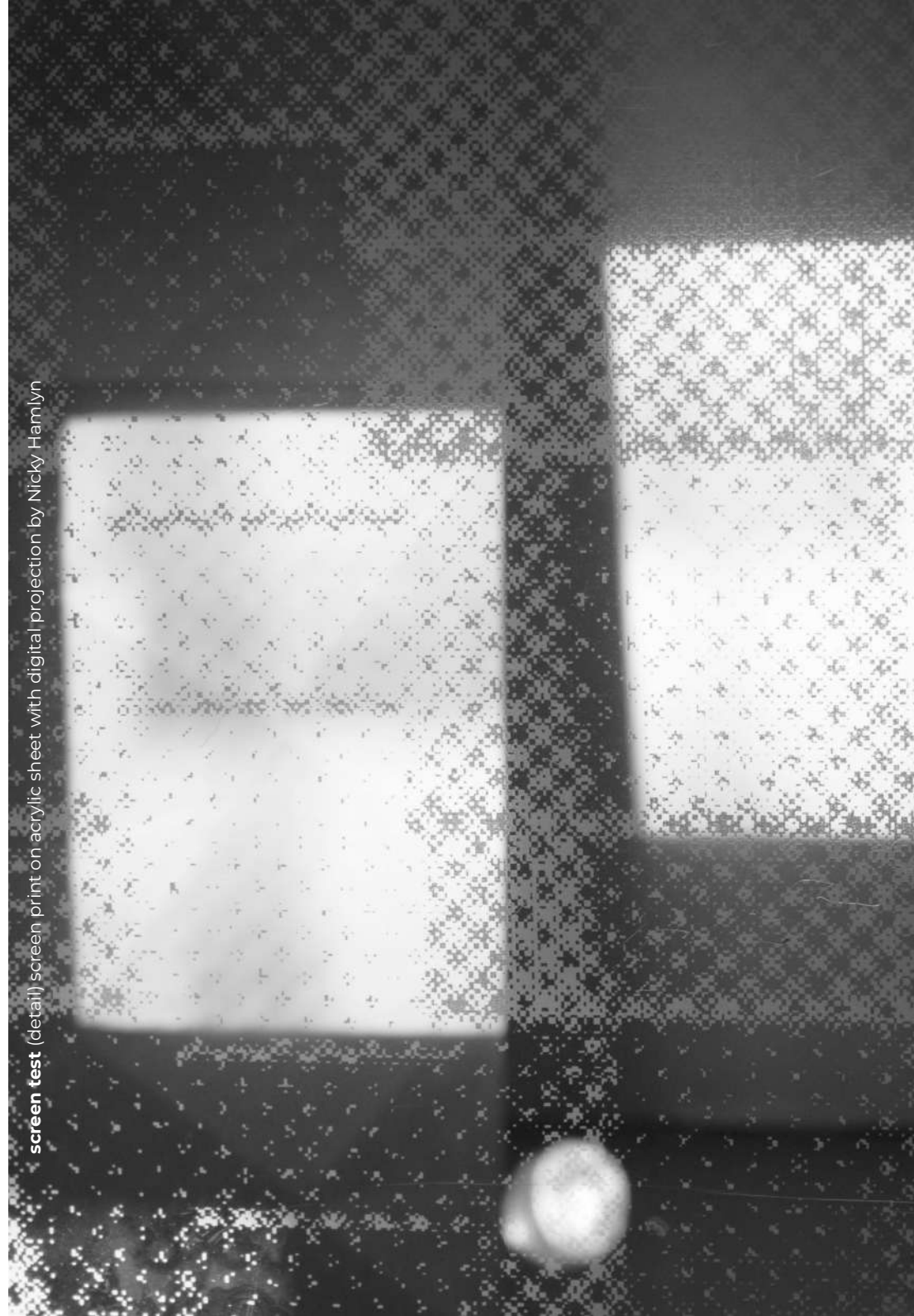


composition table (detail) a₂ + b₂ = c₂ diagram components, acrylic on plywood panel

our predominantly screen based information streams, a technologically induced degraded attentional capacity is often proposed. A further consequence of this potential information overload is that attention takes on a scarcity value. Here the attributes of attention, its limited capacity, its susceptibility to capture, and fears over its qualitative state give attention the characteristics of an economic entity (Terranova 2012: 1-19). Books from the past decade or so, including Nicholas Carr's *The Shallows: What The Internet Is Doing To Our Brain* and Tim Wu's *The Attention Merchants: The Epic Struggle to Get Inside Our Heads* build a picture of attention buckling under these new pressures (Carr 2010, Wu 2017). Yet as we are asked to consider whether digital technologies are reconfiguring our cognitive capabilities, we can also hear echoes of the fears of Malebranche and others from centuries before.

Jonathan Crary has pointed out that 'part of the cultural logic of capitalism demands that we accept as natural switching our attention rapidly from one thing to another' and that 'the rhythms, speeds, and formats of accelerated and intensified consumption are reshaping

screen test (detail) screen print on acrylic sheet with digital projection by Nicky Hamlyn



experience and perception' (Crary 2001: 29-30, Crary 2013: 39-40). Similarly, Crary's evocation of distraction and attention on a continuum (Crary 2001: 51) is made in the context of new social, technological and economic demands placed on our attentional capacities. By the early twentieth century, the precariousness of attention and fragmented perceptual experience had moved distraction to the fore as 'the perceptual stance most appropriate for modernity', our interface with the outside world exemplified by Walter Benjamin as 'reception in a state of distraction' (Duttlinger 2007: 34).

These concerns about attentional fracture, fragility or plasticity are in sharp contrast to dominant discourses for painting that tend to foreground idealised and stable forms of attention. In fact attentional expectations often form an unspoken backdrop to a series of critical points in painting's understanding of its own limits and possibilities. For example, the presentness that a modernist apprehension of painting lauded (Fried 1965) (Fiedler 1876), is arguably an attentional constraint imposed on painting, one that is at odds both with the oscillating and



interference pattern (detail) double sided split screen, screen print and acrylic on plywood standing panels

durational character of attention at a cognitive level, and at odds with the wider social, cultural and economic contexts attention operates within.

So in reimagining the attentional capacities we might bring to painting,, the memory of the yellow table points to both the pleasures and problems of attention for a painting practice. The day dreaming child, and the tangential thought processes and speculative perceptual roaming it represents fall outside narrow margins of attentional compliance and productivity. Lost in the details of colour and line, surface and space-making imaginatively entangled, the table also describes a limit; a formatted space that intersects with painting conventions and the attentional modification they are attuned to. Systems of attentional expectations, the demands made on limited attentional resources, and the negotiation of social, cultural and economic frameworks of attentional control crash in on the reverie of a yellow tabletop, and so I need to map out two positions. One, that the attentional capacities for painting should not be considered in isolation from wider contexts for attention; and two, that painting's material, spatial

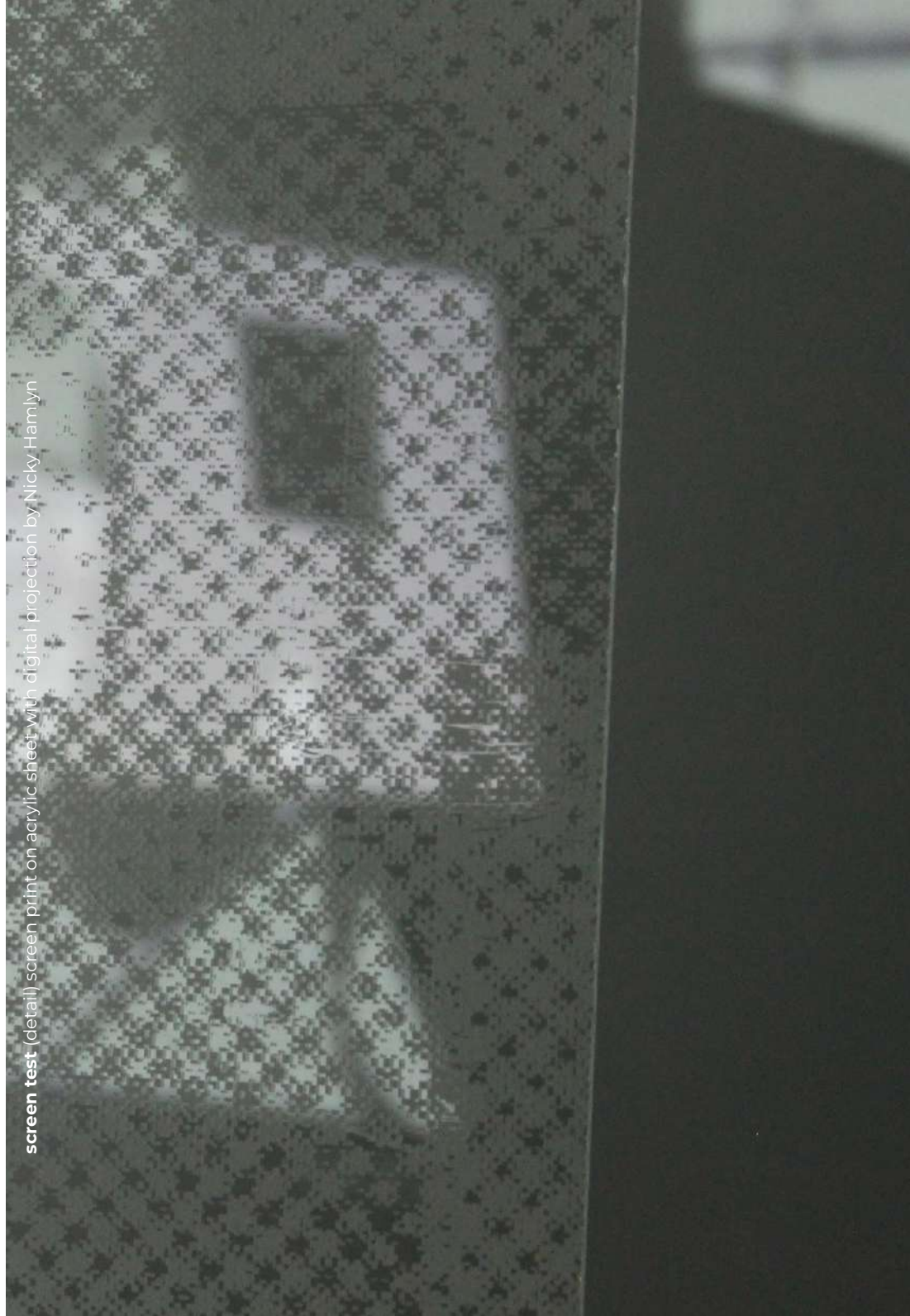


interference pattern (detail) double sided split screen, screen print and acrylic on plywood standing panels

and durational peculiarities might have the potential to interrupt and resist attentional compliance.

With this double pull kept in mind, the cut in attention of the title is intended as a disruption of attentional norms for painting. My contention is that art historical and contemporary expectations of the viewing experience of painting need to be reorientated and reevaluated in light of current cognitive and neuropsychological research, and considered within an assessment of the social, cultural and economic conditions our attention is modified by. My strategy through practice is to be directed by the oscillating and fluctuating durations of attention, its divisions and dispersals, the pulls of focus and distraction. This approach acknowledges both the limits of attentional capacity and the breadth of attentional experiences that painting can prompt. By instigating a cut, a break and an interruption across value laden and restrictive models of attention that have been brought to bear on painting, a radical shift in the conditions for considering contemporary painting's production and reception is proposed.

screen test (detail) screen print on acrylic sheet with digital projection by Nicky Hamlyn



entry 2

2 sorting stones

'All experience implies the acts of recollecting, remembering and comparing'

Juhani Pallasmaa *The Eyes of the Skin: Architecture and the Senses*, 1996: 76

'This tension between marking and storing time remains present on its surface, since (painting's) constituent marks, which are laid down over time, are always simultaneously available to vision'

David Joselit, *Marking, Scoring, Storing and Speculating (On Time)*, *Painting Beyond Itself: The Medium in the Post Medium Condition*, 2015: 14



entry 2

As a very small child I remember sitting and sorting stones. Rough-cut dark grey shards, each about an inch in diameter, I would turn the stones over in my hands, assessing difference and similarity. Each stone had an equivalence, while at the same time individually distinct. As a category of things in the world, they could be ordered or counted. They prompted close looking, concentrating on detail and letting a wider view go out of focus, like imposed short-sightedness.

Deciding which way was up was never conclusive but was an important part of the game. The shards of stone had definite facets like miniature mountains, the imaginative potential of zooming into a tiny scale, making an epic landscape in the dusty ground, minute spaces opening up as vast vistas. The connection to mountain must have been partly an idea of mountain picked up from picture books; the mountains I knew were worn down to the smoothness of hills, sweeps of granite seen far away on the horizon, and these handheld stones were jagged in outline. Assessing the stones was grasping the world directly, while also making a comparison with previous experience, depicted, remembered, and imagined.

Attention is an interface between our perception as raw visual data and our selective attachments. Attention's role in filtering the senses, discerning relevance amidst competing stimuli, gives access to conscious and unconscious responses to an external world.



screen roll (detail) carbon transfer drawing

In reimagining attentional capacities for painting, I propose that the procedural transactions offered by painting, the tactile, spatial, durational and imaginative registers for maker and viewer, provide perceptual circumstances that are conducive to understanding the adaptability and responsiveness of attention.

Our senses are often spoken about in isolation, but vision, touch, hearing collaborate to build perception's working model. The material sensibility active in the childhood activity of sorting stones, the correspondence between hand and eye it demonstrates, points to an interchange between touch and vision and establishes their connectivity. The recollection of sorting stones also acts as a reminder that perception confers with memory and imagination, that attention is both externally reactive and internally reflective.

A multimodal approach to attention is informed by the visual and tactile prompts of the studio; the processing of paint and its spatial positioning, the material feedback as a substance shifts or settles, the associations that open up between disparate elements, inducing moments of



recognition and likeness, the perceptual spin of connections and comparisons as elements are installed across space.

Drawing on neurologically grounded approaches to philosophical theories of consciousness, perception, and the neural mechanisms that support aesthetic experience (Fazekas 2016, Nanay et al 2015, Prinz 2015, Zeki 2015), I am examining the attentional attachments that painting might prompt, taking account of the tactile, spatial and durational contexts painting can operate within. A focus on attention moderates the reductiveness that could come with an emphasis on painting's visuality or opticality, one that might house the argument within certain art histories [see also **APERTURE**]. By accepting and working with the oscillating and multi-sensory modalities of attention, the approach taken here undercuts idealised and sensorily isolated accounts of attending to painting. Similarly, divisions between abstraction and representation that can still irritate a consideration of contemporary painting are dissolved by the multiple pulls on attention that work across those categories.

A further motivation for working with attention as both subject and method



5 colour sequence 54250 acrylic on laser cut mdf, each 12.5 x 20.3cm

is a question of sensibility. Attention is thought to function at the brink of consciousness, and that the self as we understand it philosophically and biologically is dependent on attention (Prinz 2012: 89). With this in mind, how self awareness might also attune to an awareness of others emerges in the term attentiveness. As an expansion of the word attention, attentiveness carries with it the emotional responsiveness of taking care that might inform an approach to how painting produces perceptual registers for maker and viewer.

The term attentiveness was used by early twentieth century art historian Alois Riegl to describe a form of socially engaged interaction, one that he recognised depicted in some paintings and one that painting could potentially prompt in a viewer (Olin 1992: 155) (Iversen & Melville 2010: 92-96). This socially attuned and empathetic aspect of attention also connects to Riegl's pairing of the haptic and the optic, both the process of tactile verification that might isolate objects, and the counter experience of tactile disintegration and the interconnectedness it facilitates (Iversen 1993: 33-47). As such, the social connectivity of attentiveness and the entanglements of touch and vision offered by Riegl, gives painting's



prototypes for floor based screen divisions or folded table paintings, screen printed papers and hinged card structure

spatio temporal, material and procedural potentials the traction to be considered contact points for a reciprocity between a work and a viewer, tuning into the receptivity of attention as care [see also **FABRIC**] [see also **PROFILES**].

Alongside attentiveness, and the connection between attention and memory and imagination, remembering the sorting stones foregrounds for me the numerical aspects of perception and the contributive modes of attention they require. Research on attention shows that focused attention enables the sequential exactness needed to count, while distributed attention supports estimation and our sense of the statistical properties of a given scene (Chong & Evans 2011: 634–638). The activity of sorting stones also indicates the close link between attention and pattern seeking in selecting and organising perceptual input, or the impulse to build significance or the uncovering of order within a vastly complex field of data (Lund 2001: 2). In terms of painting the need to individuate in order to count points to figure to ground relationships that have been a standard distinction in pictorial works, and the ability to experience quantitative



shift pattern (detail) 22 triangles, acrylic on mounting board, various configurations

comparisons might direct our experience of composition. The assertion that how we deploy attention determines what we see (Treisman 2006: 411-43) describes what we might lose and gain as attention oscillates between focus and dispersal. These shifting modes of attention have also been associated with mood (Srivastava 2009: 87-100), and this emotional cadence of attentional experience, alongside its role in perceptual prioritization, can inform an understanding of the affecting resource offered by the compositional and structural possibilities of painting, and its spatial and durational aspects.

As an artist making structures and surfaces to prompt and condition attention, the responsibility to engage with current cognitive and neuropsychological research on attention and perception seems clear. By reflecting on sorting stones, the correspondence between optical and tactile, the immediate and the remembered is foregrounded. As mountains, the stones point to imaginative engagement and the process of picturing, and as countable units they value the early stages of perception, decoding sensation. In the abstraction of standing for



studio set up including table or plinth components for room plan, ulam spiral rolled ink drawings on graph paper, paper tape wall work

something, depictions and representations in collision and in collusion with immediate sense data are kept in play. More significantly, the perceptual sensitivities recognised in a childhood preoccupation, and the comparative assessment and imaginative associations that can signify are to be argued for in terms of their empathetic potential. Additionally, the close contact and receptiveness inferred by tactile verification and disintegration is built into the work as an invitation. In reimagining attentional capacities for painting, attention can then be thought of as an open and responsive interface with the world [see also **FABRIC**] [see also **PROFILES**].



grid for Sophie Germain in progress (Sophie Germain Primes up to 1000) each 12.5 x 20.3cm, various depths)



number key 0123456789 acrylic on laser cut mdf, 10 parts, each 12.5 x 20.3cm

methodology

picture-diagram & imagined protagonist

Attention operates here as both subject and method. The oscillations of attention have facilitated the trajectory of the research and the development of the practice. Attentional capacities provide the conditions within which the practice is materialised, and these conditions are also visualised within the practice and within the writing. The dispersed and diverging nature of this research process is held by a strategy I term picture-diagram and tested by the activation of an imagined protagonist. Both the role of the protagonist and the function of the picture-diagram are dependent on picturing, an imaginative act closely related to the processes of attention and the processes of painting.

The research process draws on current cognitive and neuro psychological research on attention to support considerations on how states of attention are prompted by the fabricated limits of painting, and how the limits of our attentional capacity might get played out within the conceptual and material conditions of painting. This cognitive approach enables me to rigorously examine and cut across a set of attentional conditions inherited by art history, philosophy of perception, and the subjectivities of art criticism. This enables an innovative reimagining, acknowledging the fluctuations and temporality of attention, and positioning distraction, dispersal and divisions of attention within a spectrum of attentional resources for painting.

picture-diagram

Picture-diagram is my term for a visual methodology (Rose 2001) generated through and by practice . Picture-diagram establishes a limit to the research that is pictorially demarcated. Both picture and diagram, as visualisation or proposition, infer action or outcome, instructed, anticipated or recalled beyond themselves. Approaching painting as a tool for thinking, where one can 'posit a proposition and its contradiction simultaneously' (Bochner 1993: 201),

picture-diagram is conceived as a conceptual space, enabling the holding and retrieving of multiple research trajectories, encoding and decoding painting's potential for attentional attachments. The practice operates within the speculative potential of picture-diagram, and as a methodology, this also foregrounds the practice impetus for the research and signals the pictorial approach to the writing, both in tone and format, that was laid out in the preface. Additionally, picture-diagram, as a compound category of image related terms, places a consideration of attentional capacities for contemporary painting firmly within a culture of visual saturation and the exchange of visual data. Its fabricated status aims to imply the modulation of attention by social, cultural and economic levers.

The picture-diagram is generated in the first instance by a single art historical artefact, a two panel work by Giovanni Bellini, *Angel of the Annunciation and Virgin Annunciate*, commissioned for the church of Santa Maria dei Miracoli in Venice circa 1500 (picture 2). Rather than being positioned as an art historical exemplar, the Bellini work has a structural anomaly that has prompted me to detach it from the logics of art historical sequencing. This anomaly is the 'cut' foregrounded in the title of this text and it provides 'an access point to discuss painting's participation in attention dispersed through space as well as caught within a frame' (p68). The cut points to the work's original function and spatial contribution within the architecture of the church interior for which it was commissioned, and points away from the conventions of coherent and enclosed pictorial space and wall bound painting it has been assimilated into. Originally designed as shutters or we can say more generally doors, for the organ in Santa Maria dei Miracoli, the cut is a functional opening. Designed to move the panels through space, it would have facilitated a turning away and turning towards as the work negotiated the spatial logic of open and closed, endlessly dividing and reattaching the pictorial and attentional responses the work might prompt. This move from and between site responsive component and pictorial object, as an 'interway station' between painting and architecture, is a strategy throughout the research (Crough 2016:235).

Via the strategy of the picture-diagram, the Bellini work is proposed as 'a holding space for the attentional conditions of contemporary painting's production and reception' (p67). It is offered as an expanded model of painting that is active within an architectural setting while still pictorially conditioned

and contained. Slipping between categories, it is a useful mnemonic device for a practice based research methodology that resists stable and resolved positions for painting and any attentional mode assumed for it. As a functional component, door, shutter, screen, the Bellini work raises objections to critical positions that are nervous of painting's objecthood, and its functional and decorative alignments (Fried 1967) (Melville 2001: 4) (p91). The motivation for giving an art historical artefact such a central position requires some clarification. It needs to be understood as a fictional device activated by a painter rather than a respectful nod to art historical precedent. Its function within a research process testing attentional capacities for painting was initially informed by a thought experiment: if more recent histories for painting were inaccessible for some reason, and one had to construct a contemporary position for painting from some arbitrary point in the past, would a full spectrum of the attentional responses to painting be identifiable? The thought arose in the context of questions about potential changes in attentional function due to attention hungry technologies, and contemporary concerns that our attentional capacity is being depleted, our attention span fractured or at least that our attentional priorities are being modified by new attentional demands. The use of a Renaissance work is therefore not an attempt to retrieve an idealised version of attention from the past. Rather it is put under pressure to uncover evidence for inevitably divergent attentional conditions for painting. Its structural anomaly has enabled a reimagining, to shift the discourse from idealised forms of attention and to engage with the fluctuating nature of attention not as evidence of a flaw or failure in capacity but as an indicator of the active cognitive engagement painting might invite.

There is also a sort of counter intuitive function for the focused analysis of a single work. This return to the same work has continued throughout the research because the work keeps slipping out of reach. In Michael Baxandall's words, 'from instant to instant, we never see the same picture' (Baxandall 1994: 414). Yve-Alain Bois has pointed out the limits of a process account of painting in which we might list, 'A (paintbrush) + B (paint) + C (support) + D (the manner in which these are combined) give E (painting)', and then assume that 'given E, ABCD could be deciphered' (Bois 1991: 216). Bois' warning can be widened to any assessment of painting that aims to contain or account for it in its entirety, as though it believes 'itself capable of exhausting its object, of

being able finally to state the truth about the truth, when it is in fact its object that exhausts it' (Bois 1991: 216-218). In this way the picture-diagram, as an insistently pictorial methodology, holds and delimits the practice research, while also being experienced as inexhaustible and also insufficient.

imagined protagonist

The attentional requirements of an imagined protagonist steers the picture-diagram. The protagonist emerged as a contributive strategy within the methodology through various research routes. Firstly through an engagement with a narrative painting, Bellini's *Annunciation*, that both pictures and prompts modes of attention. In this sense, the protagonist anticipates and imagines the role of a viewer or participant for painting and the attentional attachment they might experience. The directive and active aspects of the term protagonist gives agency, and aims to re-address the narrative potential of painting that was dismissed by abstraction while simultaneously accessing deeply abstract concerns.

The protagonist tests the idea of a social space invited and choreographed by painting as a site of production and reception. Then in relation to wider issues of spectatorship and the gaze, the term protagonist has been chosen because it offers a different tonality to viewer, spectator, observer, beholder, participant, that each carry with them promoted or implicit conditions of engagement with a work of art. The protagonist also takes on a strand in painting's art history that infers that a viewer can be pre-configured by a work or acknowledges a reciprocity between the work and its viewer (Podro 1998: 61-65) or more directly that paintings can contain internal spectators that are a key to our imaginative engagement (Wollheim 1987: 101-185) (see also **PROFILES**). The imagined protagonist is also an articulation of the position of the practitioner within and without the practice, The sense that 'the painter is already in the canvas' as expressed diagrammatically by Gilles Deleuze as 'a preparatory work that belongs to painting fully, and yet precedes the act of painting' is particularly relevant (Deleuze 2003: 99). It is here that the imagined protagonist and the picture-diagram meet, but also here that the gap

between any methodology and the articulation through the practice is made clear.

The building in of a specific historical figure as the imagined protagonist brings qualities I want to claim for painting. A responsibility to the biographical detail of Sophie Germain gives the practice the task of referring to content outside of itself. Germain's contribution to her field was impacted by the restrictions she faced as a woman born at the end of 18th century. This impacted her access to education and to discourse, but this sidelining also gave an alternate viewpoint that seems to have facilitated her ability to innovate. In researching attention I became interested in incidents of creative breakthrough that had occurred in compromised circumstances and how they might shift an individual into different modes of attention. An example includes the detailed noticing that led astrophysicist Jocelyn Bell Burnell to discover the first radio pulsars in 1967. As a phd student at Cambridge, Bell Burnell had set herself the task of scanning approximately 900 ft of data each day from the radio telescopes she helped to construct. A small anomaly or 'scruff' in the read out as she called it became a pattern of difference she couldn't ignore, but was overlooked by her supervisor. The subsequent omission of Bell Burnell from the 1974 Nobel Prize that was dependent on her discovery is a significant example of exclusion on the grounds of gender or hierarchy (Drake 2018). Examples like this open up a parallel question for me of what and who has been excluded from painting and on what basis. Here attention's selectivity intersects with selective memory, and the overlooked or undervalued aspects of cultural production. A painting dependent example would be the exclusion of female practitioners from the painting workshop at the Bauhaus who instead found creative focus in the weaving workshop (Glancy 2009). The close attention to process and colour modulations, down to the warp and weft of the fabric under construction, has an arguable significance for developments in painting in terms of its relationship to support and surface. Yet that contribution is inevitably positioned to the side, or outside the dominant narratives (p 179-180). The experience of exclusion I can feel as a female practitioner looking back through art histories and wider cultural production is a contributing factor in Sophie Germain emerging as a active agent in the research process. As imagined protagonist she is given the impetus to unsettle and to mediate the space through which she moves.

Additionally the function of Sophie Germain the mathematician facilitates the most numerically specific and conceptually abstract aspects of the practice. This reconnects me to aspects of painting's relationship to abstraction, but also gives the practice a divergent motivation. So although the mathematical systems that are key drivers in the practice might have a connection with certain precisely delineated strands within abstract painting, the protagonist also demands that considerations of representation and depiction are not excluded.

Before detailing the specifics of Sophie Germain as imagined protagonist within the methodology, I need to make a further analysis of my use of the terms picture and diagram. Furthermore, I need to acknowledge how the co-joining of picture and diagram points to a strategy of doubling that is evident throughout the research. Firstly I will provide a note on picture and diagram in turn, before moving on to demarcate the space in which the protagonist operates and pushes against. A further note will reflect on the approach taken to writing, and then I will locate the practice concerns in relation to discourses within contemporary painting and its recent histories, including how the picture-diagram generates two inventories that are pivotal to the writing structure and the innovative contribution of the practice. Finally I will review the instances of doubling that the methodology hinges on, and the related interest in number. The next sections are formatted as a series of notes: *a note on picture, a note on diagram, a note on Sophie Germain, a note on writing, a note on contemporary painting and its histories, a note on doubling, a note on number.*

a note on picture:

The use of the term picture is strategic. Picture infers enough of a sense of being constructed that I hope it avoids being read as an objective record of perception or a dematerialised instance of the visual. Picture suggests the physical actuality of a surface, but it also signals an imaginative response. The cognitive process of picturing as both anticipatory and reflective, opens the research to the exchanges between attention and the predictive coding of visual stimuli, the transactions between sensory stimuli and conceptual proposition, and also the relationship between perception and the processes of

memory and imagination (Millidge, Seth & Buckley 2017). In considering the characteristics of picture in the context of attention, the research tests the proposition that 'the things that language must be decisive about and pictures must be decisive about are different' (Baxandall 2003: 123). Discrepancies and collaborations between the visual and the linguistic, reading and looking, filter through the entire research process. Scale, spatial position, level of materiality, chromatic value, relation to edge might make a start to a listing of pictorial priorities, and the research methodology of a picture-diagram asks how these might also impact an approach to writing [see also **BOOK and WINDOW**]. For example, the facility of picture to negotiate ambiguity has enabled the writing to accommodate seemingly contradictory positions, connecting back to strategies in the studio that approach ambiguity as a key factor in sustained attentional attachment (Zeki 2003: 173–196).

Picture is on the face of it a very accessible term, but when put under pressure is exceptionally hard to pin down. Picture might exchange with image, and it might exchange with painting. In a process of translation the difficulties of the limit and reach of any term emerge. In a functional approach to art history, or within a studio practice, dissecting the term picture could be viewed as a distraction from the work at hand (Elkins 2011:20). However its flexibility when moving between philosophical, art historical, and cognitive references is useful. Picture also has a certain historical contentiousness for painting, as a method of self definition, as when modernist criticism refers to 'the strictly pictorial' (Fried 1998: 26), but also picture standing for what abstraction had discarded, signalling a rush in of imaging, narrative, social commentary, and critiques of originality. The use of the term picture is also to claim a connection to a wider scope of practices that foster pictorial concerns, particularly when there is a marked dispersal of painting problematics into other practices as was the case during the 1960s and 70s when the critical viability of painting was seemingly exhausted (Ehninger and Krause-Wahl 2016: 7-21). As Douglas Crimp described in the 1970s, as he identified image based practices that had made a break with modernism, 'equally important for my purposes, picture, in its verb form, can refer to a mental process as well as the production of an aesthetic object' (Crimp 1979: 75). Painting's alliance with and resistance to picture connects to a contemporary demand to participate in an economy of image circulation. The 'becoming picture' (Joselit 2015:

15-17) of upload and image sharing that painting might assimilate and also resist can be usefully informed by painting's long term investment in manipulating and modifying attention. The tensions and overlaps between painting and picture are re-activated here in the context of attention where the imaginative aspect of picturing also comes to the fore (endnote 7).

a note on diagram:

The use of the term diagram bridges a space between image and writing. Diagram might suggest a single schema of essential information, or nameable content, but the intention is also the propositional aspects of the diagrammatic (endnote 9) . Crucially the source of the diagram is not conceived as stable or fixed. The structural anomaly of the Bellini work, the cut, provides a spatial and durational fluidity for painting, carrying with it the selectivity of attention while accommodating attentional gaps and glitches, attention divided and dispersed.

The idea of a diagram for or from painting consciously references multiple research sources, and the problems and limitations of each are of interest. The diagram points to art history as a visual inventory, the formation of art history as an academic discipline entangled with the invention of photography and the seductive potential it offered to cross compare works across time spans and locations (picture 1). A propensity for the diagrammatic is also notable in art theory, giving a semblance of the evidential. The diagrammatic also emerges as a strategy for artists at moments of rupture, as visualised by early twentieth century practices; machine systems, inventories, visual cataloguing to the point of absurdity (picture 3). The art historical and theoretical approaches to the diagram are multi-layered, and the Bellini as a starting point can track a very particular trajectory. As a Renaissance painting invested in 'the machinery of illusionism' (Clark 2019) it might easily be subject to a perspectival overlay to expose its spatial system, locate vanishing points and establish the picture plane. Perspective's role in positioning a viewer, spatially and psychologically and as a shared tool between pictorial and architectural responses to space is evoked by the use of the term diagram (Iversen & Melville 2010: 109-128) (picture 4) . A perspectival diagram also intersects with

a diagrammatic tradition for describing vision, a viewer centred and monocular, with a gridded version of receding space, or the eye seen in profile dissected by rays of light, and vision seen as a projection from point to plane (Crary 1992) (picture 5)[see also **GRID**] [see also **APERTURE**]. Painting overlaid with diagrammatic divisions makes apparent the formal underpinning of proportion or ratio, signaling a philosophical and cultural engagement with mathematics that was relevant in Bellini's time. Diagram also facilitates the reconstruction of an architectural space within a painting, in this case a single room that was envisaged as a pictorial echo of the architectural setting the painting was originally commissioned for.

As a frequent method within art historical analysis, a diagram can be both reductive and expansive. Diagram might evoke a formalist inclination, characterised by Erle Loran's diagrammatic analysis of Cézanne's work from the 1940s, with directional arrows attempting to configure the viewing experience; then Loran's diagrams remade by Roy Lichtenstein in the 1960s, with very different motivations, in Pop Art's move to diagramatise painting as image (picture 6). The explanatory delineations of Loran have been dismissed by Rosalind Krauss as 'intellectual kitsch', but the same diagrams apparently appealed to Clement Greenberg's analytical impulses. In Krauss's writing Loran's diagrams find themselves at the centre of a disagreement over the undercurrents of modernist practice, with Krauss returning to them as a storehouse of subconscious responses (Krauss 1993). This links to the diagram's role in a psychoanalysis of painting, for example Oskar Pfister's 'discovery' of the outline of a vulture amongst the tangle of legs in Leonardo da Vinci's *The Virgin and Child with St. Anne* (picture 7). Then Krauss's own use of the diagrammatic, the structuralist Klein Group, and its double negatives that mapped the logics of sculpture in an expanded field in the late 1970s, and provides the potential for an equivalent mapping for expanded painting (picture 8).

The schematics of diagram also point to visual frameworks used in cognitive research. Neuropsychological research on attention relies on pared down visual stimuli to test a subject's ability to distinguish between targets and distractors, to assess reaction time, attentional limits and gaps or lags in processing (picture 9). In another example, research employing eye tracking scatters dashed lines and points across pictures as visualisations of saccades and

fixations (picture 10), and the same technology attempts to monitor our attentional patterns online, as we pause or swipe. As Krauss

states, 'to each his own diagram' (Krauss 1993: 98-104), and here the flaws, compromises and subjectivities of the diagram are acknowledged. So a double potential of the diagram is evoked; the diagram's aim for clarity and its communicative potential can also make apparent some of the slip ups in our perceptual and attentional processes. The diagram stands for extreme selectivity, exposing bias and hierarchies even with the most objective of intentions. In this sense, contemporary artist Amy Sillman's recent writing on the seductiveness of the diagram is also a call for its corrective, and the 'spasms, screw ups, sabotage, refusal, stupidity ... whatever is incalculable' in the messiness of a painting practice. Like Sillman I am interested in how the diagram is 'a way of holding disparate ideas together', of offering plausibility to the most implausible ideas (Sillmans 2020). The diagram moves between this liberating capture of possibility and its emergence as 'a manifestation of social conditions, a state of quantification, surveillance, and bureaucracy' (Buchloh 2006). All this makes the diagram a particularly pertinent model for negotiating the multiplicity of attentional concerns. In the picture-diagram it is asked to map attentional compliance and manipulation, to make gaps and slippages apparent, while staying open in its insufficiencies to the care and responsiveness that attentiveness might offer.

minor
edits

a note on Sophie Germain

As I have indicated, a focus on the variabilities of attentional experience led the research to look at examples of innovations that have emerged under compromised or inadequate attentional circumstances. So I need to outline in more detail the biographical detail of Sophie Germain's experience in navigating gender based restrictions, and the particularities of Germain's contribution to number theory that have informed key aspects of the practice. It is important to say that Germain's restricted and displaced position as a female scholar in 18th Century France, and her mathematical innovations converge for me in her role as imagined protagonist. Sophie Germain the mathematician provides a remit for considering the connection between numeracy and perception and the numerical aspects of focused and dispersed attention while remembering the social and cultural contexts these attentional modes emerge within (Chong & Evans 2011: 634–638) [see also **GRID**].

Born in 1776, Sophie Germain faced considerable societal obstacles to pursue an interest in mathematics. The decade-long upheaval of the French revolution from 1789 - 1799 spanned Germain's formative years, confined indoors and tuning attention to the books in her father's study. The intensity of Germain attentional attachments, often studying late into the night, were seen as inappropriate and obsessive for a girl. As a young adult, Germain's use of a male pseudonym in order to access the mathematical and scientific curriculum of the newly formed École Polytechnique in Paris innovatively undercut social restrictions. Under the assumed name of Antoine Le Blanc, Germain was able to receive lecture notes and submit written work. Later Germain used the same name to enter into correspondence with German mathematician and physicist Carl Friedrich Gauss (Ornes 2009: 13-33) (Dalmédico 1991: 116-123) (endnote o). Questions about Germain's significance as a mathematician are often qualified by the disadvantages she carried due to a lack of formal training. Despite Germain's resourcefulness, the circumvented access to contemporary mathematical and scientific thought created a substantial barrier for her. Yet there is evidence it also enabled Germain to tackle problems innovatively and tangentially, unhampered by certain received ideas. Germain's work on number theory led to the identification of a special category of prime number, now named after her (Singh 2011: 104).

A further aspect of Sophie Germain is also worth noting in relation to her function as an imagined protagonist. There is a peculiarity about Germain's picturability. Sophie Germain died in 1831, 4 years after the first experiments in fixed photography but well before portrait photography was a possibility. Yet various photographic images purportedly of Germain circulate online, the need to picture seeming to have overridden this historical reality. One particularly odd example is a Sophie Germain twitter account @SophGerm with tweets from Germain's biography that uses a photograph that looks like it has been modified from a photographic portrait of Russian mathematician Sofya Kovalevskaya born in 1850. It points to a more general image exchangeability between Sophie Germain and other female mathematicians and scientists including mathematician Emmy Noether (1882-1935) and repeatedly Sofya Kovalevskaya (1850- 1891), physicist Marie Curie (1867 - 1934) and Cecilia Payne astronomer and astrophysicist (1900-1979). Much of this image misattribution might be lazy research compounded by search engine relevance criteria, but the image search results are a contemporary reminder

of the institutional bias and social dislocation each of these women experienced for pursuing mathematical and scientific careers (Singh 2011: 110-111). It dilutes the particularity of each of their individual contributions to the level of a stock photo, or type. Additionally the misattribution repeatedly pulls Germain into the later 19th Century, as though Germain's achievement within a much earlier historical time period is difficult to visually acknowledge and therefore needs to be pictorially adjusted (picture 11). In the context of painting based research, Germain's displaced picturability asks questions about correlations and tensions between painting and image and the modes of depiction, likeness and representation that painting might operate within and against (Elkins and Naef: 2011; 79-89) (endnote 7). When the dismissal of representation for painting is readdressed in terms of underrepresentation, the lens of attention can help widen an art historical trajectory, Contemporary figurative painter Jennifer Packer addresses this most forcefully when she talks about a kind of erasure that her approach to painting aims to contradict. As Packer says in relation to her experience as a black woman artist walking through museum collections, 'I see all the things that aren't there' and 'my inclination to paint, especially from life, is a completely political one. We belong here. We deserve to be seen and acknowledged in real time. We deserve to be heard and to be imaged with shameless generosity and accuracy' (Packer 2021). Additionally, the female body as an object of aesthetic observation within a painting tradition can leave another non individualised residue in our image expectations. This presents an obstacle for female practitioners accessing art historical precedents, and the necessity to shift from object to subject within a painting space. As a necessary piece of imaginative work, this is complicated and kept live by an empathetic link to the objectified body, and so it is a process of constant renegotiation for a female practitioner. The imagined protagonist in the research methodology takes on the complexity of this gendered painting history (Brennan 2004) and a painting art history that needs to account for its selectivity and erasures in a wider sense.

The interaction with Germain as protagonist within the practice can be glimpsed in the studio notes which run through the writing. Studio thoughts and decisions are directed by a sense of what is essential to share with Germain, in response to her biography and in acknowledgement of the historical distance from which I write. As the practice leads the research and writing, a function of the picture-diagram methodology has been to maintain space for

the practice so it is not the object of analysis but its engine. This is partly achieved through a strategy of distance; the scrutiny of the Bellini work and the framework provided by the components establish a focus and remit that allows the practice a speculative flexibility. The studio notes remove that distance at key points. Enabling that closeness and directness is one of the essential contributions of the imagined protagonist.

a note on writing

A thought that has informed the approach to writing is that the process of reimagining I have undertaken might not be compatible with the authoritative voice of a theoretical text. Art historians who have approached writing about art with a sense of doubt have given me confidence to allow the sensibilities of the studio to direct the writing in an intrinsic way. Rosalind Krauss' writing, particularly the approach she took in *The Optical Unconscious*, is a significant example. Personal recollections are allowed to intercede with more theoretically pinned analysis, as Krauss's disillusionment with formalism is manifested in an unravelling of the need for linear continuity in the writing also (Krauss 1993). Additionally, the interjection of another text into Krauss's description of Sol LeWitt's work in an essay in *The Originality of the Avant Garde and Other Modernist Myths* offers multiple attentional strands for the reader. The extracts from Samuel Beckett's novel *Molloy* come without explanation from Krauss, but the logics and illogics of the task of sucking stones in turn which the character Molloy undertakes with such seriousness and resilience clearly elucidates LeWitt's approach to the endless iterations of seriality in an art practice (Krauss 1985: 245-258). Only in the last paragraph does Krauss acknowledge the Beckett reference directly and the importance of its 'absolute detachment from a world of purpose and necessity' (Krauss 1977: 258). Another example is the textual ventriloquy that James Elkins undertakes in his writing on photography, that in parts shadows word for word Roland Barthes influential book *Camera Lucida* (Elkins 2001: xi). Elkin's doubts about perception and memory, and his worries about the confidence we place in images, permeates the tone of the writing (Elkins 2001: sections 10- 22). Then in relation to my central use of a Renaissance work as a research method to reflect on the attentional circumstances open to painting, the diary format that T J Clarke uses to track the

experience of the repeated apprehension of two paintings by Nicolas Poussin gives space to a train of thought as it forms and edits itself. As an experiment in art writing, Clark's *The Sight of Death* can also be seen as an experiment in allowing the variabilities of perception to unfold over time, and to inflect a consideration of the social and political conditions that apprehension is caught within. Clarke talks about the motivation to shift painting from 'a trance-like removal from human concerns' and to make painting 'fully part of the world of transactions, interests, disputes, beliefs, "politics"' only to find that the consequence of this move is painting's potential to be incorporated into the ideologies of an image regime (Clarke 2006: 122). Clark's writing is tinged with hope and despair, matched by the pictorial and material approximations and displacements he identifies in the Poussin paintings..

In a text *Indexing Notes on Painting* written for an exhibition catalogue in 2019 (endnote 4) , I used a numbered note format to capture a sense of parallel, interconnected, uncertain and fragmented thoughts on painting. One note references Hubert Damisch's use of the term 'remarks' in his

strike through landscape acrylic and paper tape on plywood panel, 55 x 34 cm



text *Remarks on Abstraction*. Damisch uses the analogy of the sort of annotation, or *remarque* as it would in French, found on the margins of a printer's plate, giving feedback and response to a work in progress (Damisch 2009: 133-154). In my text, note 1 opened with 'Notes on. Onto. Painting. Notes on, or about, or into painting. Edge notes and endnotes, retractions and clarifications or expansions. On the periphery, on the reverse, the marginalia of a practice scrawled over its surface. Painting as an annotated space, responsive, and open to modification'. Note 4, directly in response to Damisch, follows on with, 'A note in this context is a form of critique or commentary. Additionally it can indicate a directive function, like the proof reading of a text: deepen the tone, increase chromatic value, sharpen the line, enhance contrast, cover over, erase. This might also capture the status of a text as a side note, an aside to the general thrust of an established argument. Or it may be corrective, the introduction of an alternative thought, experienced as a gentle nudge that shifts an assumed trajectory further down the line' (endnote 4). The final note, note 11, is particularly relevant to an approach to writing that is in correspondence with its content, and so, 'The indexing of Notes on Painting might offer a formal system that incorporates uncertainty and impermanence. Held by

zero grid detail



the considerations of a proposition, not coalesced into an assertion of or candidature for the canon of painting. The logics of one after the other can be reordered endlessly, painting's history of the singular image spread out as sequences and dependencies, frame by frame, while also compressed into close proximity. Hierarchies assumed and consumed, compositional configurations generated as a consequence of the system, despite itself' (endnote 4).

a note on contemporary painting and its histories

I have mentioned strategies of distancing that I have activated in the methodology that prevent a practice based PHD process turning the practice into an object of analysis. Rather my approach is to consider the practice as innovatively locating a position from which analysis takes place and new knowledge can emerge. In order to make that position clearer I want to outline connections I make to positions expressed by other practitioners in the context of painting's recent histories and to outline the contributions this research makes to the discursive field of contemporary painting. In an article, published in 2021 in *The Journal for the Philosophy of Language, Mind and the Arts* titled *The Productive Inadequacy of Image: Image based operations in the work of Beth Harland, Jacqueline Humphries and R H Quaytman* I test the term image against the material, spatial and durational conditions of painting, and the attentional attachments it might mobilize (endnote 1). Through a careful reading of the artists' own descriptions of working processes, I propose 3 functional sub categories of image: image as visual artefact, image as data, and image as visualisation. As I describe, 'Image as visual artifact points to the categorising impulses of art history and a visibility that overlooks material and spatial circumstances; image as data indicates a destination of upload, circulation and exchange, and captures image as reference or image as information imported into or onto painting; image as visualisation opens up image as internal picturing, connecting to the anticipatory and reflective processes of imagination and memory' (endnote 1). The position I outlined in that article was not to position painting as image, rather to consider painting as a processor of image information, producing and prompting an image response (endnote 1). These image based conditions form an inescapable backdrop to contemporary painting practice for me and its activation of attention, one that the strategies undertaken by artists like Beth Harland, Jacqueline Humphries and R H Quaytman help me to locate.

I am interested in how artists might need to negotiate the baggage of painting's past while connecting with painting's contemporary potential. In a 2019 article *Models of Attention* in the *Journal of Contemporary Painting* I discussed how the social and economic functions of attention are still operative within painting's negotiation of our attentional capacities (endnote 4). Responding to a key text in painting's recent art history, *Painting as Model* by Yve-Alain Bois (Bois 1991: 245-257), the article shifted from the idea of painting as a mode thought that Bois takes up via Hubert Damisch, to considering painting as a mode of attention. I proposed an 'attentional-specificity for painting' in which 'the limits of attentional capacity, distinctions between focused, distributed and divided attention' can be seen to have a correlation with the structural, spatial and material conditions of painting (endnote 4). This intentionally adjusted the focus from a recurring discourse for painting of medium specificity, instead I approached the 'unravelling of modernist painting' as a 'conflict between models of attention, and divergent attentional expectations' and argued that 'modernist values of immediacy, presentness, wholeness are considered conditions of an ideal attentional experience, one that attempts to hold back a partial, fragmented and

zero grid detail



distracted counter experience of modernity' (endnote 4).

The difficulty of reconciling painting's past with painting's contemporary potentials is a space I find productive for a practice. Other painter's moments of crisis, reevaluation or repositioning in relation to a shifting context have informed this. Marcia Hafif's text *Beginning Again* describes beautifully how doubt, limit and impossibility open up a process without any of those responses being rejected. Writing in 1978 Hafif describes a state of seeming irrelevance for painting, but one in which the artist continued to paint; 'It was not that everything had been done, but rather that the impulses to create that had functioned in the past were no longer urgent or even meaningful' and that the 'enterprise of painting was in question, was "under erasure"' (Hafif 1978). Hafif's response to this state of proposed effacement is relevant to the fiction of the picture-diagram methodology, describing how artists 'pretended in a certain way that we did not know anything about painting' and that this pretence allowed for a productive displacement in thinking and position. For Hafif this fiction provided 'a kind of extra-consciousness, a looking in from the outside' (Hafif 1978).

zero painting index:: 0, acrylic on laser cut mdf, 55 x 34cm



I see a parallel strategy in R H Quaytman's position, as described in a text written in 2011 in which discourses on painting's irrelevancy are acknowledged while also activating painting in a conceptually expansive and systematic way. Quaytman's use of chapters establishes a connectivity between individual work and bodies of work that is ongoing (Bessa 2014), and has parallels to my thought processes on the dependencies of works as components. It is also an archival strategy that future proofs the conditions of the work's apprehension. Printed on the dust jacket of a publication documenting their work over 10 years, Quaytman writes about the use of a serial structure as 'an inoculation against the limiting scenarios constructed around contemporary painting', one that 'effectively untied a double bind I felt caught between - highly articulate and sexily convincing endgame versus the less glamorous and inarticulate reality that I had no desire to do anything other than make paintings' (Quaytman 2001). Earlier in the same piece of writing Quaytman talks directly about attention as a factor in the practice, making works enmeshed with reprographic processes, but determined to be considered paintings; 'I make paintings in the hope that the following ideas may be activated: (1) attention, whether from a gaze or a glance, can be contained, reflected, and distracted: (2) that the paintings will correspond to the ever-changing temporal, spatial, and contextual conditions of their placement' (Quaytman 2001). Hafif and Quaytman, writing 30 years apart, share a complex response to their immediate art historical precedents; an amplitude located in the restricted focus of the monochrome for Hafif, the reprographic dispersal of image information that builds a surface for Quaytman. The logics of the picture-diagram sees them in correspondence, contributing to my sense of what is at stake for contemporary painting.

The picture-diagram generates two inventories that I propose are relevant for practices and discourses contributing to contemporary painting. The first inventory is a set of actions or responses identified via the attentional circumstances of the Bellini work: *Interruption / Schemas / Capture / Correspondence / Deferral / Dispersal / Cut*. They act as subheadings within the central chapter *A Cut in Attention: caught between reader and visitor*, providing a framework for engaging with current cognitive and neuropsychological research on attention and testing art historical expectations. They point to attributes of attentional experience that have directed the research process, and they are also identifiable as strategies within the practice. For example, the activation

of interruption is multiple; it emerges from research on how interruption impacts attentional experience (Craig 2014: 841) and connects to disruptive techniques from early modernism that might intersect with and challenge the enclosures of painting (Barthes 1977: 69-78). Strategies of interruption and cut are identifiable in the practice documentation through compositional decisions within the works, and within the way works are positioned in space in relation to architectural and durational edits inherent in an exhibition context.

The second inventory is the set of components derived from nameable objects or structures within the Bellini painting. These are designated as *Aperture*, *Book and Window*, *Fabric*, *Grid*, *Profiles*. Each component has generated a self contained text addressing a specific context for considering attentional capacities for painting. They offer multiple frameworks that are at times at odds with each other, at times in complex collaboration, and are evidence of the multiplicity and dispersal that attention as both subject and method brings. *Aperture* confronts an optical emphasis for painting and attention's participation in technologies of vision. *Book and Window* explores attentional contexts for the pulls between visual



studio components for room plan

and linguistic priorities for painting. *Fabric* approaches the correspondences between looking and touching, and the tactile dimensions of the attention we bring to painting. *Grid* offers coordinates for shifting modes of attention, and painting's dual attachments to surface and recession. *Profiles* addresses attentional alignments and the individual and collective aspects of the orientation of attention. The term components is suggestive of interdependent moving parts rather than a set of singular objects, and so the contributions of *Aperture, Book and Window, Fabric, Grid, Profiles* within the picture-diagram allow it to be visualised as active and shifting. Points of abrasive contact, overlap and tension between the components are evident, and this is an important part of their function within the writing and the practice, and innovative contribution the research offers to the contexts of contemporary painting and its histories.

a note on doubling

As the minimal requirement of the experience of recurrence, doubling is an important compositional and structural device in my approach to painting and the attentional capacities it works within. I consider doubling as an instance and activation of attention; comparative looking, attentional capture, divided attention all imply the attentional pull of competing attentional targets. The double format of the Bellini acts as a concrete precedent for this strategy, returning the research again and again to a balance between two positions. This is reflected in a structural and conceptual doubling via *entry 1* and *entry 2* that indicate diverging attentional possibilities. The double aspect of the compound term picture-diagram echoes this interest in divergence; it can hold together an interchangeability or a distinction within a wider sense of image or the visual, while indicating a doubt in the adequacy of definitions. Picture and diagram both describe a form of image that is derived from or overlaid onto another, or that predicts or prescribes another. The function of both infers the dichotomy between copy and original that is pertinent to painting, and the sense of double that any assessment of representation or resemblance can hold.

The protagonist, in providing an imagined or internal viewer that pre-configures and then mirrors any actual viewer, is a key instance of doubling. Sophie Germain's strategic use of a male pseudonym is a further reiteration of this, locating a flexibility and shifting identity from within and without the practice. This doubling is restated by the paired roles of visitor and reader identified via Bellini's depiction (picture 2) , offering a double or alternate position for the protagonist, working across the cut between the two panels like a hinge. Visitor and Reader act as place holders for a studio practice versus a writing practice, artist versus researcher, between visual priorities and linguistic ones [see also **BOOK and WINDOW**]. They also picture a fixed and a moving viewer, and mark the shift between making work and viewing work, between studio processes and spatial installation, and act as useful visualisations of focused and dispersed attention. In relation to Germain's biography, the visitor carries with it the conditions of arrival or the necessity of invitation, and therefore questions of inclusion and exclusion, and the reader retains the private space of internalised experience and the complexities of interpretation. Importantly, the roles and modes they are asked to stand for have a flex built in, facilitated by the shifting position and attentional requirements of the protagonist. They underscore the complexity of pictorial representation, holding contradictions and ambiguities, with oppositions reconfigurable as equivalences.

Two other instances of doubling have been key to a pictorially generated research process. Both are identifiable through association and resemblance. Both take on the mirroring aspect of doubling. The first is housed within the Bellini painting, the second is equivalent to it. Firstly within the Bellini painting is a framed view of a landscape, as though we are looking out a window, or looking at another painting. I found the mountain in the background of this landscape view disconcertingly familiar, causing a returning attentional tug. The mountain resembles the slant of Paul Cézanne's *Mont Sainte-Victoire* series, but as though seen in a mirror (picture 12, picture 13). I haven't been able to ascertain whether Bellini's landscape view can be attributed to a specific location, but an association between a fragment of a painting from 1500 and a recurring modernist motif from the beginning of the 20th Century is lodged in the picture-diagram. The mountain, repeatedly apprehended by Cézanne in a distillation or attenuation of visual perception, might seem out of kilter with a perspectively mapped Renaissance articulation of space. Cézanne's extended series can be understood as evidence that perceptual intent and sustained



mirror image mountains: Cézanne's Mont Sainte-Victoire and mountain detail from Bellini's landscape view

Paul Cézanne, *Mont Sainte-Victoire*, 1904–06, oil on canvas, 83 x 63.5 cm, Kunsthhaus, Zürich

Giovanni Bellini, detail from *Angel of the Annunciation and Virgin Annunciate* circa 1500, oil on canvas, diptych
each panel measures 224 cm x 105 cm, Gallerie dell'Accademia, Venice

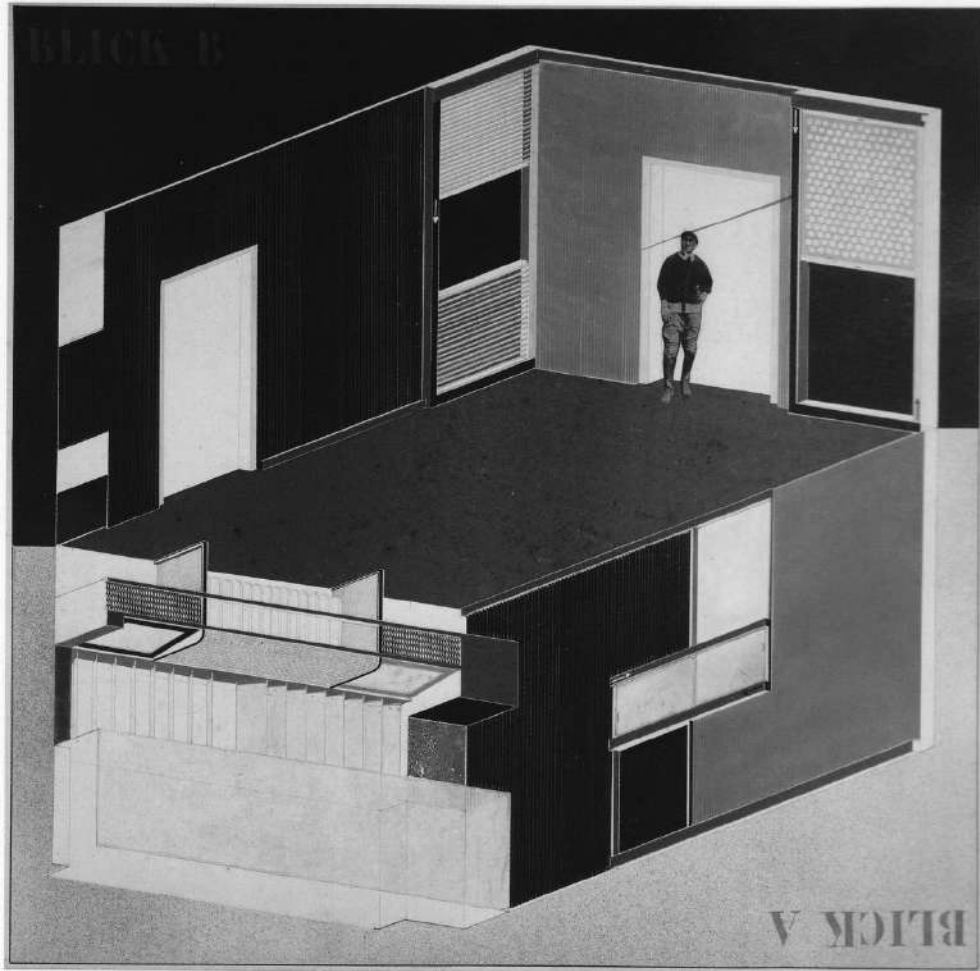
attention 'did *not* lead to a fuller and more inclusive grasp of its presence, its rich immediacy. Rather, it led to its perceptual disintegration and loss, its breakdown as intelligible form' (Crary 1999: 288).

The recurring nature of Cézanne's encounter with Mont Sainte-Victoire, with painting as an instance rather than a single and resolved pictorial output, acts as a premonition of the seriality that painting moved towards in the mid 20th century. In the context of the picture-diagram this move can be understood as a visualisation of the durational, episodic and fluctuating experience of attention (Dux & Marois 2009: 1683-1700) (B. Wyble et al 2011). From a phenomenologist perspective Cézanne's work is evidence of closely attentive sensory perception, of 'lived perspective', and an interchange between sight and touch, that for Maurice Merleau-Ponty was contrary to the system of geometrically perspectival space of which Bellini's room would be an example (Merleau-Ponty 1945: 64) (Merleau-Ponty 1964: 135). These seemingly oppositional positions are allied for me through the doubling strategy of the picture-diagram. Looking again at the mountain depicted in the Bellini and Cézanne's series, it is in fact possible that they are views of the same mountain. Mont Sainte-Victoire is a 6 day walk from Venice, approaching from the east, and the mirroring could be accounted for by a change in point of view. Either way, within the logics of the picture-diagram, art historical and geographical distance can collapse in a rush of recognition. Cézanne's mountain caught in reverse in Bellini's painting like a misaligned memory operates as another schema for painting and the subjectivity, discontinuity and tactility captured by attention.

Secondly, another mapped room with a figure caught on the threshold is imagined overlaid onto Bellini's spatial description. It is an axonometric rendering of El Lissitzky's *Kabinett der Abstrakten* designed by Lissitzky for the cover of modernist magazine *Broom* in the early 1920s (picture 14)(Bois 1988: 174). Through the strategy of doubling, Bellini's room and Lissitzky's room are put in correspondence; correspondence thought of as exchange and conversation as well as equivalence. Lissitzky's diagrammatic room is significant for the methodology of picture-diagram as it unfixes point of view, just as

the mirrored mountain indicates a shifting position. By discarding recession as a necessary logic of spatial description, top is equivalent to bottom in Lissitzky's room plan. Mapped by Lissitzky as a shift from A to B, the figure in the doorway is perpetually ungrounded. Yve-Alain Bois describes Lissitzky's strategy as an instance of 'radical reversibility', connecting its' conceptual intent to a series of spatial dis-orientations and re-orientations for painting in the 20th century, from Cubism, Mondrian, Pollock, Minimalism (Bois 1988: 174-175). Sophie Lissitzky-Küppers, Lissitzky's wife, linked the double orientation in the *Kabinett der Abstrakten* cover image to the table top destination of the magazine, breaking the privilege of a single point of view that picture-painting might assume (Lissitzky-Küppers 1992: 26). Bois calls this a shift 'from the verticality of the painting to the horizontality of the document' (Bois 1988: 174). For Leo Steinberg, writing in the early 1970s, horizontality follows the logics of table tops and studio floors and the flatbed of printing processes where painting takes on the task of storing material and image information rather than fabricating a scene (Steinberg 1972: 82-91) (picture 15). Later Rosalind Krauss identified the transgressive potential of the horizontal as anti form, working against the coherence of image and inferring the bodily (Krauss 1997: 93-103). As Steinberg described it, 'horizontality relates to making as the vertical of the Renaissance picture plane relates to seeing' (Steinberg 1972: 89-90). Bois goes further; in identifying horizontality with the status of documents, but these are documents to be understood as 'blueprints for action, charts for strategy to be adopted in order to transform society' (Bois 1988: 174-175).

Lissitzky's axonometric room plan, and the *Kabinett der Abstrakten* it describes, form a double or counter to the Bellini room. The adaptive nature of the Bellini work, opening and closing as functional shutters, unexpectedly meets the space of production and the blueprint for action of Lissitzky. Both provide an analogy to studio, study, library and gallery, and the attentional priorities each might house. They also provide a model of propositional space that can imagine a different set of attentional conditions and possibilities for painting. Lissitzky's *Kabinett* or demonstration room was designed to house abstract paintings, even as Lissitzky dismissed their pictorial limitations. In fact Lissitzky saw his work as actively in opposition to what he called picture-painting, and in the adaptive space of the *Kabinett der Abstrakten* 'we are destroying the wall as a resting place for their pictures' (Lissitzky 1923). An experiment in



reversible room plans: Lissitzky's kabinet and Bellini's room



El Lissitzky, *Kabinett der Abstrakten* 1926-27, gouache and collage, 39 x 51 cm. published as a cover for Broom magazine Collection: Sprengel Museum, Hannover
 Giovanni Bellini, *Angel of the Annunciation and Virgin Annunciate* circa 1500, oil on canvas, diptych, each panel measures 224 cm x 105 cm Collection: Gallerie dell'Accademia, Venice

exhibition design but more significantly conceived as a total work, the *Kabinett der Abstrakten* had moving partitions and striated wall surfaces whose tonality would shift and produce a perceptual flicker in moving through and past (picture 16)(Crough 2016: 229). The viewer in 'continuous circulation' is one intended consequence of this (Gough 2003: 88) and Maria Gough draws parallels between Bertolt Brecht's strategy of staged interruption in the theatre and El Lissitzky's strategy of sensory disorientation in the space of exhibition. Both were motivated by a radical activation of the audience or viewer (Gough 2003: 77-78). As Gough identifies a culture of inversion in 1920s cultural production, 'theatre as exhibition, exhibition as theatre' (Gough 2001: 77) For Lissitzky, though the exhibition space is envisioned as if a stage, it is the pictures that appear as the actors as much as the viewers (Lissitzky-Küppers 1992: 74).

The picture-diagram and the imagined protagonist are both located within the spatial and social logics of an imagined room. The depiction of a room in the Bellini work is a sort of schema for interior space, and in this sense the space the practice maps or proposes or operates within intersect; room visualised as a private space, as studio, study, retreat or internalised as a space for thinking; and the room understood as a public space for interaction, exchange, presentation or demonstration. The demarcations and shifts from one to the other are facilitated by the double figure and the double format of the Bellini painting and underscored by the reversibility of the Lissitzky. The alternate name for the *Kabinett der Abstrakten* is *Demonstrationsräume* or demonstration room and this underscores the agency of the protagonist and the activation of viewer or participant within the space (Gough 2003: 78-81). Other rooms and interior structures have become attached to this sense of possibility through the research, operating as attentional co-ordinates that resonate with the imagined protagonist. These include the threshold structure of a curved wall in Eileen Gray's E - 1027 villa (p138-139), Alma Siedhoff-Buscher's adaptive approach to space in her modular units for a children's room (p180), and the display structures used by Peggy Guggenheim in her New York Gallery in the early 1940s (picture 18 - 24); the room as a holding space for pictorial processing, the reiteration and uncovering of surface (picture 25-29); the room as a measured space (picture 30-32). The dimensional limit of room has an equivalence to the space of painting for me, from the blankness and flatness of walls and floor, to the mapping of recessional space and spatial enclosure, to the compositional divisions and framing devices of edges,

doorways and windows. Each of these room references raise questions about limit and exclusion that Sophie Germain also helps me ask, and that the picture-diagram can productively expose and reposition for me. Working within attentional parameters, the picture-diagram accumulates and assimilates through overlay and extension, via top down and bottom up attentional processing (Wyble, Folk, Potter 2012), an 'associative net' of depicted, fabricated, imagined, proposed and archived spaces and structures (Boden 1992: 94-100) (picture 33-38). The mirroring and exponential expansion of doubling, firstly between Bellini's depicted room and Lissitzky's room plan, between the designated roles of reader and visitor (p69-71), and then an intermeshing collection of references allows the research to move and correspond to wider processes of correspondence and analogy that are active in the studio. A visual record of that process is partially accessible through the picture archive housed at the end of the text. The picture archive also provides a number count that runs through the writing, and a sub count of Sophie Germain primes, that proffers another potential layer of linkage. This numerical archiving gives a sort of equivalence between images that allows associative links to productively jump across timelines. It is deliberate that the Bellini work is archived as picture 2, the first prime number and first Sophie Germain prime (picture 2). As the only prime number that is even, 2 seems appropriate for the double format the picture-diagram draws on.

a note on number

My interest in number and mathematical systems is not approached as additional to my interest in painting but intrinsic to it. The picture-diagram as prototype, precursor or overlay is involved in an unresolvable count between original and copy that has particular resonance for painting. This has been a significant factor in my use of doubling, and the attentional process of comparison as a sort of base unit of perception. Counting depends on assessing equivalence and also difference, the recognition of oneness underlining figure to ground relationships. Processes of identification, and designation at work numerically can be seen on a conceptual continuum with the processes that underpin pictorial apprehension. Deeply embedded spatial-numerical associations inform cognition and are fundamental aspects in human perception (Toomarian and Hubbard 2018: 184-199).

Art historian James Elkins, drawing on Denise Schmandt- Besserat's archaeological research, discusses the 'the impossibility of disentangling pictures from counting' (Elkins 1998: 183). Schmandt- Besserat's proposition is that counting precedes writing, and that at 'each stage in the emergence of the concept of number, there was a corresponding visual practice' (Elkins 1998: 165-166). For Elkins this early history of making and handling objects and marked surfaces elucidates pictorial conventions; so the relation between mark and surface, processes of signification and abstraction, the sense of a one to one correspondence between a mark and the object it designates, or the importance of spacing and sequence in reading the relationship between marks or figures, are conceptual innovations that are shared by the numerical and the pictorial (Elkins 1998: 168- 177). These are ideas I have written about before. The malleability between counting, writing and picturing that Schmandt-Besserat describes (Schmandt-Besserat 2007: 102-105) informed a journal article published at the start of the PhD process in which I discussed constraints between the term picture and the term painting (endnote 7). I positioned an early archaeological artefact as a thought object in order to establish distance from art historical narratives around these terms and to rephrase the conditions I felt I was operating within as an artist. The artefact provided me with a complex example of 'a materially embedded thought process' (endnote 7). It allowed me to address three key terms for picture and painting, likeness, representation and depiction, without putting them in opposition to abstraction. Additionally the artefact usefully provided concrete evidence of 'a moment where the need to account for things in the world_takes on a particular physical shape' (endnote 7). All of these qualities still inform my approach to painting, and my interest in the numerical aspects of perception and attention.

Number also connects to painting's sequential and durational potentials. Notch by notch, the impulse to mark in order to catch hold of or make sense of duration or recurrence, is built into counting. This sensibility can be seen in a 2015 text by art historian David Joselit and the question of 'how can an artist mark the flow of experience, first as a producer (painter) and then as a consumer (spectator)' ? (Joselit 2015: 12). Joselit is writing in response to the contested issue of painting's specificity, traditionally attached to medium but now conceptually loosened and especially free floating in painting's digital circulation and consumption as image. Joselit takes the position that painting's specificity can rather be located in a marking, scoring, storing and

speculating on time that enables it to operate within and against this image context. Joselit sees painting as a format for 'negotiating attention, for exploring the regulation and deregulation of affective time' (Joselit 2015: 14) and although he doesn't explicitly talk about counting or number, it is implicit in the terms he activates. Scoring is described as an 'externalisation of painting', one that moves on from a definition of painting as mark making on a surface to 'a kind of scoring in physical space' (Joselit 2015:14). As Joselit puts it 'the question has become, not where to deposit a quantum of paint on its support, but rather, where will the painting - or the image - go. How will it behave?' (Joselit 2015: 17). This imaginative act that stretches painting into a future moment I see as dependent on a conceptualisation of number, or number sense; distance, magnitude, duration, spatial positioning, sequence (Toomarian and Hubbard 2018: 184-199) (Dehaene 1997).

The fundamental perceptual experience of counting, as recognising something as something gets taken up by Stephen Melville in a complex way in the text *Counting / As / Painting* (Melville 2001: 1-26). Counting for



document table | interconnected plywood structures with painted and scored tino and composite board sections, and sections from **compositional proof: painting** theorem game prototypes

Melville takes up a question of what gets included within a category, or what gets excluded. What counts or as Melville says what matters as painting (Melville 2001: 5-9). There is a play of words here but also a strong motivation to revisit old arguments but on new terms. This to me is a process of reimagining, one that stitches the oneness of modernism to the seriality of minimalism for example. Another process of reimagining that starts with counting comes from El Lissitzky, in a text called 'A. and Pangeometry' written in 1925. Lissitzky indicates a range of counts that he links to our mapping of space. Firstly numerical progression 1, 2, 3, 4, 5 when objects stand in equivalence to each other, then a shift to a geometric progression where objects stand in an exponential relation, 1, 2, 4, 8, 16 which Lissitzky associated with the recessions and expansions of perspectival space. Using the abbreviations A. for art and F. for form, Lissitzky's challenge was to articulate a new conception of space, imaginary space as he termed it. Lissitzky's use of axonometric space for his room plan of the *Kabinett der Abstrakten* needs to be understood in this context, an alternative count to the one provided by perspective, and a radical reimagining of the relationship between works, spaces and the protagonists within those



spaces. Lissitzky's numerical and spatial analogies move towards irrational numbers and imaginary numbers, but they also came with a warning, that 'the parallels between A. and mathematics must be drawn very carefully, for every time they overlap it is fatal for A.' (Lissitzky 1925). I'm interested in considering the basis for Lissitzky's warning, and in fact the potential fatality of art seems appropriate in the context of painting as a practice that has long carried with it this potential for an endpoint or obsolescence (Bois 1991: 229-244). More generally from the view point of attentional processes there is the impossibility of detaching perception from number sense and therefore Lissitzky's warning feels an unnecessary reservation.

Sophie Germain as my imaginary protagonist provides me with a different count that Lissitzky might approve of. Thinking about the expanding count of prime numbers and in particular the special category of primes that are named after Germain, it invites me to visualise a sequence of numbers outside my numerical and attentional capacity, but that has a straightforward numerical relationship I can catch hold of. A Sophie Germain prime is a prime number that produces another prime through

Ulam Spiral for Sophie Germain School of Mathematics, Statistics and Actuarial Science, University of Kent, 2022



doubling and adding 1. These are called safe primes, and with the Sophie Germain primes they establish a pairing of prime numbers that have uses in cryptography. The simple act of doubling a number and adding 1 providing a linkage that is easy to initiate and hard to disentangle in reverse. These prime pairings that Sophie Germain tracked in the early 19th century are intrinsic to contemporary processes of online encryption which feels fitting for the digital spaces painting might now need to negotiate.

The standard prime sequence begins 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97.... and is of course infinite. The more selective Sophie Germain prime sequence of 2, 3, 5, 11, 23, 29, 41, 53, 83, 89, is also infinite but always dependent on being able to generate a further prime, a checking forward that might slow the progress of the count but also means the next number in the sequence jumps more significantly in numerical value. The 25th prime number is 97, whereas the 25th Sophie Germain prime number gets you to 491. The expansive and escalating nature of a mathematical process that starts carefully step by step can also find a correlation in attentional processes, moving from focus

painting index: 419 3 digit Sophie Germain Prime., acrylic on laser cut mdf, 55 x 34 cm



to dispersal [see also **GRID**].

The way that our number sense combines enumeration and estimation, and the impossibility of holding a visualisation of Sophie Germain primes while still engaging with the articulation of its representation unit by unit, points to a key principle in the methodology. In plotting prime numbers on an imagined grid, the occurrence of primes would become more and more extended, and Sophie Germain primes even more so (picture 39) (Gardner 1964: 122) (p157-162) (endnote o). The spatial consequences of these sequences also brings me back to a consideration of the characteristics of pictorial composition. The placement of each prime number would of course be predetermined on the grid but it is also to be discovered as the search for new primes continues. The removal of the need for originality in a consideration of position frees the work to innovate in other ways (p128).

This note on number also focuses the note based formatting of the latter part of this methodology section, and makes a connection to a strand in the current practice that operates through the idea of painting under various conditions of storage (p126-129). One key example of this is the use of an



correspondence: 41-83 (detail)

index card format in the practice. The shape of index card dividers, with tabs at different positions along one edge, has been modified to offer 10 distinct shapes that are rotatable while maintaining the facing logics of painting. Designated as the digits 0 1 2 3 4 5 6 7 8 9, with inset tabs as even digits, protruding tabs as odd, this series of works is termed painting index. It provides me with a system of numerical representation and a storage and display strategy for painting. When building prime number the ordering of individual digits works front to back. Each digital is resolved as a semi-monochrome painting, but then stacked and stored within the number system. Edge is an important compositional factor, as small chips of colour and process from the lower digits remain visible. The larger the number the further the painting extends into space. Painting as surface and painting as object gets reiterated digit by digit. The index cards retain a tactile and bodily sense of number, imagining them handled, flicking from one to the next, like counting on your fingers. Each of these composite painting, can be read numerically, and each escapes readability by the multiple associations that complex colour, paint handling and the residues of process might prompt (endnote o).

painting index: 239 3 digit Sophie Germain prime, **correspondence: 1019 to 2039** from a series of Sophie Germain Primes and corresponding safe prime when that prime is also a Sophie Germain prime





painting index: number key for room plan acrylic on laser cut mdf, each 12.5 x 20.3 cm

0 1 2 3 4

5 6 7 8 9

The number key gives the representational information necessary for reading the Sophie Germain prime number paintings that they are used to build. New number keys have been made for different installations of work. See page 21 and page 159 for two different examples.



process window carbon copy paper from roll drawing darkening the space for projections at Interval [] The Waiting Room, Whitstable Biennale 2016

studio notes for Sophie Germain

1	on components	58-63
2	on aperture	110-114
3	on book and window	126-128
4	on fabric	140-143
5	on grid	157-161
6	on profiles	177-180



scene dock 3 double sided panels in phi ratio, acrylic and screen print on plywood panels
89x89cm 89x55cm 55x55 cm all 34 cm from ground

1 studio note on COMPONENTS for Sophie Germain

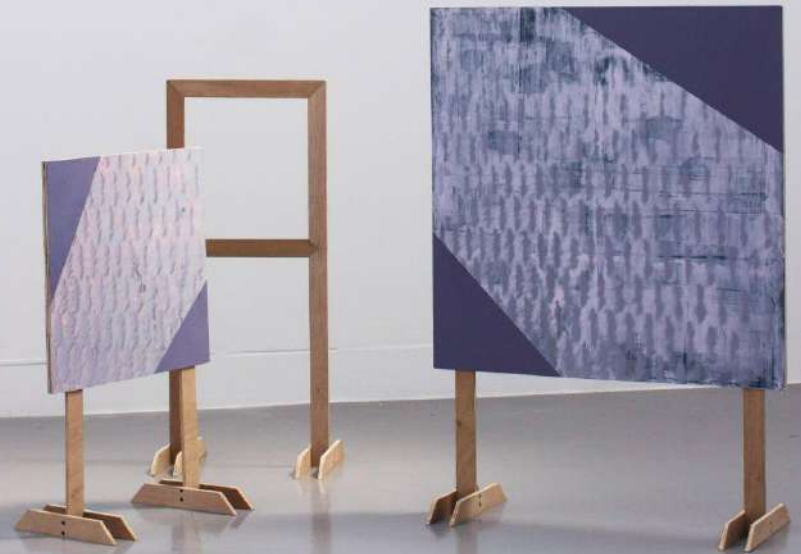
The work is component based. This is both conceptual and practical. The attributes of aperture, book and window, fabric, grid and profile conceptually circulate and cross refer. And in practical terms, decisions about size and ratio have been preset and the works are interdependent at this most basic level.

The measurements of individual panels are on a phi ratio Φ , approximated by the fibonacci sequence. Square to rectangle, rectangle to square, and then within that key compositional divisions are phi generated. In this way works are never autonomous and always point out of themselves to another work, and so on, responding to what can be described as a systems oriented logic rather than one that is object oriented (Burnham 1968: 30-36). Jack Burnham's articulation of a systems esthetic was one defined by 'conceptual focus rather than material limits' (Burnham 1968: 32), but here material limits and conceptual focus are put in endless exchange.

The measurement restrictions I impose on myself acknowledge restrictions I have socially and culturally inherited, but are engaged with in terms of their generative potential and the idea of an open work. As described by Umberto Eco, an 'open work' is one in which a contributive and interpretive space is left for viewer or participant. This moves from arranging 'a sequence of communicative efforts' (1962:3) to a genuine state of unfinishedness that still is held by 'the world intended by the author' (Eco 1962:19).

Approached with that sense of openness, the components are propositions, presenting or offering shifting configurations. The component based nature of the work allows it to be space responsive and space making, and in its pictorial qualities it is also space depictive. In inviting spatial and imaginative engagement, indecision and incompleteness is considered as a productive space for thinking and making.

scene dock 3 double sided panels in phi ratio, acrylic and screen print on plywood panels
89x89cm 89x55cm 55x55 cm all 34 cm from ground, moving from display to storage



scene dock

3 double sided panels in
phi ratio

acrylic and screen print
on plywood panels
89x89 cm 89x55 cm
55x55 cm, all 34 cm from
the ground

with digital projection
by Nicky Hamlyn, and
paintings on wall
behind by Jost Münster

shown at
Interval [] still : now at
TINTYPE Gallery, London
March 2018



A series of double sided free standing panels have been made with the idea that the work is available as a ground or support for other works or interactions. The works *interference pattern* and *scene dock* were devised as screens for digital and analogue projection experiments in collaboration with other artists (endnote6).

The perceptual flicker of the image information screen printed into the painted surfaces and the perceptual flicker of the projections onto this surface contributed to the durational experience of moving from one side of the work to another to cross refer. The title *interference pattern* indicates some of the perceptual disruption of this exchange. The 3 panels titled *scene dock* were made in direct reference to a theatrical edge space, an off stage area for the temporary storage of scenery. So in the gallery the double sided panels provide a provisional staging for other actions, whether from projected works or the viewers in the space.

scene dock (detail) with digital projection by Nicky Hamlyn





thought process (deciding between water and rock)
lay out in progress, acrylic and screen print on plywood

The components circulate around the idea of a room. The room is the space of making, studio or workshop, and decisions made in anticipation of the space of presentation. The interlocking planes of walls, floor, ceiling, openings and edges and an internalised space of imagination and association.

When you were a young girl, confined indoors as the French revolution upturned the world outside you turned to books and discovered mathematics. This retreat from a world in flux to a world of ideas and numbers was an experience of total absorption, but complicated by the social limitations placed on you as a female scholar. The rooms you occupied were both spaces of restriction and potential. Your circuitous access to education and your contribution to an academic community involved the sleight of hand of a pseudonym and the gender anonymity of writing letters. When a century later Virginia Woolf puts forward the importance of a room of one's own I think of you.



thought process (deciding between water and rock) shelved overlapping panels 89cm wide sequence and 55cm wide sequence
acrylic and screen print on plywood

interference pattern (deciding between water and rock) split screen 89x89cm 89x55cm on block ply double sided standing panels
acrylic, ink and screen print on plywood

installed in Notes on Painting, Koppel Project Hive, London, 2018



A Cut in Attention: caught
between reader and visitor

'Each and every painting is a time battery – its
apperception could consume a lifetime. But who
can spend a lifetime looking at a single painting?'

David Joselit *Marking, Scoring, Storing and Speculating (On Time)* 2015: 11

A Cut in Attention: caught between reader and visitor

In a room flooded with daylight, a figure is kneeling at a reading table. A head in profile catching the light, eyes cast downwards towards an open book. The fingertips of her left hand press the pages carefully, the right hand rests against the heavy material of her dress. Edged by the framing detail of an architectural opening onto a distant view of landscape, this close contact with paper and fabric marks a moment in time and a stretch in time, lost in reading.

Beyond the edge of the page, other visual stimuli might flicker on the periphery of vision, but we recognise the experience of absorbed attention. As observers of this pictured scene we see an exemplar of concentrated attention, one that expects a state of comparable attention in response. Between book and window, a contemplative space is captured, as an equivalent contemplative space opens up for us as viewers. Painted circa 1500, this reading figure is from the right hand panel of the *Angel of the Annunciation and Virgin Annunciate*, a two panel composition commissioned for the church of Santa Maria dei Miracoli in Venice circa 1500, and now installed in the Gallerie dell'Accademia. Now firmly attributed to Giovanni Bellini (Bätschmann 2007: 123–127), it pictures attention while pointing to a wider strategy for painting to condition the attentional experience and span of its viewer.*

Painting's association with states of attention is a long one. Attentiveness, contemplation, absorption, presentness, spectatorship, the gaze, all negotiate expectations around the mode of attention that art might facilitate and indicate the complexity of the cultural and social value given to attention more generally. Attention acts as the selective function of perception, like the framing of a picture, establishing a limit. This limit is

*Beth Mulvaney sees Bellini's designation of interior and exterior space in light of the community of nuns attached to Santa Maria dei Miracoli. From the order of Saint Clare, the nuns were strictly cloistered and Mulvaney considers Bellini's panels in the context of the structured domestic and institutionalised experience of daily life in the convent (Mulvaney 2015: 102). Viewed within the relatively narrow marble clad interior of the church of Santa Maria dei Miracoli, Bellini's description of a domestic space made a direct reference to the ecclesiastical architecture that then housed it. This religious community of women would have had a tangible identification with the figure of the reader. The narrative of the Annunciation and its role within Santa Maria dei Miracoli in 1500 Venice gives a clear motivation for the conditioning of an attentional response in a viewer. When viewed as a single panel, it allows the internalised reflective attitude of this figure to stand for the contemplative response of a member of that community, lost in the reading of the Annunciation just as we are. The enclosure of the figure in a domestic space has resonance for the imagined protagonist also (studio note 1).



also a result of an attentional capacity that can be exceeded as we confront shifting stimuli and attempt to attribute relevance. The tenuous attachments of our attentional processes are exposed in new ways against the back lit context of contemporary technology's endlessly updating stream of images and information. Anxieties about a resulting deficit in attention, attention divided, dispersed and degraded arise amidst the framing of attention as a commodity, its fragility translated as scarcity, a resource for competition in a market of competing attentional pulls (Goldhaber 1997, 2006) (Terranova 2012) (Williams 2018).

Scrolling back over 500 years, the attitude of sustained attention we might associate with the carefully delineated profile of the reading figure in Bellini's painting appears to stand in stark contrast to the partial or distracted attention that characterises much contemporary interaction with image and text (Stone 1998). However, scanning out from the particularity of the reading figure to take in the fullness of the double panel composition, and revisiting its original placement and function within the specific architectural and cultural setting it was commissioned for, I propose that the Santa Maria dei Miracoli work anticipates a spectrum of attentional possibilities that contemporary painting might also activate, and that the work's responses to a set of interconnected conditions, spatial, durational, structural and pictorial, have an unexpected resonance with a dispersed, distracted and expanded attentional field for contemporary painting. This assessment of the Bellini painting's potential is instigated by an active division, a cut as I term it, between the two panels, one that I found hard to account for when first seeing the work in its current wall bound context. I have approached this cut as an interruption in art historical sequencing, enabling more recent art histories for painting to be temporarily deselected, and allowing the Bellini painting to be proposed as a holding space for the attentional conditions of contemporary painting's production and reception.

This chapter is sub divided by a set of terms that map attentional responses identified via the Bellini painting; Interruption / Schemas / Capture / Correspondence / Deferral / Dispersal / Cut. They provide a set of experiential access points for examining the attentional expectations carried by painting's art history into painting's contemporary potential. Through examining the particular viewing conditions in the church of Santa Maria dei Miracoli, I propose that Bellini's *Angel of the Annunciation and Virgin Annunciate* innovatively carries the requirement to capture and hold attention within an architectural setting, attention dispersed through space as well as caught within a frame, repositioning idealised forms of attention within the wider fluctuations of attentional response. It provides a complex pictorial focus for an evaluation of current cognitive and neuropsychological research on attention, and a tangential vantage point for reapproaching painting's more recent art histories and contemporary potential to operate within and push against the limits of our attentional capacities.

INTERRUPTION

I propose that the cut between two panels interrupts an expectation of stable pictorial space, and opens up a spatial and durational contribution for painting. Additionally, the structural division in Bellini's composition exposes painting's complex object hood by incorporating actual edge and space in the midst of illusionistic renderings of edges and spaces. As a blank spot within a pictorial logic, the cut also signals the rush of memory and imagination into the space of painting, and acknowledges the unpicturable. My proposition is that a conceptualisation of this division is at odds with an idealised wholeness for painting, operating instead through dependencies and connections, acknowledging the fluctuations and durations of attentional response.

The attitude of an absorbed figure in profile, head inclined, has an art historical familiarity. It is part of a tradition that can be described as a

picturing of the mode of looking the painting anticipates // A young woman reading a letter, the folded paper catching the cool light from an unseen window, the concentrated profile of a boy focused on a card castle carefully balanced on a table, a scholar in his study contained by architecture and absorbed by the contents of a book are future art historical echoes within the Bellini composition (picture 29, 40, 33). Bellini's reading figure anticipates and participates in this absorptive tradition, but it also diverges from it. For the reading figure is of course only half the story. Following a well-rehearsed convention, the Virgin Annunciate is poised on the right, and a second figure, the Angel of the Annunciation, enters on the left. The action of announcement and response between the two figures runs parallel with the picture plane in a laterally extended and closed off composition in which the space in between the two figures is key. Moving across the picture plane from one to the other, back and forth and between, caught within the limits of a room, we anticipate and try to locate this interaction. Our attention is inevitably pulled in two directions, a split in focus between two protagonists that is in direct response to the narrative moment being depicted. We now recognise the absorption in the tipped profile of the reading figure as momentary or partial. It teeters on the edge of an acknowledgement or an awareness of the second figure.

For the purposes of this analysis I refer to the figure of the Angel as the visitor and the figure of the Virgin as the reader †. Reader and visitor define the distinct roles within the painting and maintain the

// The idea that a painting offers a directional prompt to its viewer can be traced back to Leon Battista Alberti's Treatise on Painting in which he recommended the inclusion of a figure that 'admonishes and instructs us' (Alberti 1435). Often identifiable as a figure that points, or that faces outward as though to catch the eye of the viewer, or as a group of figures that collectively capture and then direct a viewer's attention (picture 41-42). Michael Baxandall has linked this directive function to the tradition of the *festaiuolo* from quattrocento religious drama, a choric figure that remains on stage throughout and acted as 'a mediator between the beholder and the events portrayed' (Baxandall 1972: 72). This is underpinned by Albert's emphasis on establishing a planar continuity between depicted space within the painting and the viewer's space without (Alberti 1435). This continuity of space can be seen as an invitation or can be seen as prescribed, and certainly contributes to the attentional and spatial attachments, alignments and displacements that happen between viewer and work (see also **PROFILES**).



‡ The reader and visitor are proposed as visualisations of modes of encounter with painting and the flexibility of their roles is important when approaching a perceived dichotomy between image and text. For example, the process of reading carries with it notions of comprehension, knowledge acquisition, interpretation. Yet also, the reader could be said to exemplify a sort of absorbed attention that is transfixed and non verbal, one associated with aesthetic contemplation and the prioritising of presence, whereas the visitor is in movement, a discursive and active user of space and instigator of social interaction. The visitor's function within the narrative is that of an annunciator, implying that the communicative potential of speech is the action of the painting. Returning to the reader, it is impossible to confirm if the inclined head signifies a task based focus or the attentional dispersal of daydreaming, or to confirm the narrative moment being depicted, between words spoken and words received.

So whether the linguistic aspects or the visual aspects of painting are more appropriately held by the visitor or held by the reader is an open question. Between the two figures a range of attentional attributes or conditions are proposed, and stable definitions evaded.

potential for a nuanced exchange without being bound by the symbolism of a Renaissance enactment of a biblical narrative. Rather, the interiority of the reader, and the urgency and expectancy of the visitor positioned in mid stride, function as visualisations of two attitudes of attention.

The word visitor comes from the Latin *visitare*, 'to go see', a frequentative aspect of *videre* 'to see'. The active and momentary positioning of the visitor in motion speaks to this sense of visitor as a sight seer. Reader comes more straightforwardly from the action of reading, the contained stillness of the reading figure characterizes reading as internalised and absorbed. Reader and visitor also convey the play between reading and looking, as though holding together the opposition of linguistic and experiential responses to painting which form a backdrop to this analysis † [see also **BOOK and WINDOW**].

The co dependencies of the 2 figures is integral to the work, however, my first description of a single figure in absorbed attention and seclusion was not disingenuous. Our initial experience of the reading figure lost in her own thoughts is substantiated by the concrete separation of the painting into two panels. The physical division dissects the fullness and clarity of Bellini's description of the room. It cuts across spatial continuity and narrative reading, and interrupts our attentional attachment. Each panel contains a single figure, and this allows each to be considered both discretely and in tandem.

† The book in the reader's hand is one of many details that locate the scene in the Bellini painting in turn of the century Venice rather than in the biblical past of the Annunciation story. By 1500 when the panels were completed Venice was a centre for European book publishing, with more than 150 active presses. The choice of the Bellini painting places us at the start of the Gutenberg Era, at a moment of swift technological change, and the formatting and dissemination of image and text that has some resonance with contemporary digital circulation. Printing had arrived in Venice in 1469 and by 1476 innovative German printer and typographer Erhard Ratdolt had set up a press. Ratdolt had a specific interest in publishing mathematical, scientific and astrological subjects. He published a copy of Euclid's *Elementa Geometriae* in Venice in 1482, which included the first example of printed mathematical diagrams inventively set as marginalia. The *Sphaera Mundi*, an astrological treatise by Johannes de Sacrobosco was printed by Radolt in 1485, and included the first book illustration to be printed in three colours of ink. Ratdolt's approach was characterised by ingenious layout solutions that saw a creative alliance between image and text (Nuovo 2010) (Ratdolt 1482, 1485) (picture 43-44) .

The division throws the reading figure into perpetual isolation and back again. Displaced from its original architectural setting in the church of Santa Maria dei Miracoli, the architectural and functional circumstances that informed the construction and composition of *Angel of the Annunciation and Virgin Annunciate* are no longer immediately discernible from the work when seen in Venice's Gallerie dell'Accademia. Even within the double logic of the Annunciation tradition, the abrupt division between the two sides of a composition seems somewhat anomalous. On lightweight canvas stretchers, hung tightly together on the gallery wall it is hard to imagine the architectural circumstances that made this division necessary. Yet this cut or interruption is unmistakably active in any perceptual effort to resolve or hold the painting's depictive intentions. For now, I will hold back from a full description of the functional and architectural context that this double panel work originally operated within. This reflects my first



experience of the work, one that I carried for years without resolving the ambiguity of this division, and it helps construct my argument step by step.

SCHEMAS

The oppositional exchange that is a characteristic of the Annunciation tradition is negotiated within a finely rendered depiction of a single room. From edge to edge the space of the painting is resolutely the space of this room, as though one wall has been lifted away to make its full extent open to view.

The painting is the room; the room is the painting. A sequence of open doors and windows punctuate this depiction of interior space, like a series of apertures letting in light and facilitating visibility §. This is a scene flooded with light rather than a targeted beam of earlier Annunciation traditions. Light as a metaphor is clear, but this capture of light and the open visibility of the space also functions as a schema for painting and perception || [see also **APERTURE**].

My impression of the room is of a certain blankness, but this is hard to justify in the face of the decorative effect of floor, walls and ceiling. Even so this thought persists. Maybe it is because the decoration is structural, a gridding of wall and floor marking out divisions of space unit by unit, a propositional space to hold a narrative moment. Maybe it is because the lateral pull between the figures compensates for some of this recessional description, causing a perceptual flattening.

§ An equivalence between painting and room brings other works to mind that construct the conditions of visibility. The shallow box Juan Sánchez Cotán (1560-1627) used to control the light conditions for his still life paintings; or the boxed in model room that Nicolas Poussin (1594-1665) used to work out the placement and illumination of complex multi figure compositions that his contemporaries called his 'great machine'. In a recent reconstruction by the Fitzwilliam Museum in Cambridge this space simulation is discussed in reference to contemporary interests in virtual reality (Fitzmuseum 2019). For both Cotán and Poussin, the box precedes the painting and is also determined by the presentational needs of the painting. As well as controlling light, the box structure fixes a perspectival viewpoint in a shallow space, a presentational alignment between the space of the viewer with the space of the painting (picture 45-47) [see also **APERTURE**].

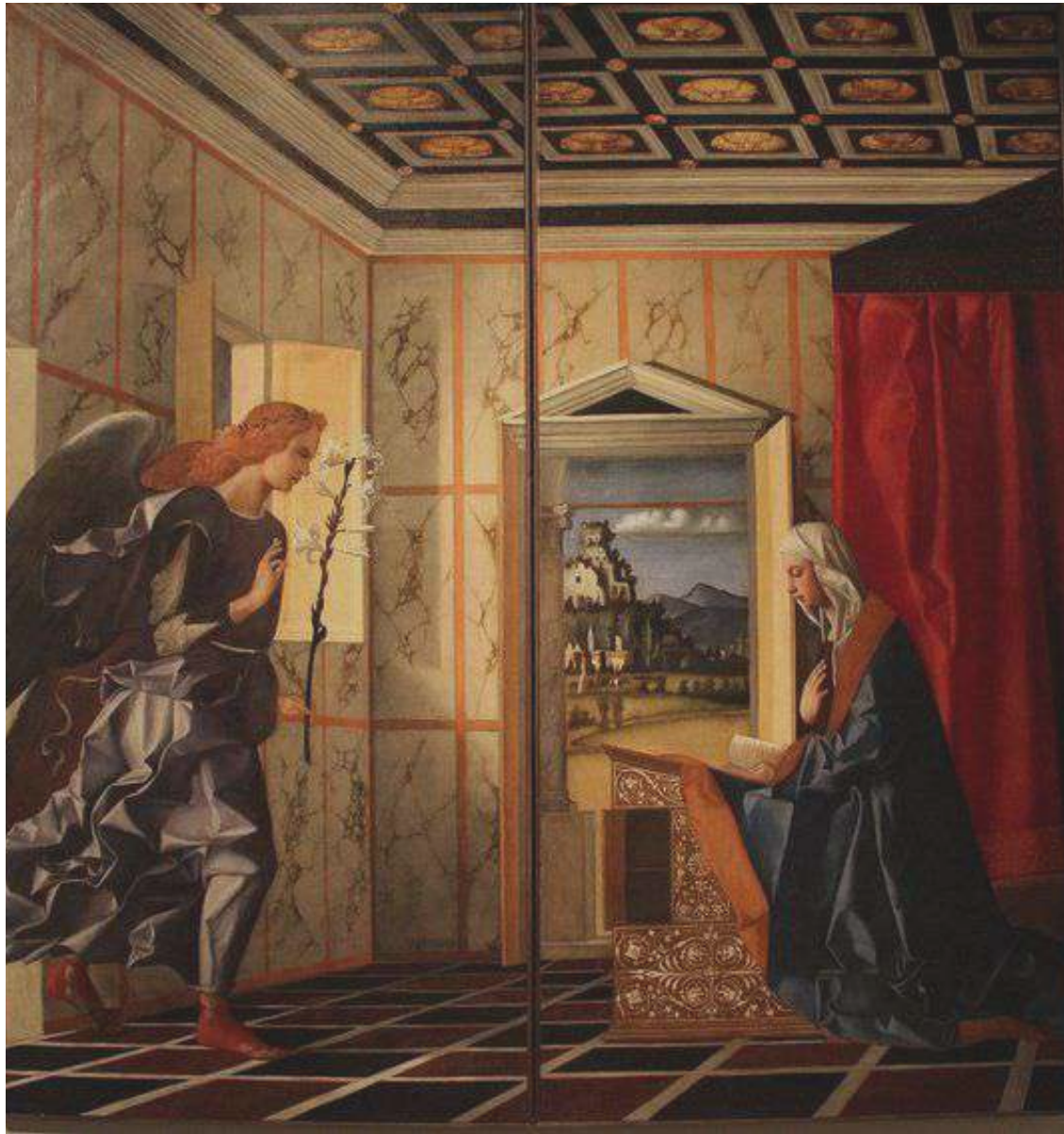
|| As an example of highly rendered pictorial depiction, Bellini's painting would seem to precede doubts about the reliability or fullness of vision. It seems to proffer a rationalised and stable spatial description, and to be confident in the adequacy of representation. Its open visibility is at first glance striking. However, there are two further pictured openings. Each implies an acknowledgment of unpicturability and a resistance to visibility. Firstly the open door to the reading table and secondly an implied opening in the canopy behind the reading figure. The interior of the reading table is a dark rectangle that fully faces us. It is in contrast to the oblique architectural apertures of doors and windows characterised by light. This interior space has a parity of orientation with the other facing rectangular opening in the painting, the landscape view, but unlike the pictorial fullness of hills, paths, mountains and sky it is empty of any pictorial detail. There is a faint line running centrally across that we

In this gridded space a series of alignments are identifiable as though points on a graph [see also **GRID**] :

- > The profiles of both figures are caught within architectural frames
- > The visitor's left heel lines up with the lit edge of the doorway on the extreme left
- > The visitor's right toe aligns with a grid division on the floor
- > The outside edge of the window shutter in the left panel aligns with the corner of the room
- > The top of the canopy aligns with the bottom edge of the ceiling coving
- > The upper orange diagonal of the left wall lines up with the top corner of the left hand panel
- > The left edge of the landscape view lines up with left edge of the right panel
- > A line across the window view aligns with a cloud formation, flattening the spatial description

Beth A Mulvaney has described the gridded geometry of Bellini's interior in detail, 'the receding square recessed ceiling tiles, the rectangular marble wall panels, the perspectively oblique, square floor tiles of alternating black and sienna, and the rectangular door and window openings puncturing this pristine, cube like, volume of space' (Mulvaney 2015: 103). The room so carefully delineated by Bellini maps this volume in order to stage an interaction, yet this interaction is held back from any resolution by the very qualities that make it visible. We can dismiss this as a basic limit of pictorial painting, to depict a single moment, but that doesn't adequately account for the perceptual and attentional experiences at play. These alignments are compositional and depictive decisions that can

can read as a shelf, or as a measured division of a rectangle into two halves. It presents itself as surface rather than space. The aperture in the canopy is imagined. We can make out the overlap in the fabric of the curtained structure and the shadow that cuts a diagonal across the expanse of red cloth, and we understand that the detailed blankness of the canopy aligned to the picture plane delineates it as a space screened off from view. The open but empty space of the table's interior fits into a category of compositional devices that show or present something to the viewer that is in some way inaccessible to the figures within the painting. It is an odd logic to say something is inaccessible to a depicted figure, but it is a device that we might associate with theatre when the audience has a privileged view. Here what is presented is blankness. In supplement, the closed curtain makes a show of what isn't made visible, its depiction of the folds of richly coloured fabric functions to screen off a space from view. Both open blankness and closed blankness are a push back from a search for content, turning attention inwards. And of course the most decisive and elusive opening is the cut [see also **APERTURE**].



Giovanni Bellini *Angel of the Annunciation and Virgin Annunciate* circa 1500
oil on canvas, diptych, each panel measures 224 cm x 105 cm
originally commissioned for Santa Maria dei Miracoli, Venice, now in Gallerie dell'Accademia, Venice.

be collectively configured into what Michael Baxandall would call 'pictorial events' (Baxandall 2003: 117-123). They are dependent on the logics of depiction on a planar surface, and are able to hold a complexity and ambiguity that durationally stretches our attentional attachment.

Rosalind Krauss, writing in the 1970's about current concerns with picture plane, found it useful to refer to the Annunciation convention, one that holds up 'two conflicting modes of being for comparison - real versus ideal, secular versus sacred, physical versus iconic, deep versus flat - all the while performing the magic trick of turning one into the other' (Krauss 1999: 88). For Krauss the Annunciation offers a picture plane 'whose integrity is constantly breached and just as continually re-secured' (Krauss 1999: 88), and it is this duality that seems to mark the condition of painting. In the Bellini Annunciation this play of dualities is abruptly intercepted by the cut; a cut across a proposition of continuous space, a cut across narrative, and a cut across the materiality of a surface, allowing edge into the very centre of a composition.

Working across the surface of the painting from left to right, a segment of lit architecture on the extreme left of the painting establishes the logic for a sequence of highlighted verticals that traverse the breadth of the painting, countering depth. Defining doorway, window, doorway again, edge of the door to the reading table, these depicted divisions set the parameters for the inclusion of the central concrete division. Even if we observe that the description of receding interior space seems more to do with the visibility of space than a concern with depth, this division is still a direct confrontation. We might conclude that a motivation to explicitly facilitate the separation of each figure overrides any motivation for spatial continuity.

CAPTURE

In the Bellini work the viewer is prompted to move across and between the space of two depicted figures in profile. As we follow the direction of inferred facing, it encourages surface scanning, material awareness that counters illusionistic spatiality. That scanning is open to the fluctuations of attention, interruptions, pauses, shifts and displacements. As the visual stimuli provided by any given scene are likely to exceed our attentional capacity, our visual systems have developed strategies for dealing with these shortfalls. Within the fabricated visual space offered by a painting, we have a reduced and structured version of a fixed field of vision. Visual stimuli are pre-set although they may be optically unstable and materially unresolvable. The effects of salience-based shifts in attention provide the basis for pictorial composition with the visual attributes of colour, shape, tonal contrast, linear detailing, all making various plays for our attention. So although we are faced with limited visual information, our attention allocation system may still be stretched. Identifying relevance or resolving pictorial or material relationships is complicated by the intentionality of everything within the frame.

Research on attentional capacity often relies on testing response to visual stimuli that appear on a screen in succession in varying degrees of visual complexity or sequential speed. The literature makes much of the terms targets and distractors, directing the viewing subject towards specific attributes, for example a colour or symbol able to be rapidly presented and apprehended. The fixed nature of a picture space seems to discount this consecutive testing of attention, but we can appreciate that sequential perception and durational looking is still taking place, especially when our attention is strategically divided, as in the Bellini work.

Two figures face each other in perfect profile but the gazes are averted. The reader looks down, the visitor looks slightly to one side. The moment of interaction is ambiguous, and is dependent on our interpretation of each of the figure's positions in relation to the other, and our understanding of the narrative moment. Our shift in attention from right to left anticipates a shift in attention in the reading figure from book to doorway. In trying to catch hold of the profile of the reading figure, one is drawn to the profile of the figure of the visitor, and back again. The comparative looking set up between the two profiles operates like a form of attentional capture. Capture is considered an unintentional shift in attention, so when a visual stimuli with a high level of salience, for example colour, contrast, movement, unavoidably catches our eye (Yantis & Jonides 1984). Shifts in focus based on these characteristics are mostly reactive and involuntary, but other salient distractors are more cognitively complex. These are termed 'top down' prompts for attention that are emotionally or motivationally dependent, rather than the bottom down prompts of high colour or extreme contrast (Franconeri et al 2004) (Wyble, Folk, Potter 2012). The visitor's profile has the characteristics of top down salience in relation to the reader's profile, and in a process of attentional capture from one side of the painting to the other, we attempt to locate spatially and psychologically one profile by means of the other.

The double profile is a standard alignment in Annunciation compositions, and in the context of innovations in pictorial space making during the Renaissance this reliance on the laterality of a profile is interesting to note. Occasionally we find a $\frac{3}{4}$ turn in the figure of the Virgin, Piero della Francesca's Annunciation from the fresco cycle at Arezzo or Simone Martini and Lippo Memmi's Annunciation in the Uffizi being notable examples (picture 48-50) but repeatedly we see profile to profile solutions. My approach to the profile is as a primer for the attentional attachment a painting conditions in its viewer (see also **PROFILES**). In the Bellini Annunciation, the reader's profile is placed centrally within the right hand panel, equidistant on a vertical and horizontal measurement. The profile of the standing figure of the visitor is much higher, and

therefore any comparison between the two profiles occurs on a diagonal. The two panels conjoined measure close to a square, at 225 x 210cm the overall painting is just higher than it is wide. The stretch of time between locating the right hand figure and the left hand figure may be miniscule, but it is an identifiable time lag in response to the width of the painting when viewed in situ. The interdependency between the two figures activates the process of attentional switch, exposed by our comparative cross scanning and checking the position and attitude of the visitor in order to establish the position and attitude of the reading figure in relation to it. Difference and similarity inform the processes of attentional switch or attentional capture. We compare the outline and tonal register of both profiles in order to make an assessment of shape and form (Franconeri et al 2004).

The visitor's profile is depicted cast in shadow, distinct against the highlighted rectangle of an open window shutter that forms its ground, but fuzzy in its detail. The reading profile is by contrast in full light, and the delineation of the face seems fully realised and focused. Yet this depictive clarity manages to produce a high level of ambiguity. This is in part due to a tonal closeness between the lit edge of the reader's profile and a bright vertical section of architectural detail that grounds it to the left. The profile just tips forward into this illuminated section and the chromatic and tonal similarity makes a perceptual holding of the outline of the reader's profile unexpectedly nuanced. Additionally the wider background to the reader's profile is multi-faceted. From right to left it takes in the strongly coloured curtain area, a strip of wall, and the edge of the doorway. This sequence of divisions and tonal alliances contributes to the experience of the inclination of the head being hard to fix, disrupting our assessment of both form and narrative moment. Is the profile caught in the moment of raising or lowering the head, is it before or after acknowledging the second figure? Our attentional focus on securing this first profile is dependent on a set of salient comparisons activated by the second profile. The two-pronged attentional capture between two mutually salient points builds distraction into

our attentional response to the painting. When attention is interrupted, however momentarily, we might inadvertently revert to the beginning of a cognitive task rather than resume it at the point of the interruption (Craik 2014: 841). The back and forth between the two profiles may in fact be returning the viewer back to the start of the visual processing tasks the painting sets again and again.

My initial description of the painting focused on the right hand figure in isolation, and indicated a right to left reading, contrary to the more expected left to right reading that painting often shares with text. The vanishing point for the spatial description of the room is placed to the extreme right, beyond the reading figure, pulling our attention to the right as though the work is weighted to one side. Symmetrically divided by the cut, but asymmetrical composed, a tendency to centre oneself in relation to the enclosed space of a pictorial work is disrupted by these spatially descriptive decisions. The expanse of red, the fabric enclosure of a bedchamber, topped by a darker triangular wedge, adds to this compositional shifting sideways. In colour, size, shape and its' alignment parallel to the painting's front edge, it both anchors attention to the right and pulls attention to the surface. This weighting of attention to the right is then actively countered by Bellini's treatment of the left edge.

The visitor's position is on the extreme left, placed at the point of entering the room and entering the picture. Wings and robe are cropped by the left hand external edge of the panel, and by inference cropped by the doorway through which the figure is entering. The dark mass of the figure of the visitor segments the lit frame of the doorway in two places, and gives a sharp vertical against the convoluted folds of fabric, and the intricacies of a ribbon like flourish, billowing behind the visitor. In our weighting to the right of the picture, this high contrast segmented edge is on the periphery of our vision. Peripheral and foveal vision have different priorities. In general, our foveal or central vision is high-resolution,

and colour and detail sensitive, and at variance with the fast working, movement and contrast sensitive peripheral vision that is able to maintain function even in reduced light levels (Martin et al 2001). When we say something catches the corner of our eye, we are describing the priorities of peripheral vision kicking in, and the experience is often an involuntary shift in attention. Research suggests that visual attention that is 'elicited by peripheral stimuli are imperative and automatic, whereas those produced by central cues are less efficient and somehow less obligatory' (Franconeri et al 2004: 876).

The pull of attention to the left is multi layered in the Bellini painting. Here we have a combination of narrative significance, the position of the visitor informing our interpretation of the reading figure, and a highly salient level of tonal contrast, the most sharply delineated within the painting. Additionally, this left hand edge is the location of a depicted capture of movement, and a simulation of movement. The rush of the visitor's arrival opposes the stillness evoked by the attitude of the reading figure, while the elaborate linear information of ribbon and robe, and the high level of contrast between the dark outline of the figure and the lit edge of the doorway tunes into the priorities of peripheral vision. The on/off of tonal contrast in this area sets off a perceptual flicker to snag the eye. Attention is repeatedly pulled to the left by these salience based triggers while countered by the red expanse and perspectival weighting to the right.

What could the motivations be for provoking this unsettled attentional response in a viewer? Research on distraction makes a distinction between 'domain specific' competition for attention, with stimuli that share characteristics with the intended attentional focus, and 'domain general' suppression of unrelated stimuli. An unresolved question is whether the suppression of generalised distracting stimuli depletes

attentional resource or whether distraction is only specifically disruptive when it has task relevant characteristics that we need to more actively discount. There is evidence for both propositions (Craik 2014: 841) and both operate on the basis of a finite attentional resource. Stretching, dividing, dispersing attention will increase cognitive load, and take a viewer closer to a limit in attentional capacity. In Bellini's composition a combination of top down and bottom up prompts for attention suspend the sort of resolved pictorial comprehension we might expect. In trying to secure the profile of the reader, the profile of the visitor inevitably comes into play. Its narrative and comparative relevance is unquestionable, but it also is configured by a set of salient cues that target our peripheral vision. In front of the work this activates an involuntary pull to this left hand edge, like a visual itch, despite our best efforts to stay fully focused on the right.

CORRESPONDENCE

In a close description of Bellini's painting, it has been hard to keep the picturing of attention distinct from the attentional engagement prompted in a viewer, and of course one is informing the other. A correspondence between the attitude of a depicted figure and the anticipated attitude of a viewer is part of what Michael Podro calls 'reciprocal aptness', 'the compositional device of intimating the viewer's counterpart within the image' (Podro 1998: 61-65). Outside the logics of representational painting, reciprocal aptness can still be in play. A modernist expectation of the attitude of a viewer in relation to painting is figured by Michael Fried's term 'facingness' in which the exposure of surface process, the reduction of illusionistic depth is perceived as a face to face encounter (Fried 1999: 266-270, 307) (see also **PROFILES**). The contentious flatness agenda of modernist painting seeming to position a viewer in front of painting but also to demand immediate perception, in an all at once visual confrontation. In the Bellini example we have already noted a double counterpart to test our viewing attitude against, the reader as a model

of contemplative absorption, the visitor as a model of attentive readiness. If we follow an art history of painting that incorporates the attributes of a figurative past into an abstract future, then a profile depiction can be seen as a displacement of this face to face encounter. The laterality of the profile and the frontal alignment of facingness both draw attention to surface, but under different attentional conditions. David Joselit, in *Notes on Surface* tracks what he calls a genealogy of flatness. He revisits the surface based priorities that steered painting's drive towards self referentiality through modernism, and an obsession with surface as simulation, as depthlessness, as pastiche, that specifically characterised postmodernism. For Joselit this is motivated by a desire to break apart what he sees as a false opposition between modernist and post modernist positions (Joselit 2000: 20).

In terms of correspondence, it is the implied positioning and conditioning of the viewer that I am interested in noting, while acknowledging a shared interest in breaking open oppositional discourses. This thought can be expanded out to take in painting's relation to a viewer more generally. Drawing on Hegel's distinction between sculpture and painting in terms of independence from or dependency on a viewer, the prompts of likeness, resemblance, and associative analogy that painting provokes set the conditions of dependency. Iversen and Melville in *Writing Art History* describe this as a 'sense of the mind's relation to its objects', and that painting involves 'the mind constituted nature of our objectivity, and it offers an occasion for reflecting on it' (Iversen & Melville 2010: 90-91). Alois Riegl expressed this in terms of external and internal coherence, with external coherence being the resolution of a work only through its apprehension (Olin 1992: 156). Riegl points to an ethical dimension in this correspondence between viewer and work, a sort of interpersonal collectivity in the acknowledgment of a viewer, in terms of care and inclusion [see also **PROFILES**].

Returning to Bellini's depiction of the gridded volume of a room, we have another correspondence I want to consider, that again uses the conditions of depiction to open up the question of a correspondence between a work and its viewer. We are given a landscape view seen as though through a window, a picture within the picture, Contained fully within the right hand panel of the painting, but pushed against its left hand edge so that the depiction of the framing device, door or window moulding, carries the cut between the two panels. One implication of the landscape view is that it visualises the internal picturing of the reader. Another is that it draws attention to the depictive methods on which the full picture relies. Both highlight a dependency on the viewer that the work is configured by, and bring to the fore the close connection between attention and the processes of memory and imagination. The proximity of the framed view and the physical enclosure of the right hand panel is also noteworthy, and the correspondence and comparison activated between an internally depicted rectangle and the wider span of the canvas edge within which it is lodged so oddly. The interiority of the reader is negotiated through the proximity of an open book and an open window. The rectangle of the landscape is cropped at the bottom by the angle of the reading table and the similar angle followed by the tilt of the book. The window scene can be interpreted as a visualisation of a story, as though we are seeing the thoughts of the reading figure. The lower sections of the landscape are traversed by pathways, and a group of figures are just indicated. There is a possibility that a reference is being made to the *Flight from Egypt*, and certainly a sense of journey is evoked. Landscape depictions in works by Bellini tend to carry symbolic meaning for the wider narrative content, and we can assume that function here also (Cohen 2010). The book is pressed open by the reading figure, and the pages are visible to us but not legible, though lines of text are indicated across the surface. The depiction of the book opens onto the landscape depiction, the sweep of a pathway curves into close alignment with the top edge of the sloped reading table, across a swath of the reading figure's garment and onwards to connect with the open pages just catching the light.

We have an articulation of a distant hill town, mountains and sky, which pulls the lateral scan of attention back towards the centre of the composition, and its internal edge. The spatial depth it indicates pushes the depiction of the interior space to read decisively as foreground. Yet the pictorial logic of distance is also brought close by the alignment of the window to the picture plane, and by an increased tactility; the framed landscape is unusually direct in its materiality in contrast to the more polished depiction of the room. It reads more immediately as pigment on surface and we can just see the push and drag of brush or cloth in the rendering of the mountains. The comparison between depictive registers is particularly interesting within the context of attention, and how tactilely informed visual stimuli point to the interdependencies between vision and touch \diamond [see also **FABRIC**].

Following current research on a predictive coding model of perception, and how perceptual inferences and errors might operate within the peculiar circumstances of encountering painting (Kesner 2014) we can understand how prior experience modulates apprehension. Some experimental psychologists propose that aesthetic experience is linked to the temporary state of unpredictability in our perceptual coding that art can facilitate (Van de Cruys & Wagemans 2011) and this predictive coding model links to Ernst Gombrich's idea that 'to read the artist's picture is to mobilise our memories and experience of the visible world' (Gombrich 1960: 264). The prompts for recognition

\diamond Tracking depictions of fabric and depictions of touch within the Bellini painting acts as an aide-memoire for close interactions between bodies and materials. Starting with the category of drapery which was significant for Renaissance painting, we can see how the depiction of bodies and the depiction of fabric are closely allied. The possibilities of weight, volume, texture, direction, movement, fluidity or rigidity that we see articulated in the handling of drapery throughout the Renaissance have a clear narrative and expressive function. Through the implied proximity to the body a connection can be drawn between drapery painting to painting's more contemporary abstract concerns (Graham-Dixon 2016). In particular I want to acknowledge a transaction between the actual fabric of the painting and the depiction of fabric, shifts between actual surface and a reiteration of surface through paint, and the complex meshing of sensation this registers in terms of attention.

An inventory of fabric in the Bellini painting starts with the fabric of the reader's garments. We can note how it indicates and encloses the volume of a body, kneeling and motionless. This fabric has two distinct sides, made apparent by a shift in colour and sheen. The outward surface is a deep blue with clearly defined folds. The folds show us the fabric's stiffness, able to hold itself without support, and made apparent its surface luminance, reflecting light with obvious lustre.

The inward surface of the garment is made visible when folded back at the reader's neck and wrist, and is in contrast a soft, warm and matt orange. This more light absorbent side can also be seen at the hem, turned up slightly as it meets the floor where the reader kneels and as a significant expanse across the top of the reading table. It is as though the swath of cloth has been gathered up to soften the transition from figure to furniture.

activated by a representational painting can of course close down this process, when we point to nameable components while discounting the pictorially specific aspects of their configuration.

DEFERRAL

The anticipated interaction between reader and visitor in Bellini's composition is deferred by the circumstances of the cut. The cut contributes to a pictorially produced narrative. It amplifies our uncertainty about the reader's profile in relation to the narrative moment and any attempt at resolved categorization; our assessment of it is always dependent on the second figure while also being concretely divided from it. My suggestion is that for Bellini the cut is an active part of the Annunciation composition, and this physical cut in picture space is made possible by the precedent of depicted divisions, doors, windows, and other architectural demarcations within Annunciation convention.

The dividing pillar seen in numerous Fra Angelico compositions, or the architectural enclosures used by Duccio and tested further by Botticelli, or the use of a void space left as an illuminated ground by Simone Martini, or proposed as a deep recession by Piero della Francesca all provide a precedent and a context. In addition, there is the possible play between depicted space and architectural actuality; Giotto's Annunciation in the Arena Chapel in Padua spanning the chapel's arched volume or

The reader holds her right hand against her garment at chest level with a decisive gesture, the spread of the fingers allowing both matt and sheen sides to be in contact with her hand simultaneously. Fabric touches or is touched by wood, stone and skin, and we can add paper to that list; the reader's other hand is pressed against the paper surface of the open book.

The other fabric to note in relation to the reader is the white cloth that covers her head, articulated by folds smoothly drawn across her forehead. This gives us the lightest expanse in the painting, matched only in brightness by the more scattered patches of white that depict the lily in the visitor's hand.

The fabric of the canopy behind the reader gives the largest expanse of a single colour within the composition, a rectangle of red with carefully described vertical folds giving a rich backdrop to the figure. The top section of the canopy is much darker, almost black and cropped by the outside edge of the right hand panel making a distinctive trapezoid shape. This section reads as a fabric pulled taut against an underlying structure, and then the brighter and deeper red folds fall gently below. It is the section of fabric that comes closest to the canvas of the painting.

The fabric of the visitor's garment has an almost metallic sheen. The visitor's leading right leg, bent at the knee, must be pressed against it as the visitor steps forward into the room. This point of contact gives a starting point to a series of angular folds, running like highlighted zig zags, and indicating the rush and startle of entry. A trailing ribbon, caught in elegant loops and curves behind the visitor, also helps to evoke movement, and the suspension of movement. The touch of each foot on the chequerboard tiles of the floor is so slight that its gridded surface seems to indicate a void rather than a solid (Knipe 2020) [see also **FABRIC**].

Pontormo balancing his Annunciation composition on either side of a window, indicate a consideration of architectural circumstances that might also inform Bellini's decisions (picture 49-55). More closely, the small, hinged panels of earlier Annunciation examples by Andrea di Bartolo or Paolo Veneziano incorporate a physical division between paired panels, designed to be handled. (picture 56- -57). However, in these table top scaled works each panel is considered as a discrete space, enclosed and negotiated by a substantial frame, rather than a cut across continuous space as identified in the Bellini.

The conceptual duality of the Annunciation convention has offered artists opportunities to work with the architectural and object circumstances of divisions and spatial stretches. Within the Bellini work I have attempted to understand the ambiguity of the exchange between reading figure and visitor through the process of attentional capture, the multiple salient pulls offered by Bellini's composition, and the formal qualities of tonality and compositional division. My proposition is that the cut facilitates this ambiguity in very particular ways that are relevant to a contemporary assessment of attentional capacities for painting. Before proceeding any further, I want to pause to consider more directly the ambiguities inherent in a pictorial interpretation of sequential narrative as part of the attentional engagement that painting facilitates.

Within the defined narrative of the Annunciation, the function of the left hand figure is comparably stable, to carry the action of announcement. The narrative suggests more choices for the depiction of the reading figure on the right. Michael Baxandall recounts an inventory of moments available to a painter in fifteenth-century Italy depicting our reader, the figure of the Annunciate. Understood as the mental attitudes or responses that the Virgin Annunciate is able to represent, this inventory highlights pictorial solutions to the episodic logics of narrative. Quoting Fra Roberto, a fifteenth-century preacher, Baxandall lists five sequential categories through which to interpret the reading figure and her

interaction with the visitor: *Conturbatio* – Disquiet, *Cogitatio* – Reflection, *Interrogatio* – Inquiry, *Humiliatio* – Submission, *Meritatio* – Merit (Baxandall 1972: 49-55). As Baxandall points out 'Fifteenth-century pictorial development happened within fifteenth-century classes of emotional experience' (Baxandall 1972: 56). The interdependence between the depicted attitude of the reading figure and the conditioning of an appropriate response in the viewer was probably a defining motivation in commissioning the Bellini painting by the convent attached to the church of Santa Maria dei Miracoli. This list of prescribed and picturable responses is a reminder of the social and emotional restrictions that our viewing of painting might be working within.

My interpretation of the reading figure has resisted fixing the narrative moment, and the pictorial decisions evident in the painting support that deferral. Her absorption could equally infer a moment prior to becoming aware of the entering figure, or a turning inwards afterwards. It can of course function interchangeably as both. Neurobiologist Semir Zeki explores the neurobiological basis for ambiguity and its activation by visual art. Zeki describes the nature of ambiguity 'when no single solution is more likely than other solutions, leaving the brain with the only option left, of treating them all as equally likely and giving each a place on the conscious stage, one at a time, so that we are only conscious of one of the interpretations at any given time'. Zeki calls this 'a sort of interpretational flip-flop' with the brain switching back and forth between plausible solutions. Zeki's research moves from the spatial ambiguity of optical illusions to the psychological ambiguity of an elusive expression (Zeki 2003: 173-196). We can see how both forms of ambiguity contribute to the 'hold' on attention a painting is able to deploy.

The inducement to continue to attempt to fix the depicted moment is part of a perceptual response to be decisive about what we see. We might interpret Bellini's composition as an opening scene to the Annunciation, the angel entering with their eyes on the ground, while the

Virgin's gaze remains fixed on the pages of a book. Or we might interpret the downward gazes as averted eye contact after an exchange has taken place. According to Yves Bonnefoy an avoidance of direct eye contact is consistent with Bellini's overall approach to interaction between figures in his paintings, 'faces are tight lipped, their eyes never seek nor meet another's gaze' (Bonnefoy 1995: 59). If we accept this observation on Bellini's depictive decisions, then the convention of the Annunciation offers an opportunity for deferred exchange that works within this restriction. Oskar Bätschmann characterises the moment as *humiliatio*, but removed from the strictly linear understanding of the narrative categories as laid out by Baxandall. Bätschmann recounts, 'Mary displays no reaction whatsoever to the angel's sudden entry, but maintains an attitude of *humiliatio*, humble submission' (Bätschmann 2007: 123). In this inventory of Annunciation categories, we can run through the sequence of the list one by one. Is Bellini's reading figure depicted prior to 'Disquiet', in the midst of 'Reflection', after 'Inquiry', preoccupied with 'Submission', or resolved in 'Merit'? The porousness of these categories quickly becomes apparent, especially viewed with historical and cultural distance. The ambiguity around the narrative moment stretches our attention span, away from an immediate reception of image, and towards a durational viewing experience. In gradations between attention and distractedness, the interiority of the reading figure remains open to interpretation.

DISPERSAL

When I first saw Bellini's *Angel of the Annunciation and Virgin Annunciate* it stopped me short, in mid stride in Le Gallerie dell'Accademia in Venice. My experience was a sort of low level perceptual agitation, an elusively stretched attempt to resolve a depiction of momentariness, complicated and supported by this concrete division between the two sides of the work. Only much later did I realise the context that had made this division the starting point for the composition rather than a structural inconvenience. For the Bellini panels are not in fact

independent paintings, and they were not originally conceived as wall bound and fixed. Rather they are painted doors, paintings and doors, commissioned to conceal the organ in Santa Maria dei Miracoli. Often referred to as organ shutters, they are part of a tradition prevalent in Venice at the time of functional enclosures and divisions within an architectural space that also act as supports for painting (Rutherglen 2016). In the Bellini example the double nature of the shutter structure is echoed by the facing profiles of the reader and visitor. An initial observation of the reading figure in isolation is part of the spatial potential of the work and the way it operated within the architectural volume of the church. The two separate panels were designed to swing open, as the two figures turn away from each other and through space. The psychological separateness of each figure that is already inferred by a withheld moment of acknowledgement becomes concrete and spatially actualised. The reader on the right contained more fully in absorbed interiority, the visitor on the left held uncertain on the threshold of a room. The ambiguity of exchange between the visitor and the reading figure is confirmed by the functional aspect of the two panels. The compositional cohesion when shown wedged tightly together is now understood as the category of shut, and they have another category of being open, and a full arc of positions in between. The disjoint in the moment of the exchange between reader and visitor is structural and pictorial. For a viewer standing in Santa Maria dei Miracoli it would have been spatially observable as the organ doors swung open, and observable still when the doors were closed as an ever present potential, and as a memory.

Often painting's relationship to architecture is characterised art historically as shifting from architecturally embedded to portable. In this shift there is also the narrative of self determination, the independence or completeness of painting on its own terms which was the presumed task of modernism. John Chilver, in tracking the problems of painting's self definition, and the spatial and conceptual dilemma of locating the perimeter of a field of activity from within, identifies painting's objecthood in tension with architecture. This dilemma comes into focus when

painting 'presumed to legislate the relation between painting and the architectural space in which it was displayed purely from within the sovereign bounds of painting' (Chilver 2012: 117). Via Donald Judd's admonishment of painting's inevitable illusionism, Chilver describes how 'the dream of adjudicating an interface or transition between painting and architecture was also the hope of mediating between the virtual space of the illusionistic image and the physical space of display'. The difficulty Chilver identifies in the coordinates of this process of self definition is the possibility that painting becomes 'indistinguishable from its surroundings' (Chilver 2012: 117).

Chilver's wider discussion identifies a relative dematerialization in much contemporary painting, compensated by an increased materiality and physicality in the structures of display (Chilver 2012: 113-134). A dissolve between painting and wall is part of painting's spatial potential and also points to the insecurity of being demoted to 'a peculiar form of interior design' (Melville 2001: 4). Painting's contemporary potential to be understood within an expanded field is still up for discussion. In the way sculpture has been activated by architecture and landscape, equivalent coordinates for painting are less convincing. Wall, image, object, can't all fit on the Kleinian diagram that Rosalind Krauss so influentially used for sculpture (Krauss 1979) (picture 8). The tension between painting and wall, painting and object, and painting and image might be considered differently if another art historical trajectory is traced. Bellini's *Angel of the Annunciation and Virgin Annunciate* is an example of a tradition that complicates the duality of painting as site specifically wall bound and painting as portable but wall dependent. Its functionality, set up in correspondence with an articulation of space, positions illusion and actuality in complex complicitness. Positioned to both negotiate attention caught within the frame of picture, and attention dispersed through an architectural volume, the displacement from its site specificity to the conventions of gallery are a misrepresentation and a simplification, forcing it to masquerade as an autonomous work. Yet its objectness is unmistakable even when fixed against the wall in the gallery, and is increased once we understand that the divided panels are

spatially adaptive structures, to be handled as well as looked at, opening and closing at intervals as part of the rhythms of a space in use. The panel edges show abrasive consequences of repeated touch, evoking the tactile accessibility of a painted surface that we might lose sight of in a gallery setting. The details of the spatial interactions that Bellini's work participated in now need to be imagined in relation to the particularities of Bellini's compositional choices. The asymmetrical weighting of the composition to the right, compensates for how the painting was designed to be encountered, installed on the left hand side of Santa Maria dei Miracoli (Howard 1989: 687-690). Originally, there would have been depictions on both sides of the canvas panels, but the inner surface paintings have been lost. This double sidedness would have been part of the work's potential, and its' structural or object qualities underscored by a functional cut across a committed depiction.

Susannah Rutherglen's text *Painting at the Threshold: Pictures for Doors in Renaissance Venice* uncovers a tradition of painting as partition that is contemporary with the Bellini example in which functional and pictorial meanings are interdependent. Rather than closed off compositions kept separate by a frame and fixed position, 'these works generated meaning through the connections and separations they established in space. By taking up themes of passage, closure, and concealment, moreover, the paintings engaged with their singular position to shape the physical and imaginative experience of early viewers' (Rutherglen 2016: 438). The subject matter and compositional configuration of Bellini's *Annunciation* is in accordance with its function as a hinged shutter, holding a threshold narrative. Many of the examples that Rutherglen references are doors and screens in domestic spaces, and the flexibility of the Venetian sense of interior space during this period becomes clear. Interior doors and screens defined and reconfigured spaces, marking boundaries and crossing points, handled and repositioned regularly, and the meaning of their pictorial aspects were understood through these shifts of context and spatial logic (picture 58). Functioning as

doors and housing a depiction of doorways and openings, the organ shutters of Santa Maria dei Miracoli interact with the metaphorical possibilities of transition.

Painting as an active component within architecture, marking transitions, defining function, configuring private and public space is highlighted by Rutherglen's research. She argues for a recognition of what she terms functional paintings 'whose meanings arise from their placement and use' and in particular 'a class of painting belonging to moveable doors and shutters' (Rutherglen 2016: 438-441). The importance of touch as a component of apprehending painting in Fifteenth Century Italy is also described by Adrian Randolph as part of a wider analysis of the intimacy of tactile interactions with art, and their social and domestic contexts, particularly for women (Randolph 2014). As Rutherglen notes about the Venice tradition of pictures for doors, 'these layered assemblages challenge modern notions of the picture as a rectangular painted field set off from its surroundings by a clear-cut frame. In the microcosm of the family dwelling, painting commingled with other media to elicit an array of responses from the beholder, and encounters in space, as well as rituals of touch and handling, altered the significance of objects at certain moments and for individual observers' (Rutherglen 2016: 438).

CUT

In a painting we might say that all visual stimuli are available all of the time, but as recall and imagination operate alongside the visual processing of attention, we may not always be thinking about what we are looking at. Distraction can turn thoughts inwards as well as turn eyes away from an intended focus (Craik 2014: 841). A conflicting visual demand that pulls attention is traceable by eye tracking but a preoccupying

cognitive demand is harder to assess. In visual search experiments to test attentional capacity, lags and lapses in attention become apparent. As well as exposing attention's capacity, disparities between what we appear to be looking at and what we are in fact paying attention to become exposed. When given a search task within a stream of visual information there is a marked reduction in the ability to identify a 2nd target if the 1st target is still occupying attention although no longer visible. At miniscule time increments, this blank in the return of visual data is termed attentional blink. It makes clear that our attentional processes can remain preoccupied at a remove from current visual stimuli, and in consequence what is visible is not always consciously perceived (Dux & Marois 2009). In a chapter entitled *The Unrepresentable, The Unpicturable* art historian James Elkins describes pictures' resistance to complete and capturable interpretation, 'No image possesses representation so fully that it is not excavated by inaccessible meanings. Representation itself is a filling in, and also a hollowing out, and there are gaps and cavities in any picture where it gradually or suddenly stops making sense and gives way to the thought of something that it is not. The "blindnesses" as I have been calling them, are built into any picture, and no reading can forsake them without also abandoning the picture itself' (Elkins 1998: 266).

In Bellini's composition the perceptual gap that any picture holds is made actual. The division between the two panels operates as a temporal lag and a perceptual blank in our attempt to hold the painting in all its complexity. If we can imagine Bellini's *Angel of the Annunciation and Virgin Annunciate* installed within the interior of the space for which it was commissioned, the painting moves from full but divided visibility when the panels are closed, to a disjunctive visibility when opening, to potential moving out of visibility when fully open. As though signalling a limit in our attentional capacity, while also mobilising our attentional processes to commit the picture to memory [see also **APERTURE**].

My intention in focusing on this one painting has been to assess more widely the cognitively complex attentional processes that painting is invested in, and to argue that painting's stake in mobilizing attentional responses is part of a wider social, economic and cultural investment in attention. Attention is susceptible to manipulation, fragile in its temporality, and flexible in its reach. I propose that contemporary concerns about a deficit of attention, or attention as hyper, partial or divided have an unexpected affinity with the captured distraction that the Bellini's painting activates, and the tension between attitudes of attention that it pictures (Hayles 2007) (Stone 1998). Contemporary painting appears to convert effortlessly to image, to slip into digital information streams with ease, contributing to attentional overload, image upload by image upload. David Joselit sees the consequence of this for a viewer as 'a giant reservoir of deferred experience', one 'beyond the capacities of any individual to consume' (Joselit 2011: 12). The implication of this deferral is built back into the painting, according to Joselit, in terms of circulation, and that 'This dynamic - of massive ACCUMULATION amid endemic DISTRACTION - suggests why painting has acquired new relevance today' (Joselit 2015: 12).

My thought is that other properties of painting might resurface in an image-laden system of information, properties that are enacted in Bellini's painting; structural complexity, spatial contribution, material peculiarity, the interchange between actual and depicted space, objectness and imageness. In addition the experience of attentional capture, interruption, the deferral of a resolved reading, dispersed or divided attention, the pulls of the peripheral, complicate the closure of image and its consumption (endnote 3). By putting pressure on the Bellini work to anticipate all the expansive potential of painting's future self, I am insisting on the significance of an anomaly. The incongruity of the cut is useful in breaking a fiction of stability in attentional response, and disrupting the linear and exclusive tendencies of art history.

In a room flooded with daylight, we apprehend the careful focus of the reading figure on the right, the suspended alertness of the visitor on the left. Attention is stretched between two figures, two profiles, and two sides of the painting, a spatially extended durational looking. The schema of a perspectively constructed room exposes vision and its limits, and the continuity of this interior space, and our attentional attachment to it is concretely interrupted by a cut. The specifics of the Bellini example circulate round this anomaly, the divided painting exposing attention and distraction as a continuum (Crary 2001: 49-51), displacing pictorial space, while also being invested in it, affirming attention's spatial dispersal and re-capture within the full volume of the architecture that contains it. Co-opting edge and division by inverting expectations of wholeness or completeness, it internalises distraction, and the blanks, gaps and glitches of attentional processes. Foregrounding duration over immediacy, it breaks the continuity of spatial description and narrative resolution, and elucidates the attentional payback of ambiguity. Positioned here as a resource for contemporary painting and its critical commentary, it operates at the limits of attentional capacity, and holds a cut in attention.



Sophie Germain prime panels
in progress for the Sibson building
grid narrative for Sophie Germain

components

] APERTURE

] BOOK and WINDOW

] FABRIC

] GRID

] PROFILES

APERTURE



image information (aperture)

APERTURE

An aperture is an opening, particularly one that lets in light. Aperture indicates light as the minimal condition for visual perception, and enables attentional concerns to be considered in relation to vision and visibility. Painting's visuality, painting as an instance of image, and an optical emphasis for painting are re-approached through the light controlling adaptations of aperture.

Apertures are mostly thought about in the context of optical instruments, adjusting the quantity of light passing through a lens, and regulating depth of field. Activating aperture within the picture-diagram indicates the technology of image production and reproduction. It connects to demands for or assertions of resemblance or mimesis that might replay for painting, and acknowledges the intersection of painting with discourses on image and imaging (Elkins & Naef 2011: 79-89). In the picture-diagram the image technologies of aperture are coupled with a wider consideration of the cultural and philosophical positioning of optical perception and visuality. One aim in examining the attentional conditions that have been set for painting is that the wider consequences of the attentional conditioning we might be subject to within regimes of the visual come into focus (Rancière 2009: 79). Aperture opens up two interconnected but quite distinct considerations of the visual that have an impact on painting and the attentional expectations brought to it. Firstly an assumed connection made between vision and truth or vision and the acquisition of knowledge, which though unpicked still reverberates, and secondly a repeated association between vision and conditions of control. The first is dependent on an assumed neutrality or reliability of our visual perception. The second implicates optical perception within systems of power.

Both of these aspects draw on how vision technologies have extended or adapted visual perception, and both point to the wider implications of painting discourses that have exclusively focused on painting's opticality. But more acutely the adjustments of aperture and the modulations of acuity and blur it facilitates are a reminder of the variability and dependencies of perceptual experience. So although aperture might imply a cultural attachment to lucid images, facilitating the duplication and the circulation of the visual, it also captures the idea of perceptual insufficiency. Aperture registers the selectivity, multi-modality and discontinuities of visual attention.

The mythic origins of painting are recounted by Pliny as a need to capture likeness actuated by imminent absence. Here the closures or blanks of visual perception and our capacity and motivation to capture and recall visual experience as memory can intersect. Pliny's story of a young woman tracing the outline of the shadow cast profile of her lover at the very moment of his departure delineates the process of image capture through turning away from the image source (Stoichita 1997: 11-16) (picture 59). A discontinuity or blank in perception as an access point to remembering has a neuropsychological basis. The term 'event boundaries' describes how a break in the continuity of experience helps encode and construct memory formation. Current research proposes that initial memory processes are episodic (Conway 2001), and that experience is 'perceptually segmented into events', with event boundaries key to longer term memory formation and retrieval (Swallow et al 2009: 236). In *The Aesthetics of Disappearance* Paul Virilio describes lapses and absences in perception as part of a wider interest in the prosthetics of vision. At one point Virilio recounts photographer Jacques-Henri Lartigue's childhood simulation of image capture, one that questions the role of discontinuity in our perceptual and attentional experience. With half closed eyes but focused intensely, the young Lartigue

would spin 3 times, with the thought that this sequence of bodily adjustments could fix perception, and retain it as picture. The realisation that this method wasn't working was apparently the impetus for Lartigue to turn to photography (Virilio 1991: 12) (picture 60). Yet we can also see it as a bodily instigation for an event boundary to be triggered and for a memory to be encoded (studio note 2).

The outlined shadow projection or the numbered spin as methods for capturing and retaining visual perception brings us back to painting's close dialogue with vision technologies. Revisiting the philosophical, scientific and cultural motivations for fixing images feels like important groundwork to do. As a starting point, the light filled room of a Renaissance depiction and the multiple meanings of illumination it plays with, can through imagined association be positioned in correspondence with the dark rooms of early image projection experiments (picture 2) (picture 62). As a precursor to the camera, but on the scale of architecture, the camera obscura was part of major developments in the understanding of optics in Renaissance Europe that also informed the potential imaging capacities of painting. The term camera obscura was first used by astronomer Johannes Kepler in his 1604 treatise on optics (picture 61), but the use of a dark room to amplify and control the phenomena of a cast image adjusted by an aperture was actively under discussion by artists, architects and scientists in the preceding century (Dupre 2008: 219-244). Leonardo da Vinci described it in a notebook in 1502, as he experimented with aperture size as part of a wider concern with understanding the workings of the eye. Closely allied with the development of perspective, the camera obscura, like the lens based technologies that followed it, reiterated a planar relationship to image making that western painting is also characterised by [see also **GRID**].

The first account of a lens being used in a light controlled room was in a treatise on perspective, *La Pratica della Perspettiva*, by

Venetian Daniele Barbaro in 1567 (picture 63). As a practical manual for the use of perspective and projective geometry for artists, architects and theatre designers, Barbaro's description already included the essential aspects of aperture and focus that we are familiar with in photography (Kemp 1992: 189) (Ilardi 2007: 220). The camera obscura could be used as a drawing aid, or used to observe solar eclipses and in both extended human vision, marking a confidence in seeing as the access point to knowing. By the mid 19th century with the ability to fix these fleeting images as photographs, the lens of the camera was seen as equivalent to the lens of the eye. Early photography was described in terms of objectivity and directness, 'the process by which natural objects are made to delineate themselves' (Fox Talbot 1839) (picture 64). Like perspective before it, photography presented itself as natural rather than fabricated, but any technical apparatus brings with it conditions of use, with the planar, monocular and durational dependencies that aperture facilitates.

A growing understanding of the fluctuating and experientially dependent processes of perception is evident from the Enlightenment onwards, but it is in the 19th Century that this coalesces with a creeping fear that perceptual facility is reducing or degrading as a consequence of rapid social and technological change. In his assessment of perception and attention in the late 19th Century Jonathan Crary references Conrad Fiedler's 1876 book *On Judging Visual Works of Art*, citing it as 'an important early instance of generalized historical assumptions in which pre-modern modalities of looking and listening are either implicitly or explicitly predicated as richer, deeper, or more valuable'. Fiedler's attempt to secure an aesthetics of presence and pure visibility for the appreciation of visual art was a response to concerns about flawed and subjective perceptual processes, and an urgent antidote to what he saw as a contemporary decay in attentional quality and capacity (Crary 1999: 48) (Fiedler 1876: vi).

So even as the grounds for vision being the intellectually privileged mode of perception became increasingly shaky as the subjectivity of perceptual experience became more explicitly apparent, there is still this persistent valuing of the purely visual. As though, if only the optical could detach itself from the inadequacies of the other senses, vision as an access point to knowledge could be restored. The mode of attention that Fiedler attached to an optically charged aesthetic judgement was for him a form of bringing into consciousness that which was essential to human experience. Fiedler's nineteenth century position on judging works of art is evident in painting's twentieth century modernist criticism, when Clement Greenberg and Michael Fried prized opticality in the work of colour field painters like Morris Louis and Jules Olitski in the 1960s, the chromatic shifts and oscillations providing a space as though for the eyes only (picture 65). As with Fiedler, the optical is again bound to an experience of presentness (Fried 1965), and presentness with an immediacy which is outside time. As Rosalind Krauss describes, 'vision had, as it were, been pared away into a dazzle of pure instantaneity, into an abstract condition with no before and no after' (Krauss 1993: 7).

This demarcation of an ideal mode of engagement with painting, one that is visually honed and detached, can be understood as a setting of attentional conditions that discard other modalities of attentional experience (endnote 3). The sensibilities of aesthetic contemplation that this points to can also be seen as evidence of ingrained ideological interests that assiduously assert a value system of exclusions (Eagleton 1990: 9). A contributing factor is this persistent idea that optical perception is direct and unfiltered. Shaped by the assumed objectivity of distance and separation, both psychological and spatial, that vision is often figured by, the eye imagined as separate from the vagaries of the body. The foregrounding of the optical as a defining tenet of the critical field mapped

for modernist painting has been described by Caroline Jones as part of a wider 'bureaucratization of the senses' (Jones 2005: xvii). This is where the second aspect of the visual comes to the fore, that of a systematized and controlling overview. The term 'scopic regime' was first used by French film theorist Christian Metz in the 1970s as a way of distinguishing cinema from theatre, and it is within technologies of vision that this isolation of vision from the other senses gets played out most forcefully (Metz 1982: 61). For Metz the cinematic could be characterised by distance, but more crucially by the acknowledgment that what is represented is not present spatially or temporally. Metz doesn't make much of the oppressive characteristics of the term regime, though that certainly gets carried forward by others, and overlaps with Michel Foucault's emphasis on surveillance and Guy Debord's focus on spectacle (Foucault 1966) (Debord 1967).

The 'compulsive visibility' of much contemporary culture, and the controlling aspect of 'the fact of being constantly seen, of being able always to be seen' (Foucault 1975: 187) is escalated by the contemporary prevalence of the screen as the dominant interface in our social, cultural and economic interactions, and painting's visuality needs to be contextualised by this increasing optical saturation. The 1988 text *Scopic Regimes of Modernity* by Martin Jay describes the ocular centrality of modernity, tracing competing ocular modes while also pointing to an underlying unease with the heightened visuality they indicate. The distinctions between the terms vision and visuality are clearly articulated by Hal Foster in the introduction, 'between the mechanism of sight and its historical techniques, between the datum of vision and its discursive determinations' (Jay 1988: IX). Using painting's art history as his navigational tool, Jay maps three key scopic regimes; the rationalised space of Cartesian perspective, a Northern Renaissance tradition of 'the art of describing' and attention to surface as positioned by Svetlana Alpers and thirdly a Baroque model of visuality which disorients

through visual surplus and the contradictions of surface and depth. For Jay, acknowledging the plurality of the scopic is as useful as targeting the short falls and dangers of any dominant system of looking. As he concludes, 'Rather than demonize one or another, it may be less dangerous to explore the implications, both positive and negative, of each. In so doing, we won't lose entirely the sense of unease that has so long haunted the visual culture of the West, but we may learn to see the virtues of differentiated ocular experiences. We may learn to wean ourselves from the fiction of a "true" vision and revel instead in the possibilities opened up by the scopic regimes we have already invented and the ones, now so hard to envision, that are doubtless to come' (Jay 1988: 20).

Like the differentiated ocular experience that Jay identifies, tuning into the variables of attention underlines the implausibility of a true or stable perception (endnote 3). James Elkins, writing on photography in 2011, points out a lineage of imaging machines that are conceptualised in terms of perfect visibility and transparency. Elkins, for his part, is searching for a metaphor for photography that capture the experience of flawed, and fractured visibility. Three photographs are proposed by Elkins, and each one is appropriately inadequate to the task. The object identifiable in each, a selenite window, black lake ice, and rock salt, meets photography's mechanisms of capture, processing, printing and circulation with opacity and deflection. Each resists an approach that looks through the photograph to the object it depicts, and rather finds vision caught in and on a surface, a reminder of what can't be seen as much as what purports to be made visible (Elkins 2011:17-21). Identifying 'an imperfect model of imperfect visibility' (Elkins 2011: 28) is a strategy that can also be applied to painting, and we might think about Cézanne's doubt as tracked by Merleau-Ponty and linked by Jonathan Crary to the attentional experience of distraction, dissociation and fragmentation of perceptual experience (Crary 1999: 281-359). The difficulty of maintaining a sense of direct or straightforward visibility is approached again by Elkins in 2008 in *Six Stories*

at the end of Representation. The complex circumstances of image usage and production in a series of distinct disciplines, Painting, Photography, Astronomy, Microscopy, Particle Physics, and Quantum Mechanics, demonstrate the limits of image and vision, and the insufficiency of representation. In each case the visual output is outside retinal capabilities, whether blurred or enhanced, or caught over extended time periods (Elkins 2008) (picture 66).

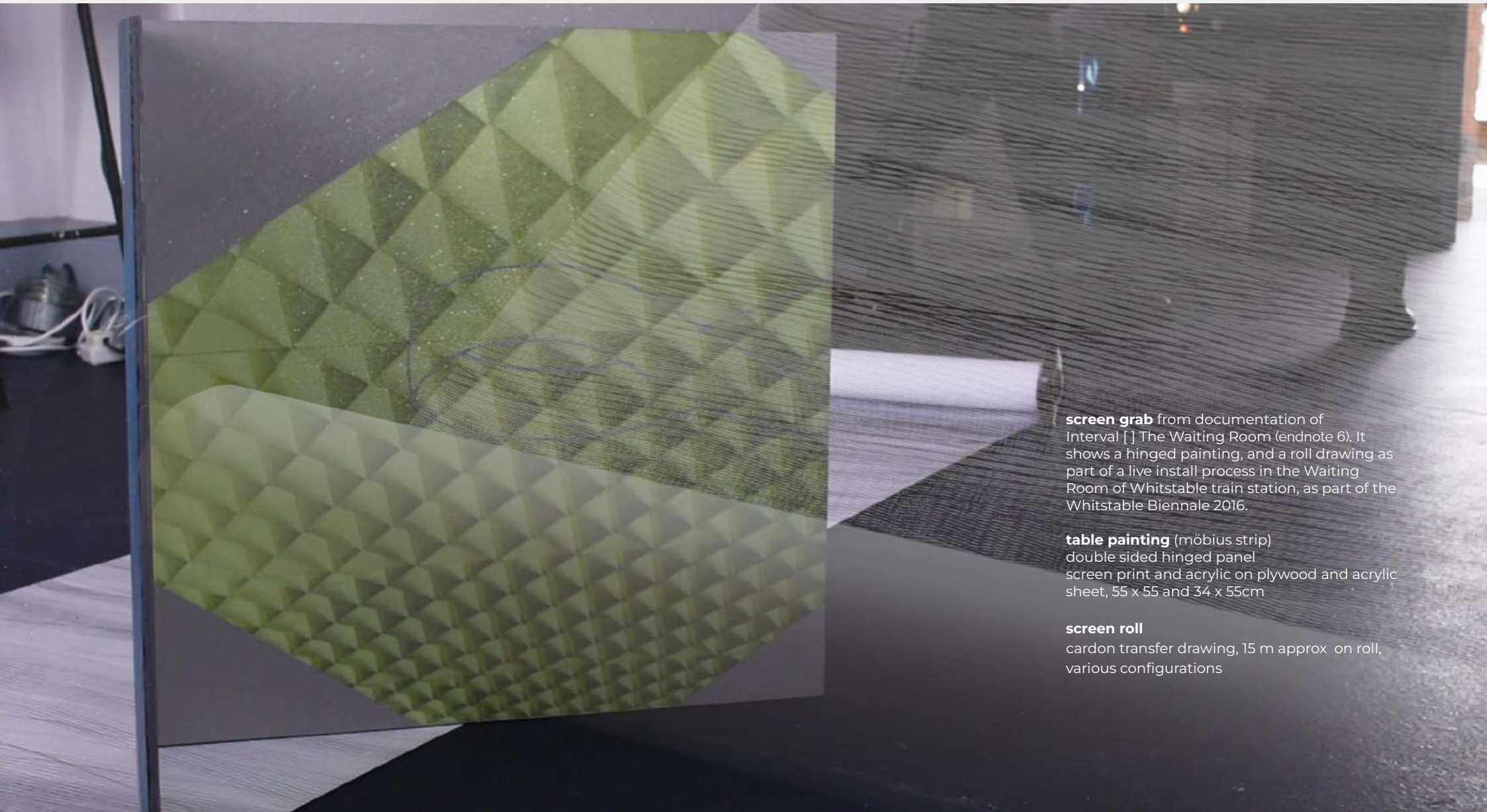
The technologies of vision that aperture contributes to may have extended and enhanced the reach of the eye, but they benefit from being approached with an understanding of limit, variability and insufficiency. Architect Juhani Pallasmaa's thoughts on the collaboration between senses leads him to propose an unfocused vision and the significance of the peripheral that might escape the detachment and exteriority more frequently associated with the optical. For Pallasmaa there is some hope in the saturated visuality that technologies might offer, that 'the loss of focus brought about by the stream of images may emancipate the eye from its patriarchal dominance and give rise to a participatory and empathetic gaze' (Pallasmaa 1996: 40). Pallasmaa's sense of an enveloping spatiality is in sensory exchange with our experience of interiority, with vision in correspondence with the other senses (Pallasmaa 1996: 14-15, 43-46). Pallasmaa's advocacy for an architecture that is fully sensory intersects with the insufficiency of an detached opticality for painting. In both the purely visual is a restriction and a reduction of our perceptual experience [see also **FABRIC**].

The function of aperture within the picture-diagram should be understood as a conceptual proposition, imagined through the variabilities of depth of field and the framing of point of view that the technology of aperture exposes. The aim is that the isolation of opticality or a confidence in visual acuity can be readjusted through the modulating mechanism of aperture, remembering how

focus and dispersal, gist and detail, and central and peripheral vision can be active in apprehending painting. Moreover, that the fragmentary, arbitrary and inarticulate aspects of visual experience can be kept in view.

In a series of letters to George Didi-Huberman, artist Simon Hantai recounts the need to displace the priorities of the visual in order to upend the constraints of aesthetic judgement. For me this is evidence of the activation of aperture within a practice. Hantai's methodology engages the blanks and gaps of perception, working with 'little direct attention', with his 'gaze wandering outside through the window', 'letting something happen which the pleasures of painting prevents from happening' (Hantai 1997-98: 216) (picture 67). For painting, an acknowledgment of deficiencies and dependencies, the fluctuations, blanks and glitches of attention, can help avoid an exclusivity of the optical, the fiction of a pure and stable vision, and a separation or distance which might problematically assume a position of control. For Hantai this is articulated by a limit reached in painting, one that necessitates an interruption:

'The hidden the fault the shattered the scattered. Inattention distraction attention scattered fluctuating peripheral decentred delocalised crack breach break The blind spot (thought) painting without seeing while looking elsewhere.....' (Hantai 1997-98: 217-218)



screen grab from documentation of Interval [] The Waiting Room (endnote 6). It shows a hinged painting, and a roll drawing as part of a live install process in the Waiting Room of Whitstable train station, as part of the Whitstable Biennale 2016.

table painting (möbius strip)
double sided hinged panel
screen print and acrylic on plywood and acrylic sheet, 55 x 55 and 34 x 55cm

screen roll
cardon transfer drawing, 15 m approx on roll,
various configurations

2 studio note on APERTURE for Sophie Germain

Were you aware of early photographic experiments happening in Paris before your death in 1831? The invention of fixed photography in the mid 1830s has somewhat displaced painting's imaging responsibility, but not replaced it. The circulation and availability of image has escalated exponentially well outside the bounds of painting.

When I saw the Bellini painting for the first time in Venice I was newly attuned to the experience of seeing painting under timed lighting conditions. To view frescos in lots of the churches I visited the procedure was to put your coin in the box which triggered lights to be switched on for a fixed duration. This fed into a sense that painting doesn't always need to be available to vision. Though I didn't connect that experience to what for me was an unexplained anomaly in the Bellini work, the thought was registered.

sky chart (detail) space responsive multi component wall work



Testing distinctions between image and painting are productive in the studio, with painting potentially processing image information and prompting an image response without becoming image (endnote1). I import image information into the painting surface using reprographic processes, mostly screen printing. Image then becomes the ground of the work rather than its figure, with the understanding that the visual field is already full.

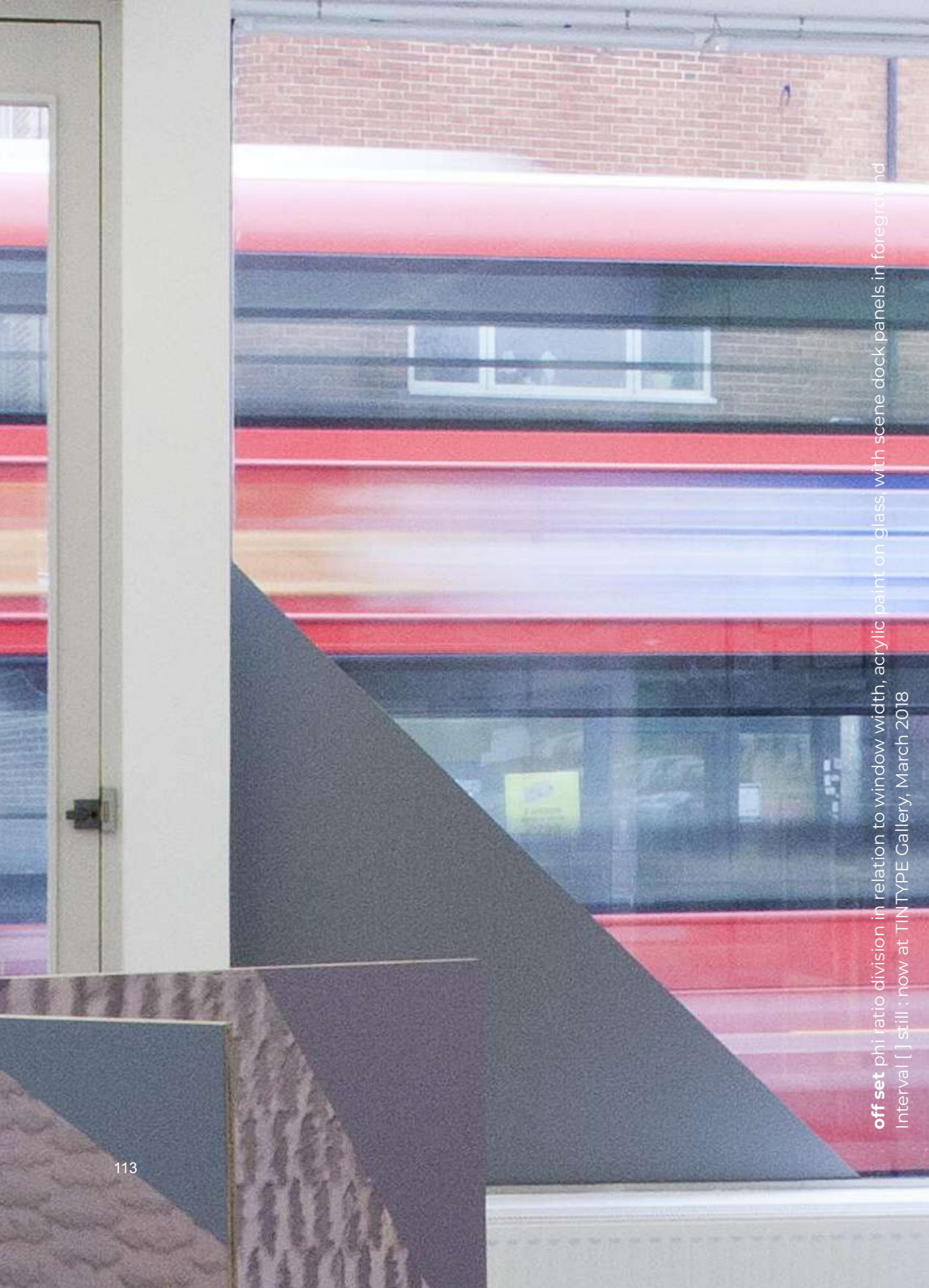
In the site responsive and component based work 'sky chart' the implied recession of the 6 sided shape suggests illusionistic cuts into or out of the architecture of the gallery like multiple apertures. The spatial associations evoked by architectural placement are in tension with the counter perspective of a printed grid and the direction and materiality of processed paint, keeping multiple spatial recessions and flatness all in play [see also **GRID**].



sky chart (detail) space responsive multi component wall work



sky chart space responsive multi component wall work, 15 phi cut shapes 84x52cm, acrylic and screen print on mounting board
Herbert Read Gallery, Canterbury July 2018



off set phi ratio division in relation to window width, acrylic paint on glass, with scene dock panels in foreground and Interval [] still : now at TINTYPE Gallery, March 2018



The work *off set* used a phi ratio division of a gallery window, and activated a blank in attentional circumstances. Noting 'a specific quality of the gallery at Tintype is the framing of its exhibition space from the street. The large window, just off square, captures and pictorializes. This architectural circumstance establishes an event boundary for the visitor first viewing the space from outside, holding a visual capture of that framed interior as they move towards the doorway and into the gallery. Event boundaries mark 'points of perceptual and conceptual changes in activity' (Swallow et al 2009: 236) like strategic cuts in a film' (endnote 6).

'...These boundary moments are part of perception's segmentation of continuous experience, and seem to encode visual data more securely into memory. The cut in time and structured spacing implied by the term interval highlights this change of view and position. Attention is framed and distanced from the street, and is dispersed and recaptured inside the gallery' (endnote 6). The window work operated like a material instance of attentional blink, a glitch and gap in continuity that I also identify in the Bellini, mobilising the processes of memory and recall. Spatial and temporal divisions, the logics of the frame as a convention for both painting and film establish the research context for the Interval collaboration. In a shared interest in the potential for cross cuts and dependencies between works, *off set* also had a logistical function, adjusting the light levels inside the gallery to facilitate the projected works. It also suggested to me the light and attention moderating potential of aperture.

off set
window division on a phi ratio, Tintype Gallery, London 2018



thought process (deciding between water and rock)

A series of paired panels, acrylic and screen print on plywood, 34 x 34, 34 x 21 cm, providing a pictorial and spatial prompt for a 16mm site responsive film by Nicky Hamlyn. The painted divisions provided the prompt for a tape division on the wall which Nicky then filmed and projected back at a slight displacement.

Interval [] still : now at TINTYPE Gallery, March 2018

BOOK and WINDOW

image information (book and window)

BOOK and WINDOW

Book and window signal the complex interplay between looking and reading or image and text that painting can be invested in. In the first instance I use window as a marker for the visual priorities and book as a marker for the linguistic priorities that attention might be modulated by. Each offers an analogy for the organisation of data on a planar surface.

Book and window operate as a double component within the picture-diagram. At first glance their pairing might suggest an approach that sees through painting's material specificity to what it points to; so painting in the service of a representational or narrative task. Certainly book and window are useful in elucidating how resemblance or likeness contribute to attentional capture, how the visual perception might be a prompt to naming, and text might be a prompt for visualisation. Both book and window interact usefully with the term picture, and how prior experience and imagination modulate attention; window standing for a displacement of attention, when what one is looking at and what one is thinking of diverge in the scattered reverie of daydreaming; book acting as a prompt for picturing, as the expressivity of text moves thoughts away from the page.

To start, I need to do some ground work on the relationship between the visual and the linguistic, in terms of painting and in terms of attention. In *Word and Image* W.J. T Mitchell describes the inevitability of language at play within the visual. He says 'the recognition of what visual images represent, even the recognition that something *is* an image, seems possible only for language-using animals' (Mitchell 1996: 47). For Mitchell word and image 'is a kind of shorthand name for a basic division in the

human experience of representations, presentations, and symbols. We might call this division the relation between the seeable and the sayable, display and discourse, showing and telling' (Mitchell 1996: 47-48). Michael Baxandall writing on Renaissance painting clarifies the disparities between the visual and the verbal in terms of 'different systems of discrimination' that a picture or a verbal text have at their disposal. Baxandall's point is that a picture's relation to narrative is not secondary to or dependent on the logics of a text. Pictures 'do not replicate the grammatical and syntactical commitments of a verbal narrative well' because 'they are committed to a structure and balance of narration that is actively different' (Baxandall 2003: 123). Baxandall outlines a set of specificities that pictures might need to be decisive about, including centre and boundaries, left and right, up and down, spatial relations, scale and distance. Baxandall's sense of an active difference is reiterated by Michel Foucault, 'The relation of language to painting is an infinite relation. It is not that words are imperfect, or that, when confronted by the visible, they prove insuperably inadequate. Neither can be reduced to the other's terms: it is in vain that we say what we see; what we see never resides in what we say. And it is in vain that we attempt to show, by the use of images, metaphors, or similes, what we are saying' (Foucault 1966: 9).

Within art discourse, book and window can be added to a list of dualities that offer various formulations of a linguistics versus visual distinction. For example the conceptual versus the experiential, mind versus body, active participation versus passive contemplation, are presented as though choices in a hierarchical or oppositional dynamic. My interest in the duality of book and window responds to this prevalence of oppositional pairings in twentieth century thought, and acknowledges the influence of structuralist thought on the art discourses I have found myself positioned by. As an art student in the mid 1990's, the influence of

semiotics was particularly evident, and Ferdinand de Saussure's structuralist linguistics and the foundational assertion that language is the 'master pattern' able to dissect and pin down the messy ambiguities of other cultural phenomena, in this case painting, forms a backdrop to the designation of book and window.

The analytical rigour semiotics seemed to offer visual art was an important point of resistance to the emotive hierarchies of connoisseurship and the need to expose an apparatus of visual complacency or control (Agamben 2009: 21). The motivation to break open systems of often unspoken privilege given to the visual is one I share. But imposing a linguistic logic onto visual and material artefacts inevitably leads to losses that I also feel. An example of a counter resistance to language as an imposition onto and into the visual is resonant in James Elkins early writing, and in particular the book *Pictures and the Words that Fail Them* from 1998. The conditions that shaped Elkins position in the late 1990's feels very close to my own experience of trying to clear space for a painting practice. The motivation to reset a balance is also clear in Susan Sontag's stance in *Against Interpretation* and in the dynamics of polarity evident in the myriad of aesthetic versus anti aesthetic positions (Sontag 1961) (Elkins 2013).

However the reactionary aspect of that response is also important to bring to the fore. Elkins admits to 'having been hypnotized by what I now see as a trope of modernism: the notion that images belong to a separate domain, outside of language' (Elkins 2022). The increasing influence of affect theory within contemporary art discourses, and the pull towards the experiential, immersive and even the uncognized (Gregg & Seigworth 2010) can also be seen in terms of a problematic narrowing and separating. The play off between the visual and the linguistic certainly gets given a particular slant by modernism's insistence on the specifics of a medium,

with painting's move towards opticality as almost a pre cognitive apprehension of the visual. Margaret Iversen and Stephen Melville in *Writing Art History*, reflect on this tension between the visual and the verbal that is inherent within art discourse. The polarity of positions is succinctly expressed as 'on the one hand, the work of art is more or less reducible to language, while on the other, it has nothing in common with it' (Iversen and Melville 2010: 129). My sense is that painting is particularly vulnerable to staking a claim at both ends of this oppositional scale. At one end painting is positioned as a complex but securely readable cultural object, versus painting as a visual and material phenomena to be immersively received in isolation from language. Neither are positions I would want to take.

So it is important to note that the interdependencies of book and window pull in various directions. They can point to the separation of the visual from conceptual engagement, which might facilitate a privileging of language as a tool of analysis, or they might indicate the valorisation of the visual in terms of a non verbal experiential mode and the rejection of a linguistic contribution. Other components in the picture-diagram confront this on different terms. For example in *Aperture* we see how optical perception has been given a privileged position in western thought, or in *Fabric* we approach the isolation of the visual by an entangling of sensory perception [see also **APERTURE**]. [see also **FABRIC**]. As a side note in *A Cut in Attention: caught between reader and visitor* I describe how the figures in the Bellini, termed the reader and the visitor, can be considered as visualisations of modes of encounter (p61 note †). My discussion on their roles opens up this question of the linguistic and visual aspects of painting, and was left purposefully unresolved.

More importantly for their function within the picture-diagram, book and window help extrapolate the pulls on attentional resource

that can be characterised by the visual and the linguistic. My proposition is that attention, as the capacity dependent and selective function of perception, provides an apt context for accessing this untangleable relation between the seeable and the sayable (Foucault 1966: 9) So a key consideration, informed by the priorities of book and window, is how attentional resources are stretched by different tasks, and how this stretching might be experienced through visual and linguistic pulls activated by painting. Current cognitive research shows that the activation of one attentional mode will impact capacity for another, for example how visual attention responds to spatial language comprehension (Burigo & Knoeferle 2015). The coupling of book and window in the picture-diagram is a strategy to actively engage with attentional limit, attentional mode shift and exchange, divided attention and distraction. Much of the current research on attentional capacity is framed by safety issues highlighted by multi channel draws on our attention, or it is motivated by understanding attentional susceptibility in terms of marketing and consumer engagement with content. For example the attention required to speak and listen degrades the attentional sensitivity needed for perceptual responses to a changing environment, and the pull of text based apprehension comes with an attentional lag that can significantly impact response time and situational awareness (Treffner & Barrett 2004) (Bernstein & Bernstein 2015).

The experience of distracted capture that I have associated with the Bellini work might be said to mark viewing at the edges of attentional capacity. The ambiguity that I identify in my analysis in *A Cut in Attention: between reader and visitor* partly responds to the linguistic and visual triggers the painting offers, firstly and directly as a narrative painting but then more expansively in terms of an unresolved exchange between two parts (Zeki 2003: 173–196). My interest in book and window is the aggregated potentials of the visual and the linguistic for attentional attachment rather than a demand to prioritise one over the other. A more nuanced

sense of this aggregation is, I think, evident in Jean-Francois Lyotard's *Discours, figure* (Lyotard 1971). While undercutting a privileging of language and a marginalising of the visual in post structuralist theory, Lyotard manages to avoid an oppositional mindset. Drawing on Charles Sanders Peirce's approach to semiotics rather than Saussure's, Lyotard points to the expressive and visually and materially resonant aspects of language that allow it to be in more empathetic exchange with the visual (Iversen and Melville 2010: 132-133). Additionally, writers like Jacques Rancière exemplify an awareness that dichotomies need to acknowledge how they might also contain their mirror image. For Rancière 'presence and representation are two regimes of the plaiting of words and forms. The regime of visibility of the 'immediacies' of presence is still configured through the mediation of words' (Rancière 2009: 79). So book and window are imagined tied together, or hinged or folded into each other within the picture-diagram.

Our negotiation of image and text in various composite formats is a key factor in 21st century concerns about perception and attention. Anne Friedberg, in *The Virtual Window: From Alberti to Microsoft*, demonstrates that 'how the world is framed may be as important as what is contained within that frame' (Friedberg 2006: 1). In a short section of Friedberg's book, titled *The Window and The Book* she hones in on the computer screen, where page and picture meet. Friedberg references media theorist Friedrich Kittler who allies the camera obscura as used by Leon Battista Alberti in developing linear-perspective to the innovations of moveable type and the printing press by Johannes Gutenberg. These are proposed as parallel instigators of the reproducibility and dissemination of image and text, inevitably leading to our current code and screen based data circulations (Friedberg 2006: 18-20). More recently Jonathan Crary sets out an assessment of our digital or post digital culture and economy, and the inbuilt limitlessness of social and

information technologies. In *24/7* Crary insists that our focus should not be on the technology or the interface itself, but on the underlying systems of control it points to (Crary 2014: 40). My argument for considering attentional capacities for painting is that painting cannot be considered immune or separate to these wider attentional conditions of culture, whether as art historical artefact or through contemporary examples of production. Crary's argument is that 'the rhythms, speeds, and formats of accelerated and intensified consumption are reshaping experience and perception' (Crary 2014: 39- 40). The 'junk time' of fragmented scrolling online (Steyerl 2017), displacing a task specific intention by scattered and discontinuous pulls on attention, is also a passive complicity in our own data mining and surveillance (Crary 2014: 48). As a very current example, a cryptocurrency called *Basic Attention Token* powers a web browser that aims to accurately price user attention. Users earn tokens by attending to advertising content (basicattentiontoken.org 2021). The explicitness of this exchange even within an attention economy is startling, wherein an understanding of a limit on attentional capacity turns our attention into a scarce resource consumed by the counter abundance of information. Michael Goldhaber's definition of the attention economy as 'a system that revolves primarily around paying, receiving, and seeking what is most intrinsically limited and not replaceable by anything else, namely the attention of other human beings' (Goldhaber 2006) supports Jonathan Crary's assertion we are not just experiencing another moment of technological change that we can reassuringly attach to a progress based timeline that includes Gutenberg and the Industrial Revolution, but 'the relentless capture and control of time and experience' (Crary 2014: 40).

In considering how acts of seeing are turned into objects of observation, how our attentional preferences, however minutely delineated through a pause or flicker as we scan a screen, are able to be analysed, we can also reconsider the motivations for

attentional capture that painting might also be invested in. Returning to Friedrich Kittler's analysis of a much earlier period of image and text aggregation, we can see the benefit of hindsight at work. For Kittler the printed book as a 'media-union' of image and text technologies that converged in the Renaissance housed within itself the potential for its own obsolescence (Friedberg 2006: 19) (Kittler 2001: 39). If Kittler's assessment is right and the obsolescence of the printed book was built into it from the start, then the attested obsolescence of painting that has been a recurring narrative for painting since at least the mid nineteenth century (Bois 1991: 229-244) might also be foreseeable within the Bellini work. My activation of book and window as an irresolvable duality within the picture-diagram entertains that possibility.

The interdependency of book and window was initially implied by their proximity in the Bellini painting. The exchange between the attentional pulls of the visual and linguistic oscillates between them. Reading and looking are often approached as two distinct and opposing approaches to the art object, but within the picture-diagram their interdependency gives them impetus within the practice and the research. Book and window are imagined operating at the edges of attentional capacity, and my thought as a practitioner is that the interplays and misalignments between image and text that painting inevitably contains might strangely equip it for the contemporary moment.





picture diagram: composition table, first made as a participatory structure for 'Democratic Practices in the Creative University' a symposium at Canterbury School of Architecture, UCA, June 2021, asking how a democratic approach to practice might disassemble hierarchies within the conventions of painting and pedagogy.

3 studio note on BOOK and WINDOW for Sophie Germain

Thoughts on book and window coalesce around the structure of a table. Table as working space, as layout, as compositional limit, a space of social interaction, table as tableau (endnote 8). And table also as tablature, as sorted and stored information.

With the thought of an exchangeability between reading and looking I have made a painting structure that also functions as a table. The compositional logics of the structure is based on diagrams that visualise Pythagoras Theorem $a^2 + b^2 = c^2$

The work invites participation in an open ended compositional proposition. Visitors can handle and adjust a series of painted components, squares and triangles generated by the theorem ratios, moving between the various elements of the work that operate within an expanded category of painting.

A provisional and discursive state is maintained through a loop of potential interactions between 3 main elements, moving the work between process, display and storage, sharing the experience of studio decisions and indecisions, directly activated or imagined by a visitor:

1: a floor structure with a slanted top like a reading stand, and an interior storage space. It functions as a table like work surface and its shape references the outline of a room or a building. The logics of painting overlap with furniture and architecture, providing display, working surface and storage space simultaneously, and a space for contemplation and imagination.

2: painted components consisting of a set of felt backed painted panels, squares and triangles, designed to be freely moved and positioned.

3: wall panels positioned like painting and functioning as shelves, with cut off parts of a theorem diagram and sections of framed edge that allow the components to be placed as a colour edit or an adjustment or a blanking out.





The components are stored in the structure's interior, positionable on the slanted surface and onto the accompanying wall panels that give further storage or display options, and reiterate the generative potential of the theorem diagrams.

As a painter they open up the idea of a shared compositional convention of shape and ratio that avoids an expectation of originality, and yet enable novel colour and shape combinations as the components are moved and assembled. The ratios described in Pythagoras Theorem becoming visually discoverable and tangible, something I would have appreciated as a child, staring at the letters and numbers of an equation with no way in.

The compositional geometries of the work might seem to assimilate into the history of abstract painting, but they assert a communicative function that discourses on abstraction tend to rebuke, offering a visual demonstration of a mathematical concept and the visual and tactile pleasures of colour and shape combinations.



Painted components for picture diagram: composition table, on studio shelf

FABRIC

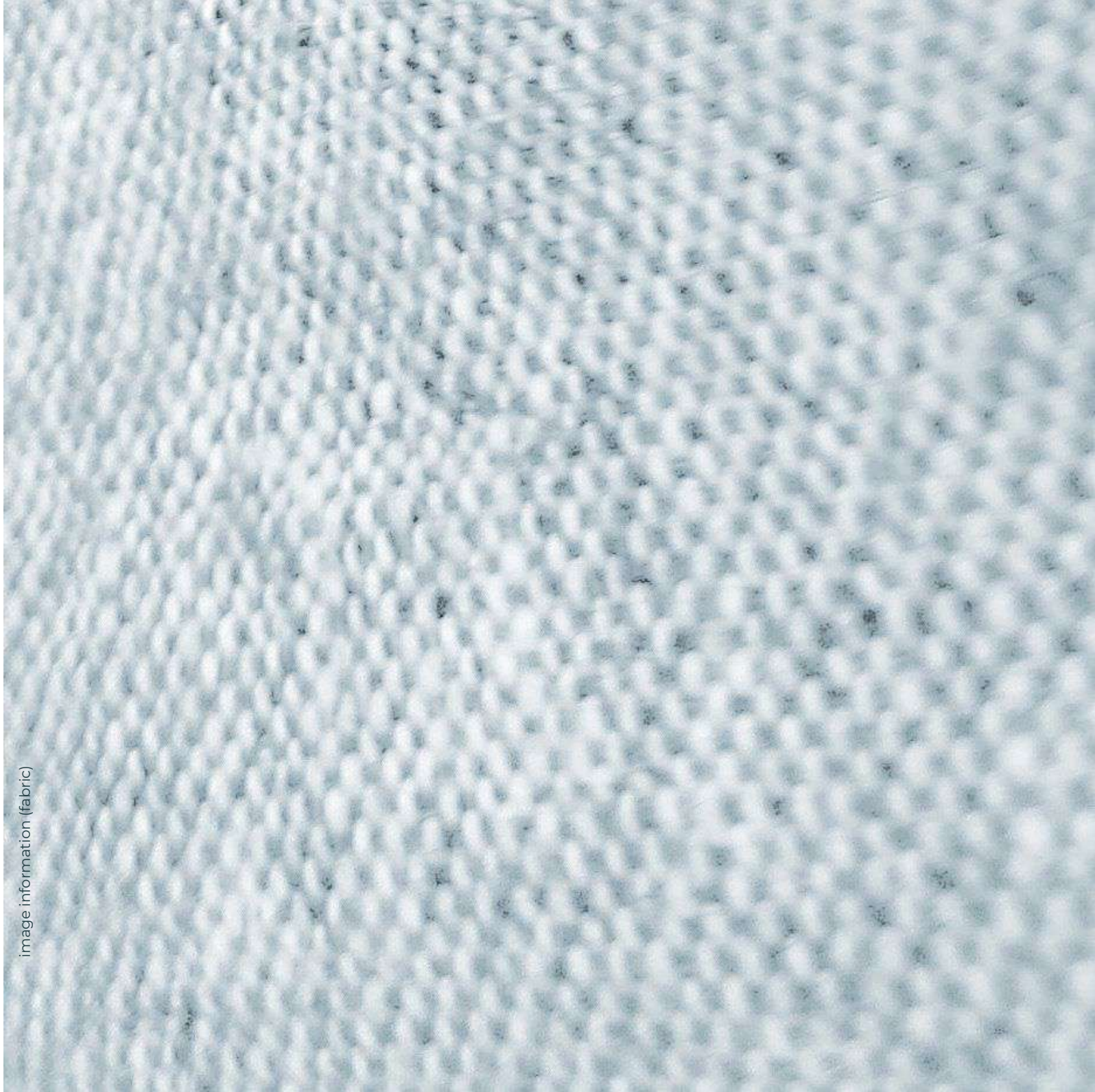


image information (fabric)

FABRIC

Fabric implies close attention to surface or substance, heeding the warp and weft of canvas or the exposed grain of a wood panel. Fabric assimilates the touch based feedback inherent in making and handling painting, the tactile contact with painting as a receptive surface and substrate. The residue of touch via mark or process are relevant to the sensibilities of fabric and the close interactions between bodies and materials.

The cross modal interactions that contribute to perception are becoming increasingly understood in cognitive and neuropsychological research (Amedi, Jacobsen, Hendler et al 2002), and the interplay between the visual and the tactile is particularly pertinent to the attentional capacities prompted by painting. The depictive push of paint, interactions between materials and surfaces, the permeability or resistance to pigment and liquidity, the pressure, drag, saturation or sweep of a mark, are informed by tactile sensation in correspondence with sight. Interplays between vision and touch can be accessed through the priorities of the optic and the haptic, and critical distinctions in the resonance of touch evident in painting discourse, underscoring the individuality of gesture or the anonymity of material processing (Buchloh 1984: 82-119) (studio note 4). While we can track how these emphases shift art historically and philosophically, it is clear that painting's complex evocation of sensation is both visual and tactile, and the cross modal interactions modulated by our attention cannot be usefully considered in isolation. The application of fabric within the picture-diagram addresses the importance of these multi sensory properties of painting for both maker and viewer.

Asserting the distinction between a touch based experience and a visual one adheres to a perceptual hierarchy that positions sight as the primary mode of perception and in separation from the other senses [see also **APERTURE**]. This hierarchy persists, but there is a traceable strand in philosophies of perception that addresses interdependencies between touch and vision even before the supporting evidence from cognitive research became available. In *An Essay Concerning Human Understanding* of 1690, John Locke asked whether a previously blind man could translate the tactile distinction between a cube and a sphere into a newly acquired sighted apprehension of shape. Although Locke's answer was no, the question itself opened the possibility of an exchange between the senses. When George Berkeley, writing in the early 1700s, upheld the independence of visual and tactile perception, he also acknowledged the entanglement of the senses through learned association. For Berkeley the role of memory and imagination in perception was key, and his emphasis on the embodied nature of perception laid groundwork and provided a provocation to phenomenology in the twentieth century. As the Enlightenment progressively questioned of the basis of knowledge, the dominance and isolation of the visual was increasingly put under question, as when Denis Diderot's 1749 essay on blindness provocatively placed new value on tactile perception (Margo, Harman, Smith 2012: 98-102).

In terms of the visual and the tactile, a distinction between the sensation based experiences of maker and viewer is important to demarcate, even if it appears obvious. So how does the tactile and visual engagement active in the making of the painting translate for the viewer when left with the exclusively visual experience of looking at a painting that has been made to be seen and not directly handled? As Jacqueline Lichtenstein has remarked, paintings provoking a desire to touch gives 'sight a tactile dimension' (Elkins and Naef 2011: 86) and it is this interaction between our senses that I am interested in for painting. When psychologist

Richard Gregory argued in the 1970s that our perception is a hypothesis, relying on top down-processing, he was influenced by his observations that sight could be informed by the memory of exploratory touch, 'for optical images are but ghosts, materialized into objects by perceptual experience of the non-visual properties of things' (Gregory 2004: 836). How then does painting evoke a touch based perceptual response in a viewer? Can we position tactile perception as integral to the fabric of painting?

The term affordance is useful here in order to consider how objects, spaces or surfaces can invite contact through an enactive response. First introduced by psychologist James J. Gibson in 1966, the most used definition of affordance comes from his 1979 book *The Ecological Approach to Visual Perception*. An affordance is the potential an environment or an object offers as an opportunity for action without the need for demonstration, like a gap to move through or a ledge to sit on (Gibson 1979: 127) (Boden 2010: 58). Importantly, affordances according to Gibson are not universal properties of an environment or object, but relative to individual bodies and contexts. We could say affordances engage our attentional system as behavioural prompts, and certainly they are articulated through an active correspondence between us and our environment (Gibson 1979: 119-137). The concept of affordance has been embraced by design theory and the intuitive interaction we have with everyday objects, and is key term in user centred design (Norman 1988, 2013). It has also been extended to include perceived affordance and even false affordance when the suggestion of action is proposed but not possible (Gaver 1991: 79-84). For painting, most commonly positioned to be looked at but not touched, its enactive potential is often overlooked in favour of indicative readings. In this sense a painting is understood to offer information rather than opportunity, or that the potential of painting as image or painting as object are presented as unresolvable contradictions (Elkins and Naef 2011: 79-89). Yet the handleability of painting, its tactility conditioned by the residue of touch on a

surface, are cognitively active properties that I propose can't be overridden. The multi sensory invitation of painting could be described as offering a sort of suspended affordance, and recent research has strongly identified that both visual and tactile perception trigger our motor system, and that our bodily awareness is spatially and tactilely attuned through proximity (Rizzolatti and Craighero 2004). In this way tactile perception is at work even within a gallery or museum environment where we are kept at a physical distance from the works on show (Levent et al 2014). Through the concept of peripersonal space, neuroscience proposes that surfaces close to our body are cognitively anticipated as though already in contact with our skin (Noel et al 2015) (Pfeiffer, Noel et al 2018). James Gibson's initial description of affordance emphasised the importance of our perception of surface, and how surface properties of objects and environments are approached relative to body surfaces (Gibson 1979). For painting, this shows that the correspondences between a viewer and a work needs to be accounted for on a visual, tactile and spatial register.

An aspect of this sensory exchange is the potential transaction between the actual fabric of a painting and the depiction of fabric, the shifts between surface and a reiteration of surface through paint, and the complex meshing of sensation this registers in terms of attention. Jean-Luc Nancy has noted that shift in a Caravaggio painting where the canvas support and the depicted fabric of its representational schema become inextricable, 'just as our eye conforms to the plane of the canvas and weaves itself into its fabric' (Nancy 1993: 111). This experience of fabric expresses a condition in which 'to paint does not mean to represent, but simply to pose the ground, the texture, and the pigment of the threshold' (Nancy 1993: 115). The perceptual entanglement this indicates can be described more programmatically as an assessment of image based information amidst a sensory response to a work's physicality. This is a persistent condition of painting and one that can be approached through a multi sensory understanding of the term depiction.

Depiction links to a work's materiality in a way that is distinct (endnote 7) . It implies painting's fabrication through touch based contact, whether the push of intentional mark making, the pressure, absorbency or resistance of material application. And it marks the conditions of presentation, of making something present, that are enmeshed within a more complex sense of what we mean by representation (Summers 1996: 3-7).

The Latin *depictus* is the past participle of *depingere*, to paint, and the Latin root helps locate this tactile aspect of painting; the *de* of *depingere* means completely, and *pingere* means to paint. To completely paint might be interpreted as the expectation of a highly rendered, and therefore in some sense complete image, but looking further *pingere* has an older root meaning to cut and mark by incision (endnote 7). This fuller sense of the term depiction indicates a pressure based residue on and through a surface. The attention to surface as pliable and inscribable that I consider depiction requires, sees a move between the register of material and the register of imaging, but within the context of evidence of contact and intentionality. Richard Wollheim has termed an aspect of this pictorial experience 'two foldedness', 'a strange duality of seeing the marked surface, and of seeing something in the surface' (Wollheim 1987: 22). In the context of tactile perception this can be thought of as a shift between the haptic register of actual surface and the recognitional prompt within or on a depicted surface. For Wollheim the interest seems to lie in the perception of the material qualities of a painting as a physical and tactile two dimensional surface and the perception of the painting as a carrier of a three dimensional representation. Wollheim names these as the configurational and recognitional aspects of painting (Wollheim 1987: 73). More recent interest in two foldedness have considered Wollheim's generalised claims in the context of two distinct pictorially prompted attentional experiences, firstly to test the contribution of two foldedness to the recognition of a represented object in a painting and

secondly the contribution of two foldedness to an aesthetic response to a painting (Alloa 2011: 179–190) (Nanay 2005: 248–257). Current cognitive research demonstrates how vision and touch share cognitive resources and a mutual representational system for texture recognition, spatial orientation and shape processing (Amedi, Jacobsen, Hendler et al 2002) with areas of the brain that had been considered specialized for visual processing now known to be responsive to analogous tactile inputs (Levent & Pascual-Leone 2017: 3-16) (Sathian, Lacy, Stilla et al 2011). Embedding the tactility of fabric into the picture-diagram is motivated in part by ensuring the recognition based attentional response that I want to claim for depiction is not one solely tied to image or representation, and not tied exclusively to aesthetic response. Instead depiction, in the context of fabric, can be more widely evoked in relation to the recognition of the residue of process and intention, a scoring of surface that is co-produced by visual and tactile registers. In this sense depiction is active in distinctions that have been particularly relevant in painting's response to medium specificity. It is, I would argue, identifiable in the perceptual divergence between paint read as on or into a surface, in the move for painting to mark depth through thickness and the shifts between spatial actuality and spatial inference (picture 68) . It is there in the fold of fabric active in painting's production (picture 69) or the surface of painting as both punctuated and delineated , mapped as a grid with cautious pencil marks and incisive pins (picture 70) .

Close looking at the physical and material properties of painting and re-engaging the haptic offers a recalibration of perceptual priorities for painting that have tended to underscore the optical. It also aims to cut across certain social and cultural frameworks associated with an emphasis on opticality, frameworks that can be extrapolated by the narrative and structural dualities of the Bellini, and by the requirements of connection and access of my protagonist, Sophie Germain. When feminist film theorist Laura U Marks was

looking for an escape from dominant theories of the gaze, she turned to these tactile registers of visual perception (Marks 2000). Marks wants to claim the pleasure and intimacy of looking without the power and imposition of a gendered gaze [see also **APERTURE**]. Proposing the term 'haptic visuality' to evoke tactile closeness 'so that the eye travels on the surface of an object rather than into illusionistic depth' Marks' was partly responding to the distinction Gilles Deleuze and Félix Guattari make between smooth and striated space (Marks 2006). Smooth space is to be understood as in close and responsive connection to an environment, in contrast to the emotional remoteness of and abstraction of striated space, mapped and divided (Deleuze and Guattari 1988: 479). Marks clarifies her use of haptic and its relation to surface 'as a kind of seeing that uses the eye like an organ of touch' (Marks 2006). Marks was also building on art historian Alois Riegl's pairing of haptic and optic that activate more embodied modes of perception for painting. Through his studies of Late Roman Art, Riegl tracked a move from tactile coherence that kept distinct objects close at hand, to a wider view of an object as an element in space assessed at a distance. Riegl had an early interest in textiles, and the scanning of a woven material where colour and shape distinctions are integral to the fabrication of surface may well have attuned him to the contribution of tactile perception when he turned to consider painting (Olin 1992: 155).

Haptic and optic, like smooth and striated, are a conceptual pairing that indicate the complex and mixed modalities of our interactions with an environment. The haptic dissolves distinctions between figure and ground, as the optical reestablishes it. Smooth space has the sensibility of a nomadic connectivity and movement whereas striated infers overview and the fixed capture of space as territory. In both pairings we can see social and political implications in the shifts in our modes of attentional engagement [see also **APERTURE**] [see also **GRID**]. For Riegl, Deleuze and Guattari, and Marks the haptic opens up an empathetic correspondence between bodies and spaces

and surfaces. Within the picture-diagram, the tactile conditions of fabric enfold the visuality of painting through a commitment to the procedural aspects of a practice understood as ethically charged. *Fabric* proposes a close attention to painting as a receptive surface and enactive structure. The responsive connectivity of the haptic is intrinsic to how my practice makes contact with the perceptual circumstances of its apprehension, by me as a maker and as an invitation to a viewer or participant.

Fabric as a component in the picture-diagram confers with *Aperture* in remembering the dangers of approaching the senses in isolation. Revisiting architect Juhani Pallasmaa's call for an intertwining of vision and touch, and remembering the interest Pallasmaa took in designing the door handles of his buildings as a moment of tactile contact as we move through a space, painting might also instigate a direct point of contact. In *The Eyes of the Skin* Pallasmaa expresses this intertwining of the senses in ethical and empathetic terms, 'The eyes want to collaborate with the other senses. All the senses, including vision, can be regarded as extensions of the sense of touch - as specialisations of the skin. They define the interface between the skin and the environment - between the opaque interiority of the body and the exteriority of the world' (Pallasmaa 1996: 40-45). As Pallasmaa describes it, touch is 'the unconscious of vision' and that 'vision reveals what touch already knows' (Pallasmaa 1996: 45). In understanding the exchange and correspondence between senses that share attentional resources there is an expansion of the perceptual circumstances that painting engages with.

Pallasmaa's approach to touch reminds me of the tactile registers of Eileen Gray's threshold wall in villa E - 1027 and the anticipation and memory of touch that the patina of its surface evokes (picture 18-20). Here the imagined room that configures and is

configured by the components of the picture-diagram takes shape within the conditions set by fabric. Gray's designed interiors were made in anticipation of surfaces that are to be handled, doors and windows to be opened and closed, screens, partitions and shutters to be adjusted in movements between private and public. Eileen Gray managed to work through the principles of modernism while recalibrating the emphasis towards interiority and the bodily contact inherent in inhabiting space (Gray and Badovici 1929). As Caroline Constant writes 'Gray sought to overcome the reductive dehumanizing qualities associated with abstraction by prioritizing the subjective qualities of experience' (Constant 1994: 265). Interestingly for a painter, Gray turns on the dematerialisation of painting and what she saw as the influence of painting's disembodied and austere abstraction into architecture. Gray wrote in the late 1940s 'The poverty of modern architecture stems from the atrophy of sensuality... we must mistrust merely pictorial elements if they are not assimilated by instinct' (Adam 1987: 216).

In the picture-diagram, as played out in the practice, the invitation of the haptic can be direct, with handleable elements and surfaces, and it can be anticipated and imagined. The cognitive expectation of touch in peripersonal space, or the deferred invitation of affordance work in tandem with the direct contact of skin to surface (Pfeiffer, Noel et al 2018) (Amedi, Jacobsen, Hendler et al 2002). The consequences of an atrophy of sensuality is one that I am mindful of from within painting. Attuning to touch is something the eyes can do. The space making potentials of painting are explored as adaptive and responsive to an embodied participant and in sensory collaboration. The affiliations between visual and tactile that fabric opens up, building a multi sensory model for painting, mapping our bodily self awareness through proximity, recalling, anticipating and evoking touch based perception.



5 colour sequence 25722 acrylic on laser cut mdf, each 12.5 x 20.3cm

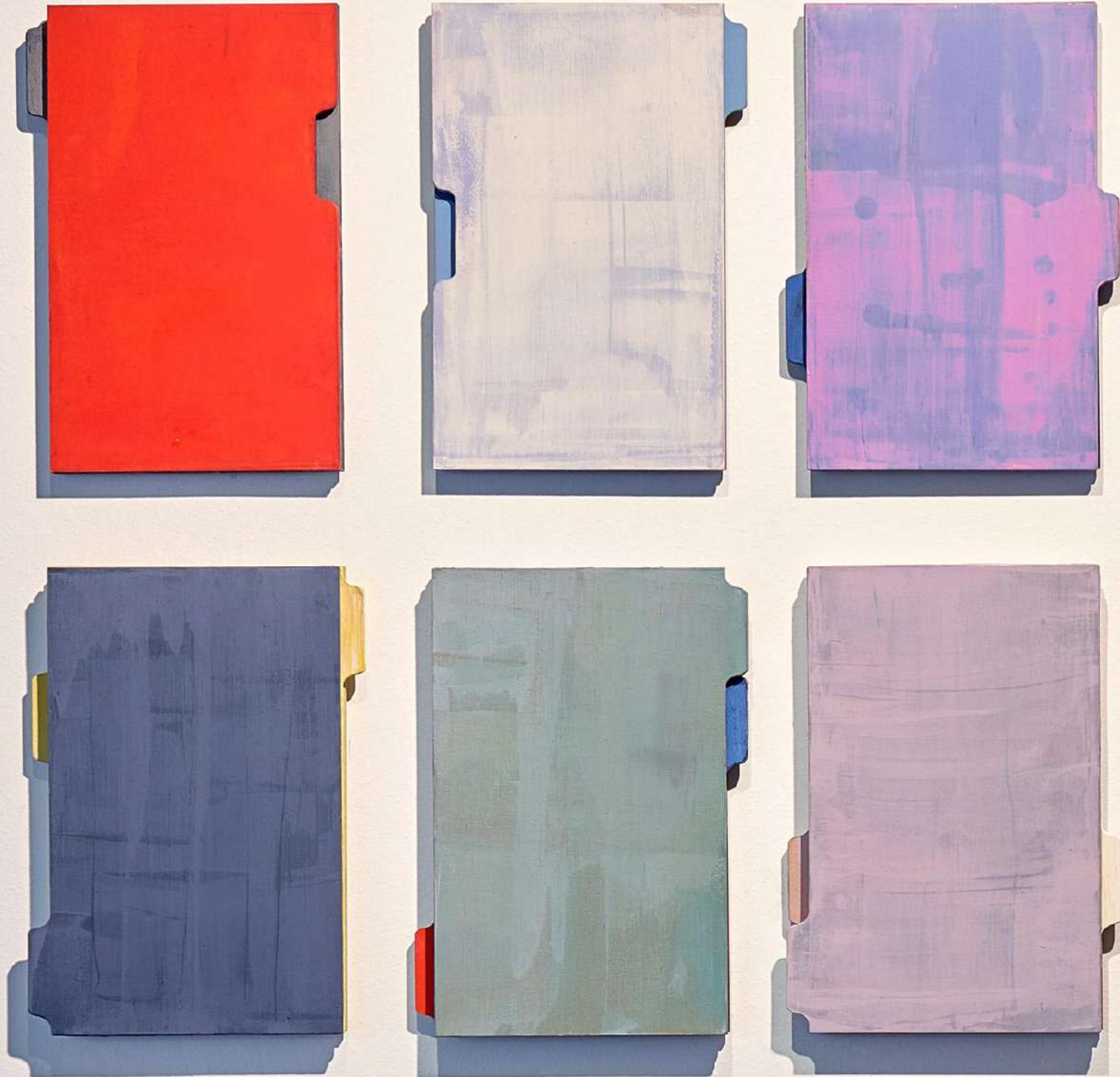
4 studio note on FABRIC for Sophie Germain

In making paintings that are numerically generated I am thinking about our tactile sense of number. When you were young your parents took away your candles and blankets in an attempt to stop you studying at night (Ornes 2008: 14) (Singh 2011: 113). So how we might encounter a sense of number in the dark?

The touch based aspects of counting are often dismissed as a childish inability to take a conceptual leap, but counting on fingers links to the tactile origins of number systems; numbers designated to every finger joint or across the entire body, the notched marking of tally sticks, the tactile registers of knotted string, or the indentations of impressed clay (Ifrah 1998: 3-61).

If you scan along the edges of the prime paintings and locate the position of protruding or inset tabs, the prime number is discernible digit by digit. The enclosed space of each individual digit archives evidence of touch. In the Sibson building install, they take up position next to hand rails, and door handles, brushed past by people on the stairs, suggesting painting that can be handled (p157-163) [see also **GRID**].

(extracts from this studio note are included in *Grid Narrative for Sophie Germain* endnote o)





components for room plan
each 55 x 55 x 22cm
plywood box structure with painted
and scored sections, plywood,
composite board and lino sheets

When constructivist Aleksandr Rodchenko listed the properties of painting in 1919, they were numbered 1:colour 2:form 3:construction 4:faktura 5:materials It is the term faktura that I pause on when thinking about fabric (Rodchenko 1920).

The works are made under the conditions of touch, and are open to being handled. Firstly in the studio as speculative components that build provisional configurations, and then as shiftable units in a space that invite contact. Painting is more usually excluded from the sphere of handleable objects, but the art historical artefact I keep in mind is a painting and also a door or more correctly a shutter, a functional and adaptive structure and surface (picture 2).

In thinking about fabric, and working in the dark, I am thinking about how the work can materially produce a tactile impression of itself or its procedural circumstance. This is thought of as another dependency in the work, and a form of doubling. Interconnectable structures are made from painted and scored sections of a pythagoras theorem diagram, and off cuts from the painting index number system with tabs and insets to slot inside each other.

Returning to faktura as evidence of a worked surface without inferring the gestural signature of an artist. The residue of a process, of handling, is what the surfaces are set up to capture. Rodchenko's dismissal of the brush as the standard application method for picture, turning instead to other instruments that are 'more expedient to work the surface' is something I share (Buchloh 1984:89).

In producing a möbius loop drawing, in collaboration with visitors, direct contact with the work in a state of production was key. The loop was manually fed through a workstation covered in carbon copy paper. As the drawing loop was fed through, carbon transfer marks accumulated through the action of moving the paper, through marking with a scoring tool and through the scuffs and blurs transferred from previous marks. The double-sided nature of a paper roll, twisted to the single sided possibility of a continuous surface were in a material tension. Capturing a hybrid surface, between intention and procedural circumstance, the loop could endlessly circulate, bypassing decision making that was based on ideas of completion or aesthetic judgement.

Production Loop, participatory work - paper möbius loop, 16 m length, carbon coated printing trolley, and scoring tool, made for The School of Beginnings as part of MUSTER STATION at TATE EXchange, Feb 2018



GRID

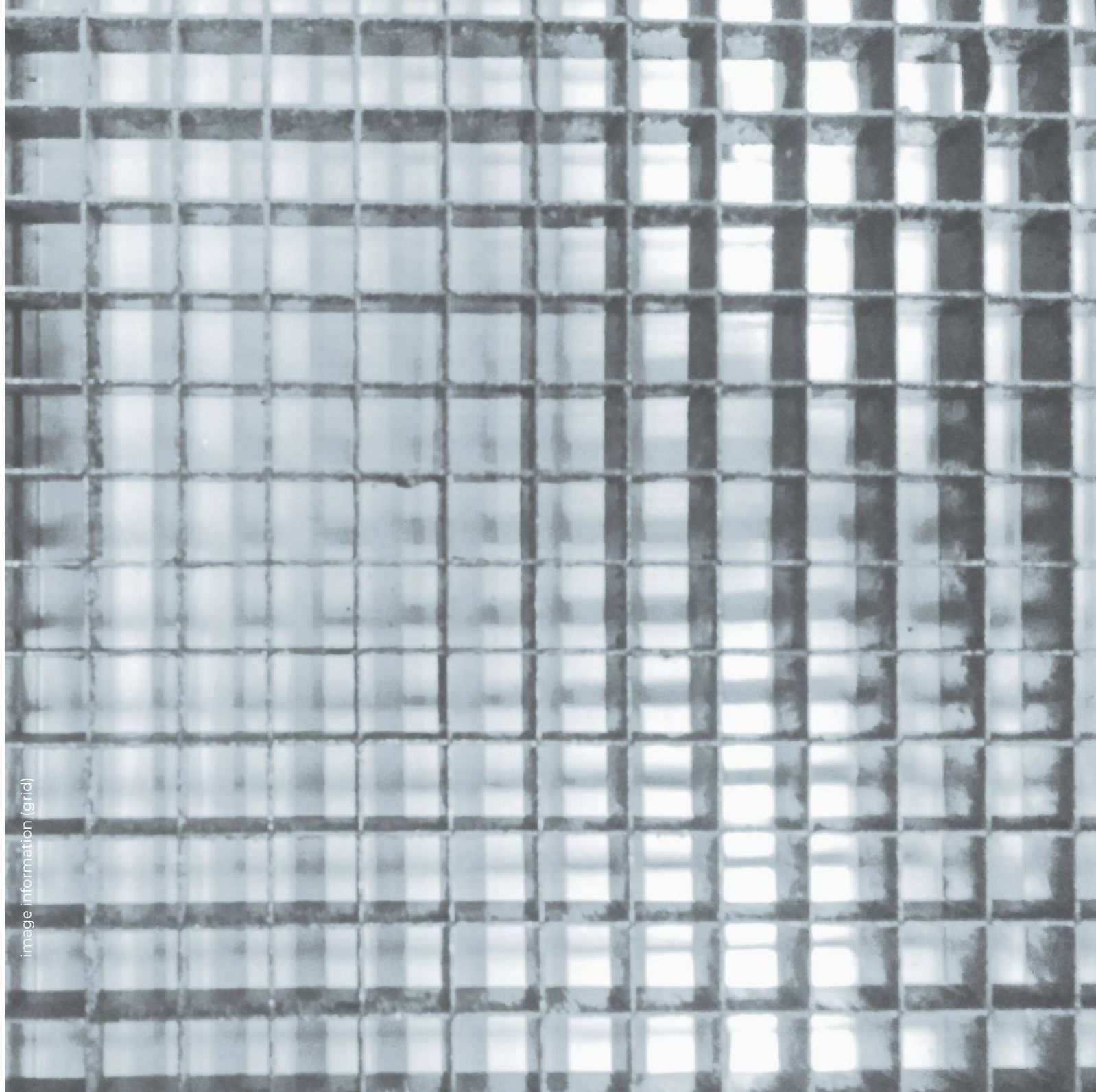


image information (grid)

GRID

The grid restates painting's enclosure of the visual, and in this sense mimics the selective function of attention. The production of the grid requires the precision of focused attention, and in its apprehension it can facilitate both attentional focus and attentional dispersal as it maps a surface edge to edge. In activating the grid within the picture-diagram I propose that it usefully schematises shifting modes of attention that are relevant to contemporary painting, flipping between painting's paired potential for flatness and recession, containment and expansion.

Activating the grid is multi faceted and art historically resonant. The grid offers a structural underpinning in which support and surface are interchangeable; it holds the warp and weft of canvas, the vertical and horizontal axis of stretcher bars, the rectangular format of the support (picture 73). Positioned as a baseline for painting, it might also need to be approached with some caution. The grid has been considered the stripped back standard bearer of modernism and abstraction, a marker of 'modern art's will to silence' and its 'exclusive visuality' (Krauss 1985: 9). In this context it is anti compositional and non objective, pushing apprehension to the surface. and refusing illusion. Painting's reductive impulse adheres to the logic of this version of a grid, and we can see how it steered painting from depiction to abstraction, the plotting of horizontals and verticals that can move from a description of structure and recessional space and spread to become a mapping of painting's frontality (picture 74) .

When a rejection of pictorial illusion shifted in the 1960s to become a rationale for the rejection of painting, and its dependence on the internal relations of composition, it was on the basis that illusion is painting's unassailable characteristic. An intolerance for the spatial

inferences of painting was described bluntly by Donald Judd 'as one of the salient and most objectionable relics of European art' (Judd 1965: 184). The grid, for all its concreteness, doesn't prevent this; for the horizontal and verticals mobilised to offset a spatial reading cover up the grid's other capacity; to swivel into the contracted space of perspective, orchestrated by vanishing point and horizon line.

What does the grid's facilitation of both flatness and recession, surface and illusion, have to do with attention? And what do assertions about the grid offer the picture-diagram? A photo of Eva Hesse's studio table from 1967 shows a grid marked across its top. The table is full of studio and domestic ephemera, simultaneously casual and staged, each item co-ordinated by the logic of the squared divisions and also at odds with it (picture 71). The gridded studio table reminds me of the drawings made by Hesse in which she marked a circle in ink within squares of graph paper, the idiosyncrasy of each hand drawn loop made more apparent by the grid's containment (picture 72). With these formats in mind, the rectangle of table and paper subdivided, I also approach the grid as a measured system that can make apparent what is other to it.

Hubert Damisch reminds us clouds escape the grid (Damisch 1972). Damisch's engagement with perspective as a system of spatial coordinates brings to the fore what can't be held by it, and for Damisch this is a paradox that points to painting. Describing the perspective box constructed by Renaissance architect Filippo Brunelleschi to pictorially represent The Baptistery in Florence, Damisch returns to the point where the geometry reaches a limit and Brunelleschi slots in a mirror rather than attempting to plot the sky. As Damisch describes it 'cloud introduces something which has no place in painting but at the same time is painting. So painting is itself defined within this type of paradox' (Bois, Hollier, Krauss and Damisch 1998 : 9). This slippage and contradiction is part of what the grid

makes visible in the picture-diagram.

The gridding of perspective is often seen as a marker of a rationalisation of vision, an enactment of visual control offering a stable and human centred configuration of space. In its basic form it assumes an immobile and monocular viewer. In this sense perspective's gridding facilitates theoretical space rather than experiential space. The unified perspectival system formulated by Brunelleschi and others in the Renaissance is dependent on the logics of the grid. Innovations in pictorial space making and innovations in the study of optics were closely tied together during this period, and there was a compatibility between painting's desire to depict space and visualisations of the mechanisms of perception. In the early twentieth century Erwin Panofsky pointed out the determining implications of a gridding of our perceptual experience, that 'In a sense, perspective transforms psychophysiological space into mathematical space. It negates the difference between front and back, between left and right, between bodies and intervening space' (Panofsky 1927: 30-31). In this sense, the body can be thought of as both at the centre of a perspectival grid and removed by it.

Erwin Panofsky influentially called perspective a symbolic form (Panofsky 1927), and negotiating between the pragmatics of spatial mapping and the social and cultural conditions it might construct are relevant to the selectivity and coherence that attention has been asked to assert. In this formulation, the conscious process of paying attention holds back 'the confused, dazed, scatterbrained state' of distraction (James 1890: ch 11). When George Berkeley's theory of vision of 1732 depends on imagining a 'diaphanous plane erected near the eye and perpendicular to the horizon' we are being asked to understand our perceptual experience through the logics of pictures, the selectivity of the framing rectangle and the stability of a vertical plane (Crary 1992: 55). In *Della Pittura* of 1435,

Leon Battista Alberti used the analogy of an open window to describe how a projection of space and subject can be constructed in painting. Like the implied transparency of Berkeley's window view and the sheerness of a diaphanous plane, Alberti evokes the experience of looking through a plane rather than being caught on its surface. This is practical advice for painters and a picturing of vision by Alberti, and it marks a tension between image and the material circumstances of image production for painting; repressing materiality in the service of semblance, negotiating the consequences of a spatiality that occurs by simply drawing a rectangle on a surface (picture 75)[see also **FABRIC**] (endnote 1). This also crucially marks a demarcation between picture space and its viewer. As Jonathan Crary describes, 'in ordinary visual experience one is seldom conscious of the ways in which the body is continually present but effectively deleted out of one's visual perceptions. Classical representation, from Alberti onward, defines itself by the fundamental subtraction of the body from the constitution of a visual field and by the related intellectual distinction between observer and observed' (Crary 1999: 220).

The critical emphasis on opticality that painting underwent at the end of modernism also follows this trajectory of isolated vision. Like the perspectival grid, the modernist grid can be thought of as positioning the perceiving subject at its centre, while also negating the body, leaving only the eye (Krauss 1997: 90-94) [see also **APERTURE**]. When Rosalind Krauss, writing in 1972, articulated modernist painting's rejection of spatial perspective, she identified it in terms of a rejection of determinacy. Perspective was, according to Krauss, 'the visual correlate of causality that one thing follows the next in space according to rule'. However, as Krauss also pointed out, another system of causality was even more firmly encapsulated by modernism, the temporal perspective of historical precedent by which works are assessed. Painting's invoking of history is described by Krauss as a 'perspectival armature', one through which

'modernism's belief in the "reality" of a certain version of the past has led it to construct (in its coercive sense) the present' (Krauss 1972a: 953 -956). Stephen Melville and Margaret Iversen take an overview of different trajectories for our reading of perspective from within critical discourses drawn on by art history in a chapter called *The Gaze in Perspective* from the book *Writing Art History*. Via a close reading of Maurice Merleau-Ponty, Jacques Lacan and Hubert Damisch, they examine how concerns with vision and the relations between a work and its viewer have been entangled with assessments of perspective (Iversen & Melville 2010: 109-128). We encounter the gridded system of perspective as an imposition on our lived experience of space and as a distancing system that disrupts bodily continuity with our environment via Merleau-Ponty; we understand that the privileging of the one who looks within a system of perspective can be reversed and negated via Lacan; and we see how perspective can in fact reveal a limit to vision rather than signalling command over a stable visual field via Damisch. For Melville and Iversen it is the intersections between discourses on perspective and discourses on the gaze that are of interest, and particularly how a perspectival system can in fact prompt diverging experiences of the conditions of looking [see also **PROFILES**]. They end within a series of questions that track the gaze in perspective, through the privilege of point of view, to the experience of psychic and technological artifice that its structures might induce, to a final turn towards 'a picture's opacity or strangeness' that might 'reflect my blindspot and remind me of my own finitude' (Iversen & Melville 2010: 127).

Now within the context of the grid, and its' perspectival shadow, I want to reflect on thoughts raised by the double entry that opens this text. In entry 1, I propose that the selectivity of attention has a close affinity to the framing characteristics of painting, and that painting's hold on attention cannot be viewed in isolation from wider power structures and value systems. This is identifiable within

painting when its discourses are also those of delimitation and exclusion, evidence of Krauss's 'perspectival armature' running through linear and developmental versions of painting's art history. In contrast in entry 2 I put forward the notion that the interplay between tactile and visual prompts of painting offers a connectivity and responsiveness, and I lobby for the emotional cadence of attentiveness. The optimism of attention as attentiveness and the pessimism of attention vulnerable to manipulation and control both need to be acknowledged and both I propose are capturable by the grid .

My approach to the grid has not found it necessary to mark a clear distinction between the grid of perspective and the grid as it operates within painting as an exemplar of abstraction. In the 1978 text *Grids* Rosalind Krauss does firmly distinguish between the perspectival aspects of the grid and the grid as the relentlessly, persistent form of modern aesthetic production (Krauss 1978: 9). Krauss sees the double potential in the grid on other terms. With the late 20th century tendency to jump to the psychoanalytical, Krauss calls the grid schizophrenic in that it suppresses and masks but also facilitates a split. One split is between the concrete, material here and nowness of the grid and then its call to the infinite. More pointedly, Krauss terms this as a split between the secular and the sacred. As Krauss expresses it, 'The grid's mythic power is that it makes us able to think we are dealing with materialism (or sometimes science, or logic) while at the same time it provides us with a release into belief (or illusion, or fiction)' (Krauss 1978: 15). Krauss then identifies a more general argument about the move art makes outwards into the world or inwards to separate itself off, and how the grid expedites both these centrifugal and centripetal forces (Krauss 1978: 18-22). Krauss's criticism of the grid as a form that appears radical while enabling conventional thinking, that ushers transcendental nonsense back into painting under the guise of rationality is one I have sympathy with. But the distinction I would make is on attentional grounds. The shifts between containment

and expansion, centrifugal and centripetal tendencies infer a connection to attentional modes, and particularly the shifts we make between focused and dispersed attention. The 'bi valent structure (and history)' of the grid as Krauss describes it doesn't seem necessarily based on a suppression as Krauss characterised it but I contend it is evidence of the modulations in attentional faculty. The suppression I would identify is of one attentional mode by another, either the over-valuing of focused attention to the exclusion of dispersal, or the counter position that promotes the experience of dispersal at the cost of focus. Both are a narrowing of attentional experience, and both are based on a fiction of perceptual and cognitive stability [see also **APERTURE**] [see also **PROFILES**]. In the way that I don't find it necessary to demarcate the perspectival grid from the modernist grid, I also don't find it useful to underscore a division between a concrete encounter with surface and the inference of infinite expansion. Krauss might say that is typical of a painter, as the mythic aspect of the grid allows for thinking in both ways at once (Krauss 1978: 21-22). But my position is not based on a suppression of a contradiction, rather it is based on an understanding of the fluctuations and multi modalities of attention.

My proposition is that the grid's capacity to hold both recession and flatness, expansion and containment, can be more fully addressed by understanding the differences and exchanges between attentional modes, and the shifts in the spatial and psychological orientation of a viewer that are also taking place. In the mid 1960s Anton Ehrenzweig argued for the importance of dedifferentiated attention as opposed to gestalt based theories of art that focus on the distinction between figure and ground (Ehrenzweig 1970: 35-45). The current cognitive and neuropsychological term for this sort of defocus is distributed or dispersed attention and it has been seen to facilitating more or less assessments of properties in a visual field (Bajjal et al 2012), for example processing the dominance of one colour over another, capacities significant in compositional decision making and comprehension. For Ehrenzweig, the hierarchy

inherent in the spatial positioning of a figure ground split was not a helpful model for the artist who wants to consider the totality of a work. Ehrenzweig proposed that a scattered attentional mode is able to facilitate ambiguity, holding the potentials of both figure and ground without a fixed resolution (Ehrenzweig 1970: 35-45). A more recent claim for the significance of distributed attention follows a research strand within philosophy of perception that examines aesthetic experience through an engagement with current neuropsychological research. Bence Nanay's claim is that a characteristic of aesthetic experience is the mode of attention deployed, so although focus is potentially on one object, attention is scattered among the various properties of that object (Nanay 2016: 96-118). Nanay connects this to distributed attention, though others have pointed to the rapid and sequential reallocation of attention as a closer match to aesthetic experience (Fazekas 2016: 66-87).

My thoughts on these distinctions are unargumentative in terms of promoting the value of one of these attentional modes over another. I can support Ehrenzweig's call for the potentials offered by dedifferentiated attention, to compensate for the dominance of gestalt priorities to resolve a visual field, and I am interested in considering whether aesthetic experience might be supported by distributed or sequentially reallocated attention. What is more significant to my position is that it is clear that a range of shifting attentional modes operate during the apprehension of any work of art. What is also clear is that the valorisation of aesthetic experience within certain art discourses have often narrowed the scope of attentional experience to be valued in consequence. From Kant to Nietzsche, the minutiae of assessing the attributes of distance and disengagement, the definitions of disinterestedness, construct the attributes of aesthetic pleasure on very limited grounds (Branco & Hay 2017). Meeting the requirements of an endorsed attentional experience has the sense of chasing shadows and getting lost in clarifications. More generally we have to contend with how distributed

attention might be valued in one context as the facilitator of aesthetic experience and dismissed in another as daydreaming or inattention.

So within the picture-diagram the grid facilitates an interplay between attentional modes, acknowledging that attention is shifting, and episodic. The mathematical associations of the grid also opens onto a more complex understanding of attention, organising two numerical abilities within its measured spacing. The process of counting requires us to select and individuate distinct items serially, and we achieve this through the deployment of focused attention. In contrast, distributed attention supports statistical assessment by the advantages of a scattered overview of overall characteristics (Chong & Evans 2010) (Baijal et al 2012). Our sense of number in the visual domain is now understood as an aggregate between these two distinct processes, enumeration and estimation, supported by oscillations between focus and distributed attention (Chong & Evans 2010: 634–638). Some researchers take this attentional distinction further and make a connection between different attentional modes and mood, with distributed attention contributing to our sense of happiness (Srinivasan et al 2009). Ehrenzweig's interest in undifferentiated attention or Nanay's research into the attentional conditions of aesthetic experience become more nuanced by this potential relationship between modes of attention and well being.

The experiential consequences of distinct and shifting attentional modes identified through the grid connect to questions within philosophy, psychology and cognitive science about how awareness is constructed. Jesse Prinz positions attention as the cognitive gateway to consciousness, framed as the process that makes a representation available to working memory, or more fully that attention allows the integration of the multiple properties of a stimulus perceived with the particularity of point of view to contribute to

conscious experience and recall capacity (Prinz 2012: 93). The grid as a problematic but persistent schema for painting and perception is built by a point by point assessment of the visual field that we understand is coordinated by point of view, directly experienced or imagined, constructed or uncovered. Attention's role in enabling perceptual states to become conscious (Prinz 2012: 89) and the shifts between focus and dispersal that contribute to our attentional experience point to the cognitive complexity that the grid might need to navigate.

Returning to the grid as a set of inscribed and conceptual coordinates for painting, the close ties between attention and other cognitive processes are kept in mind. Grid can be woven into an assessment of surface, while also projecting painting's most committed illusions. As a component in the picture-diagram, the grid has both an expansive and limiting function. It is imagined as both a substrate and an overlay. As overlay, the grid might be experienced as a mechanism of constraint and control. As substrate, the grid might point to an underlying framework or unassailable characteristic. Overlay and substrate are of course inter dependent propositions, and they remain imagined rather than actualised within the open schema of the picture-diagram. The grid's repeated divisions tabulate perceptual count and estimation, and edge to edge they coordinate shifts between dispersed and focused attention.





Ulam Spiral for Sophie Germain
31 composite panels
acrylic on laser cut mdf
each 125 x 203mm, depth various

Installed in the Sibson Building
School of Mathematics, Statistics and Actuarial Science,
University of Kent, 2022 as part of the installation
Grid Narrative for Sophie Germain

5 studio note on GRID for Sophie Germain

I have been marking Sophie Germain primes on an Ulam Spiral, a grid visualisation of the occurrence of primes, both plotting and predicting their frequency.

In the foyer space of the School of Mathematics, Statistics and Actuarial Science at the University of Kent, a section of an Ulam spiral is imagined caught by the curved wall. The location of Sophie Germain primes find their position amongst the architectural detail of stairs and doors and signage. Starting at the apex of the curve the Sophie Germain prime count starts, 2, 3, 5, 11, 23, 29, 41, 53, 83, 89, 113, 131, 173, 179, 191, 233, spiralling outwards and escalating quickly in digits and spatial position, with primes falling outside the limits of the architecture to be imagined extending onwards into space.

Ulam Spiral for Sophie Germain
School of Mathematics,
Statistics and Actuarial Science,
University of Kent, 2022



In 1963, mathematician Stanislaw Ulam, bored in a lecture, started to doodle a number grid in a spiral format. Starting with 1 at the centre, and counting up in an anticlockwise direction, Ulam marked prime numbers as he went along with no real purpose other than filling time.

As the grid and the marking built up, Ulam noticed that primes were more densely present in certain diagonal lines. Rather than a random scattering of marked and unmarked squares, the marking appeared composed, and this phenomena increased the larger the grid grew. Ulam understood that these grid lines correspond to quadratic polynomials, and that certain of these algebraic expressions are more likely to return a high count of prime numbers. The predictive potential of the spiral grid demonstrates the more likely search paths for new primes (Gardner 1964: 122). Ulam's doodling, simultaneously attentive and inattentive, made this visually apparent.





School of Mathematics, Statistics &
Actuarial Science Reception

Number Key - 0123456789 - Sibson

10 single panels
acrylic on laser cut mdf
each 125 x 203 x 3mm

The number key outlines the shapes of each index card format digit by digit, 01234 above with 56789 below. This tight grid serves as a point of comparison to the dispersed gridding of the Ulam spiral on the curved wall of the Foyer. Both engage with the conventions of abstract painting while very directly fulfilling a representational function.



details from **Grid Narrative for Sophie Germain**

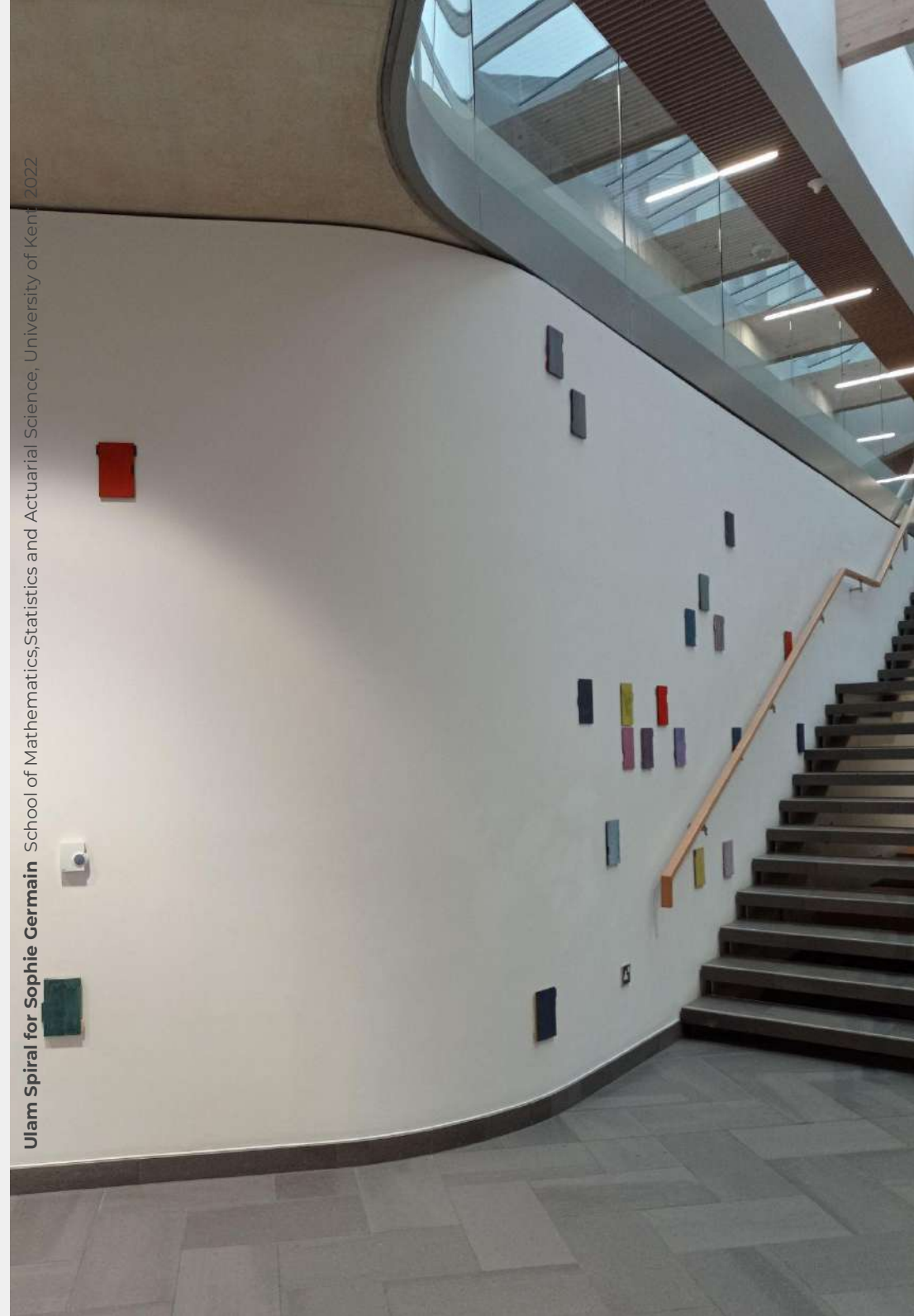
The location of Sophie Germain primes find their position on the grid format amongst the architectural detail of ceiling edge, stairs, skirting, and signage.

In the 50 years preceding Ulam's distracted focus in a lecture, painting's reductive impulses have often been worked out through the logic of the grid. For painting the grid is most often positioned as the exemplar of abstraction, as non representational, anti compositional, mapping the surface of painting back onto itself (Krauss 1985: 10). In contrast, the grid of an Ulam spiral lays out relationships. It is generative and directly representational. It shows something which would be more difficult to understand without its visualisation.

In the Sibson building and in the practice more generally, the self-definitions of painting intersect with the communicative necessities of a number system.

(extracts from this studio note are included in the leaflet accompanying 'Grid Narrative for Sophie Germain' - endnote 0)

Ulam Spiral for Sophie Germain School of Mathematics, Statistics and Actuarial Science, University of Kent 2022







PROFILE

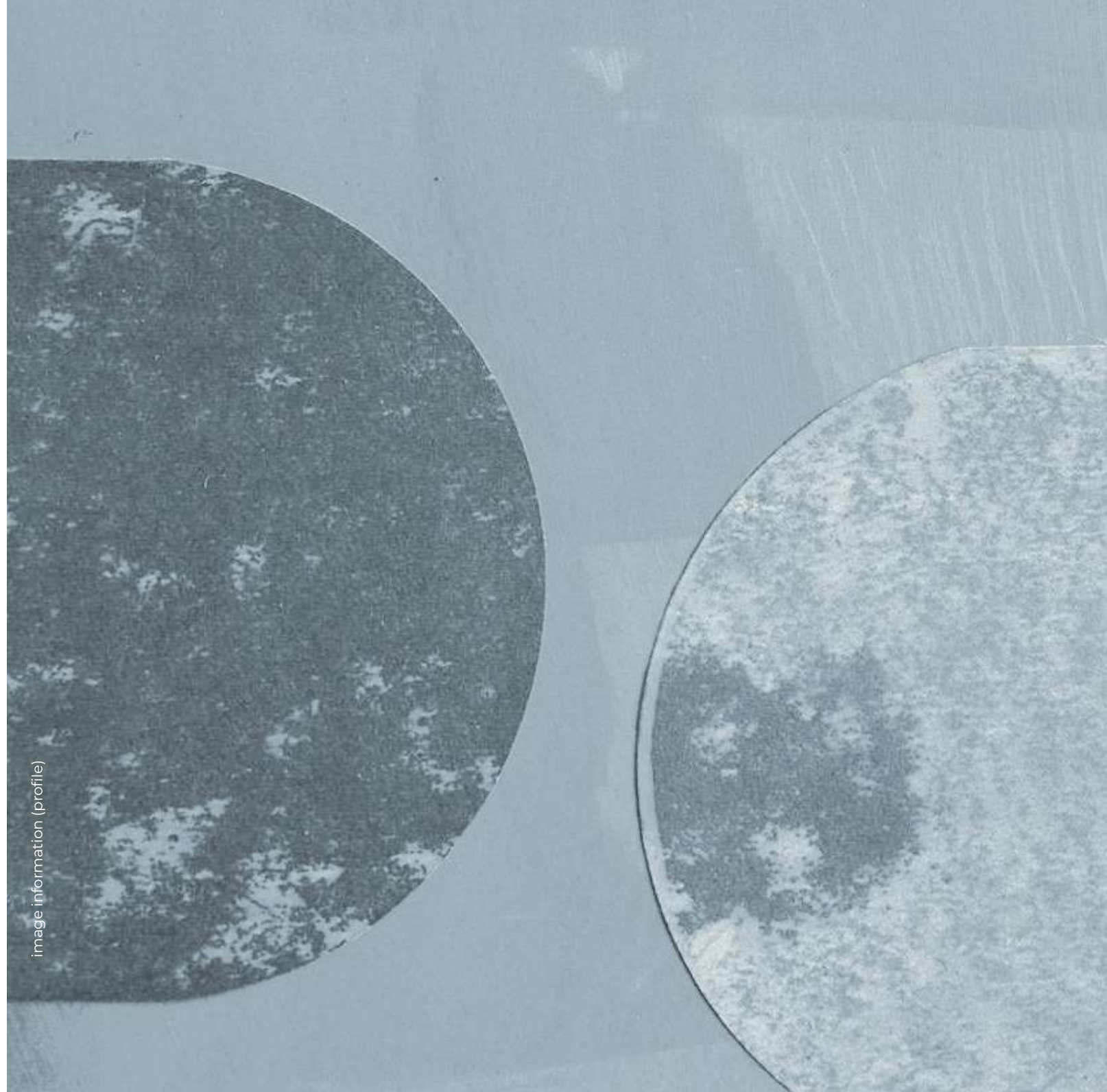


image information (profile)

PROFILES

A profile to profile composition directs thoughts on the orientation of attention, and the orientation of a viewer in relation to painting. The profile is an instance of pictorial specificity that can still set the tone for alignments between viewer and viewed outside the pictorial conventions of representation. I use the term alignment positionally, so how a work might configure where a viewer places themselves, and alignment in the sense of an imagined reciprocity between a work and its viewer. Both assert the attentional attachment a work might prompt, the spatio-temporal and psychological dimensions of attentional experience that can be in correspondence with each other. This moves from a viewer's response to a depicted profile, and the counter positions of facing or $\frac{3}{4}$ view, to a consideration of how painting might present profile or facing characteristics more generally. The profile gathers associations of interiority and absorbed attention, but it can also act as an indicator of action and interaction. In this oscillation between an individual and a collective response, between still and moving, the profile operates within the picture-diagram with an expansive remit.

Painting's figurative art history has enabled the conditions of viewing to be in some sense pictured, and in that picturing the attentional response of a future viewer preempted. I am approaching this pictorial past as a sort of primer or set of precedents that can still operate spatially and psychologically even when figurative depiction has fallen away. Margaret Olin, responding to Alois Riegl, describes the psychological exchange between a work and a viewer in these terms, 'The work of art does not depict a relationship, but performs it with the beholder. Even if not palpably "real", an object convincingly plays out its relationship with a beholder if it pays

attention to that beholder, and acknowledges its own existence as a subject' (Olin 1992: 168). This is more widely an Hegelian assessment of painting in which the viewer is 'in it from the beginning, is counted in with it' (Iversen & Melville 2010: 90).

The proposition that painting pays attention, that it might perform a relationship, rather than depict it, is part of discourses that personify painting and give it a strange sort of agency. In response to this personification, the profile in the picture-diagram is positioned as an alternative to facing. Facing has been an active term in painting discourse, particularly in the medium specific priorities of modernism, and along with the partner term frontality describes painting as a surface presented conventionally to an upright viewer, and one that a viewer aligns their body and their view to. This has been clarified by Rosalind Krauss as a constraint of pictorial space, 'that which cannot be entered or circulated through; it is irremediably space viewed from a distance, and is therefore eternally resigned to frontality' (Krauss 1972b). The related term faciality gives a wider sense of the socially conditioned aspects of our engagement with cultural artefacts that present a front, whether that is a building, a piece of furniture, or a painting. As critically activated by Gilles Deleuze and Félix Guattari, faciality points to how 'certain assemblages of power require the production of a face', a sort of blank alignment that signifies control (Deleuze and Guattari 1987: 195). In a requirement to be faced, the asserted 2 dimensionality of painting can be said to limit the scope of spatial approach. Krauss's phrase 'resigned to frontality' expresses this physical limitation as a frustration, but we can also see in it an assertion of power, and a stratagem of attentional capture.

The alternative of the profile alignment does not necessarily escape the frustration of physical limit, or the implications of control that we might associate with frontality, but it does signal a displacement and unresolved alignment between work and viewer which I

propose gives it a criticality, discursivity and flexibility. Again as characterised by Krauss, the pictorial offers space that cannot be physically entered, but one might retort it offers space for wandering in the mind and of inviting and visualising another's point of view. I propose the profile as a picturing of attentional attachments and imaginative alignments that doesn't break down into an opposition between the private and individualised response versus public and collective experiences.

The complexity of the profile and its evocation of attentional attachments and displacements obliquely revisits an argument about the mode of engagement we should seek from art, an argument that had considerable heat in the 1960s for painting, and still has relevance to how contemporary painting is positioned. The lines of this argument were drawn particularly clearly by Michael Fried and Donald Judd, with Fried valuing an experience of presentness achievable through the limitations of painting, whereas Judd prioritised actual space over the illusions and limitations of the pictorial (Judd 1965: 181-189). The lines get drawn again in a more contemporary moment when painting is valued or dismissed as an internalised attentional mode or deemed unable or unwilling to meet the priorities of participation or social engagement. We might visualise this as the difference between a viewer whose alignment to a work has been fixed by the need to face it, and a viewer configuring and reconfiguring their alignments as they move through a space. For Fried the face to face encounter, was an articulation of visual immediacy, characterised by 'intensity, instantaneousness, facingness, strikingness' (Fried 1996: 404-405) , and backed by assertions by artists like Frank Stella whose paintings claimed to operate through the high impact of a one hit look (Krauss 1993: 6-8). Fried's claim for facingness however was in part retrospective, uncovered by research into 18th and 19th century French painting that he turned to after the tide of practice

and critical focus moved away from the conditions of viewing that Fried had lobbied for at the height of modernism (Fried 1967).

Fried's contentious opposition to the emergence of minimalism on the grounds of its dependence on a spatial and durational interaction with a viewer still provokes a divisiveness within art discourse, pitting the interiority of an individual response against the collective and participatory. Fried's articulation of facingness has a double move of acknowledgment and negation of a viewer. Again using art historical precedents from 18th and 19th century French painting to uncover the relations set between work and viewer, Fried describes a peculiarity of painting in these terms, 'the recognition that paintings are made to be beheld and therefore presuppose the existence of a beholder led to the demand for the actualisation of his presence: a painting, it was insisted, had to attract the beholder, to stop him in front of itself, and to hold him there in a perfect trance of involvement'(Fried 1976: 103). Fried continues, 'it was only by negating the beholder's presence that this could be achieved: only by establishing the fiction of his absence or non existence could his actual placement before and enthrallment by the painting be secured'. Painting was required, according to Fried, 'to face the beholder as never before' (Fried 1976: 226) while also denying or displacing the social qualities that facing might imply in order to facilitate an absorbed contemplation and permission to look. This internalised engagement or 'perfect trance of involvement' was expressed by Fried in terms of presentness in his 1967 Artforum article *Art and Objecthood*. Writing against a theatricality Fried identified in works that directly acknowledged and were explicitly dependent on a viewer, Fried's call for presentness connects to Conrad Fiedler's much earlier call for an aesthetics of presence, and a dream of unfiltered visual experience (Fiedler 1876: vi) (Fried 1967) [see also **APERTURE**]. Both Fiedler and Fried's positions might be critiqued in terms of a

privilege inherent in the disembodied and distanced experience of aesthetic contemplation. In the *Art and Objecthood* essay Fried railed against a theatrical sensibility he attached to minimalism or literalism as he insisted on calling it. Fried's terminology is extraordinarily moralistic and condemnatory, 'the sensibility or mode of being that I have characterized as corrupted or perverted by theatre' (Fried 1967) and recent research by Christa Noel Robbins has uncovered a more worrying agenda behind Fried's emotive use of language. In a series of letters written to the editor of *Art Forum* in the run up to the article's publication, Fried's refers to theatricality as a 'faggot sensibility' and the narrowness and extreme bias of Fried's aesthetic register is exposed (Robbins 2018: 429). Fried's use of homophobic language is for me a clear example of the undeclared exclusivity and conservative social and cultural contexts that painting discourse has often been conditioned by.

In an action of turning away and turning towards, the profile offers an alternative to the assertively dogmatic, confrontational, self absorbed, moralistic and narrowly controlled mode of attentional encounter that Fried so problematically proposed for painting and configured through the positionality of facing. I propose that the alignments of profile, as a component in the picture-diagram, offers a radical alternative, one that in turning away enables resistance to imposed and narrowly defined modes of encounter, and one that in turning towards facilitates openness, acceptance and responsiveness.

What else does the profile offer painting that might complicate its attachment to the face to face encounter? Art historian Meyer Schapiro has identified frontal and profile depictions as symbolic forms. His characterisation of the profile is through distance and

autonomy, a body in action and independent from a viewer. Schapiro's makes the analogy to an intransitive state, as when a verb needs no object to complete its action but is fully realised in its relation to the subject. For Schapiro the profile is 'like the grammatical form of the third person, the impersonal 'he' or 'she', with its concordantly inflected verb' (Schapiro 1973: 38). This sense of enclosure is explored in a 1988 paper, *Women in Frames: the gaze, the eye, the profile in Renaissance portraiture*, by Patricia Simons. Simons positions the profile as a strategy within the display culture of the Renaissance, in which a female face is made available to view as an 'ordered, chaste and decorous piece of property' (Simons 1988: 7) (picture 76). At first this indicates a potentially problematic aspect of the profile, one that facilitates the objectification of the female subject by a viewer unopposed by the face to face of a returned look. This availability to view that the averted eyes of the profile might bring was also recognised by artist Barbara Kruger in the early 1980's when she presented a profiled image of a woman paired with the text 'Your gaze hits the side of my face' (picture 77). Like Kruger, Simons is informed by gendered theories of the gaze, but Simons also points to another aspect of the profile format that simultaneously resists this objectification. Although the profile constructs a type, Simons sees it in positive opposition to a characterization of the female in Renaissance literature as irrational and inconstant, and therefore could be said to be a sign of resistance. For Simons the profile is 'ordered, constant, geometrically proportioned' (Simons 1988: 13-15) and like the stylised stone profile that Kruger chooses for her work of protest, the gendered gaze meets resistance from the profile's closed autonomy.

But how can the closed autonomy of the profile navigate between the individual and the shared? Alois Riegl's term attentiveness had ethical hopes for the basis of the relation between a painting and a viewer. Conditioned through the outward facing compositions of

Dutch group portraits, attentiveness described an attitude to the world as well as a response to painting that is relevant to the profile. Framed as 'an ethics of beholding', that combines both passive and active attributes, attentiveness in Riegl's terms indicates an adaptive responsiveness and dependence between a work and its viewer, without imposition or design (Iversen & Melville 2010: 91-96). Riegl made a distinction between works with internal coherence and works whose coherence came through a correspondence with their viewer. This internal to external coherence is exemplified by the collective gaze of the Dutch tradition of group portraits, and picturable by a general attitude of facing. But this configuration of facingness has a very different sensibility, one based on acknowledgement, to the one identified by Michael Fried. The group are internally unified by what Margaret Olin calls their 'attentive bond' (Olin 1992: 158) but also externally open and dependent on a viewer, as when a figure rises from his chair as if to include the viewer in Rembrandt's 1662 *Syndics of the Drapers' Guild* (picture 78).

The collectivity of the syndics demonstrates what can be described as joint attention. Joint attention is a term used by psychologists to indicate an important developmental marker. From 9 months children learn to follow a gaze, and so share a point of reference with another. This joint attention can be thought of as a sort of emotional alignment and is a pre linguistic aspect of social cognition. It indicates a three way configuration, so rather than the pairing of subject and object we see a triadic relationship in which the attention of two subjects affects how each considers the object. Joint attention is understood to be an important precursor to theory of mind in childhood development, the ability to construct and co-ordinate internal representations that can imagine another's experience (Mundy et al 2007) (Charman et al 2000). I propose that the directive potential of the profile facilitates an imaginative

engagement that can be understood in terms of joint attention, opening up the social dimensions of how alignments and reciprocity between a viewer and a work might be understood.

Yves Citton in *The Ecology of Attention* describes joint attention as 'the shared feeling of a co-presence that is sensitive to the emotional variations of the individuals involved' (Citton 2017: 85). Joint attention depends on a shared attentional experience rather than dominance of one directed gaze over another. It sees the alternation of roles, for example between speaker and listener (Citton 2017: 18). Citton outlines the need for a change of emphasis from the collectively directed attention of en masse enthrallment, spectacle, and consumption that fuels an attention economy. Rather the hope is to identify the ethical potential in attention's social dimension, to participate in a 'politics of care' (Citton 2017: 111). The term attention carries with it this implication of care and concern (Citton 110-116) and the quality of paying respect 'directed towards another' (Olin 1992: 165). As Margaret Olin outlines in terms of Alois Riegl's configuration of attentiveness, 'Riegl discussed the relationship with the beholder as the ethical purpose of art, seeking to defend the close participatory relationship between the beholder and the work in certain artistic practices against those who would dismiss it as theatricality' (Olin 1992: 156). Olin also points out that Riegl's idea of attentiveness was based on a view of attention as the means of subject-object distinction, on the assumption of a unified self and a stable and objective world (Olin 1992: 22). If attention produces self awareness, and we have seen the role it plays in consciousness (Prinz 2012), then we might also see how it 'arises simultaneously with sympathy' and through that 'attention acquires an ethical dimension' (Olin 1992: 162). It is here that the profile reenters with a quality of responsiveness and care for others.

An aspect of a contemporary attentional experience, characterised by Linda Stone as the always switched on, always scanning state of continuous partial attention seems an unlikely link with Riegl's early twentieth century priorities of attentiveness (Stone 1998). However the idea of continuous partial attention as an adaptive attentional mode is taken up by education theorist Cathy N. Davidson with a much more optimistic sense of possibility. Davidson views it as a 'digital survival skill' but one that moves us towards the collective and communal aspects of attention that Riegl would have felt familiar with. As Davidson describes, 'In our global, diverse, interactive world, where everything seems to have another side, continuous partial attention may not only be a condition of life, but a useful tool for navigating a complex world. Especially if we can compensate for our own partial attention by teaming with others who see what we miss, we have a chance to succeed and the possibility of seeing the other side - and then the other side of that other side' (Davidson 2012: 287)

Contemporary painting usually finds itself positioned outside any sense of collective encounter or direct participation. Contemporary art is fairly dominated by participatory practices but the definition of participation is quite narrowly demarcated. Writer and artist filmmaker Morgan Quaintance has called for a widening of our view of participation in response, in terms that I would say argue for the inclusion of attentional attachment as a form of cognitive participation. Quaintance identifies 'a physical bias' in participatory art discourses that makes an easy connection between bodily engagement and social and political engagement (Quaintance 2012: 7). In a review in *Art Monthly*, Quaintance points to works by artists 'that requires a particular form of intellectual engagement which has been overlooked by readings of participatory art', works that call on 'spectators to use their imaginative capacity' (Quaintance 2012: 8). This position is closely allied with Jacques Rancière's call for viewing to be extracted from its association with a privileged passivity.

For Rancière 'Emancipation begins when we challenge the opposition between viewing and acting..... When we understand that viewing is also an action that confirms or transforms this distribution of positions. The spectator also acts, like the pupil or the scholar. She observes, selects, compares, interprets. She links what she sees to a host of other things that she has seen on other stages, in other kinds of place' (Rancière 2011: 13). So, alongside the reciprocities of joint attention, the ethics of attentiveness and the capacity of continuous partial attention to see the other side, the link between attention and imagination also comes into play. Quaintance continues, 'The essential component of imagination is memory, and so therefore - rather paradoxically - the act of imagining could also be described as the novel reconfiguration of things we have already seen and experienced. In order to provoke that capacity in the viewer an artwork has to remove or conceal part of itself so that the absent feature can be reconstructed' (Quaintance 2012: 8). The turning away of the profile can be considered in terms of a partial absence that allows for imagination, the turning towards of joint attention is a participatory experience, an opportunity to imagine and share another's point of view.

In a recent paper, curator and educator Paul O'Neill has drawn on Riegl's term attentiveness, recognising in it a sensibility attuned to the requirements of socially engaged, participatory and durational practices. Using the model of Dutch Group portraits as Riegl did (picture 78), O'Neil identifies a reciprocity between the structures of a work and its responsiveness to its wider contexts, giving 'equal consideration' to the internal and external dynamics of a work, and between individuals, collectives, producers, contributors, participants and publics (O'Neill 2018). For O'Neill, looking back to a pictorial articulation of social engagement from the 1600's and described in the early 1900's enables him to imagine contemporary participatory and durational practices as a gathering of

relationships and interactions like a sort of group portrait. In doing so it avoids more recent art discourses that can get stuck in a dichotomy between ethical and aesthetic priorities as though one negates the other. For practices operating within the category painting, this social dimension of attentiveness is a challenge to the characterisation of a closed autonomy for painting and the assumed isolation of an aesthetic encounter. This challenge pivots on the resonance of picturing as an imaginative and socially responsive act for both producer and participant. The complexity of the attentional conditions being fought over in the 1960s is worth returning to once more with these further thoughts around the profile in mind. In fact, at the height of or maybe the limit of modernist painting, Michael Fried had noted a counter experience to the attentional capture of facingness that I propose can be thought of in terms of the profile. In an analysis of Kenneth Noland's work he describes the sensation of 'being held' and subsequently being 'moved by a progression or sequence' (Fried 1966: 83). In works by Noland that upended the square into an arrow like trapezoid, or thin horizontally aligned canvases with parallel bands of colour, the internal configuration of the work realigns the viewer to the side. The lateral positioning that is produced anticipates and orchestrates a moving viewer (picture 79-80) that is at odds with Fried's own assertions on the value of facingness. The attentional alignment of the profile and its offer of moving sideways, of joint or directed attention, is a gentle unravelling of the demands being placed on modernist painting from within its own logics.

In claiming the profile as a component for the picture-diagram, I am harnessing a shifting set of associations that are relevant to the radical intent inherent in activating a cut in attention. The profile orchestrates my thoughts on the orientation of attention and the orientation of a viewer. The profile moderates between collective and individual responses, pivoting on the reciprocity and

spatial and temporal exchanges between a work and its participants. The profile is therefore active in how the work configures itself adaptively in space, and how the work might indicate both physical movement and spatial position, while also facilitating the internalised direction of associative links. Via the profile, the interiority of imaginative engagement is considered within the sensibilities of participation.

In naming the components, I moved between profile and profiles, before settling on the plural form. For it is the multiplicity of profiles that offers most traction within the picture-diagram. The profile to profile composition of the Bellini work remains instructive in the deferral of resolved readings, the internalised or externalised modes of the profile keeping in mind multiple points of view. The hinge of the profile is in this turning towards and turning away; in turning towards, the profile is an invitation for joint attention and shared experience, opening up how alignments and reciprocity between a viewer and a work might be understood; and in turning away it is indicative of a movement across or out of the work that points to interdependencies, and an action of non-compliance. The distancing aspects of the profile takes up the question of autonomy and removal with a different tonality to the autonomous work of art that is closed off and authoritative. Rather it points out of itself, displacing the closure of a work through open and circulatory prompts that are cognitively active and in flux.

6 studio note on PROFILES for Sophie Germain

Your use of a pseudonym keeps recurring as a thought that is relevant to profile. The profile deflects a face on encounter. Following the multiple logics of the profile, works are directive, pointing out of themselves to other works, and pointing inwards as prompts for internalised participation. A function of the work is to move a viewer through a space, and to orchestrate pauses and shifts in spatial and attentional alignment. Alignments are temporary, as configurations of work are provisional or spatially responsive. This invited exchange between work and its viewer is built in from the start, partly internalised through imagined and remembered comparisons and partly open to direct reconfigurations.

The cut off sections of the pythagoras theorem panels arise from studio indecision about colour within a settled composition, and act as a prompt for compositional adjustments. They also take on arrow like configurations, like directional signage in the gallery space. Partially framed edges are in part also ledges for other painted panels to cover or amend. This potential for change can circulate endlessly when installed, as it circulates in the studio.



component for room plan
Pythagoras theorem cut wall panel, 55x55cm, section of room diagram, a paper tape wall work



components for *room plan* Pythagoras theorem cut wall panels, each 55x55cm



shift pattern 22 triangles, acrylic on mounting board in various configurations scattered throughout the gallery space for *After Bauhaus* at the Herbert Read Gallery, Canterbury, Oct 2019

The idea of directional signage gives the work a function in the background of a space. In this sense the work is supplementary. A multi component wall work *shift pattern* made for the exhibition *After Bauhaus* consisted of 22 triangular paint processed card shapes. I was thinking about the function and positioning of painting at the Bauhaus and the context of female exclusion. So painters were employed as teachers, and the painting workshop was a resource for experimental research into colour, shape, materiality that would feed into design innovations, but painting itself was not a key output of the school. The positioning of painting also exposed a gender bias that was at odds with the declared progressiveness of the Bauhaus; female students were discouraged from participating in the painting workshop but the grounds for this are hard to clearly uncover. Walter Gropius's belief that women could only think in 2 dimensions while men thought in 3 was the logic for an exclusion from architecture but the basis for the exclusion from painting seem to have been so ingrained in hierarchy as to need no explanation.

shift pattern was made in response to female Bauhaus practitioners whose work I consider a provocation for painting. Firstly the spatial experimentation offered by Alma Siedhoff-Buscher, firstly in her *small shipbuilding game* made from 22 wooden blocks (picture 81-82), and then her modular design for a children's room (picture 21-22) (picture 83). Secondly, the colour shifts and complex spatial materiality of the woven surfaces of Anni Albers, Otti Berger and Benita Koch-Otte (picture 84-86). And so the 22 components of *shift pattern* was count dependent on those 22 wooden blocks of Siedhoff-Buscher's children's game. My intervention into the gallery space was in terms of painting and in terms of architecture, to be installed on the edges, positioned as a marginal practice, pointing to other works, assimilating into the space as a pervasive backdrop.

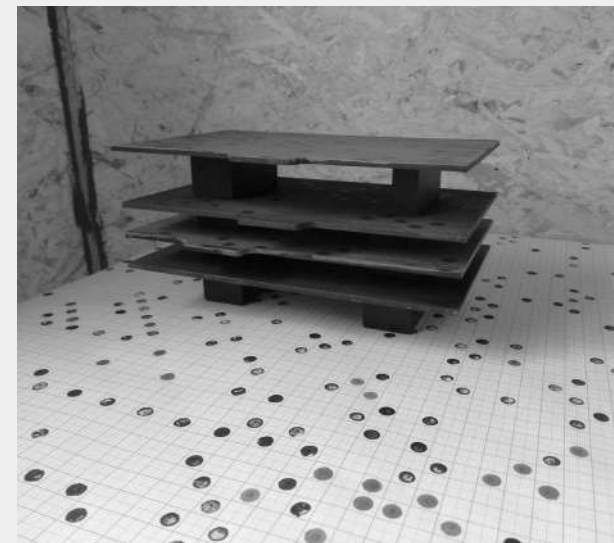
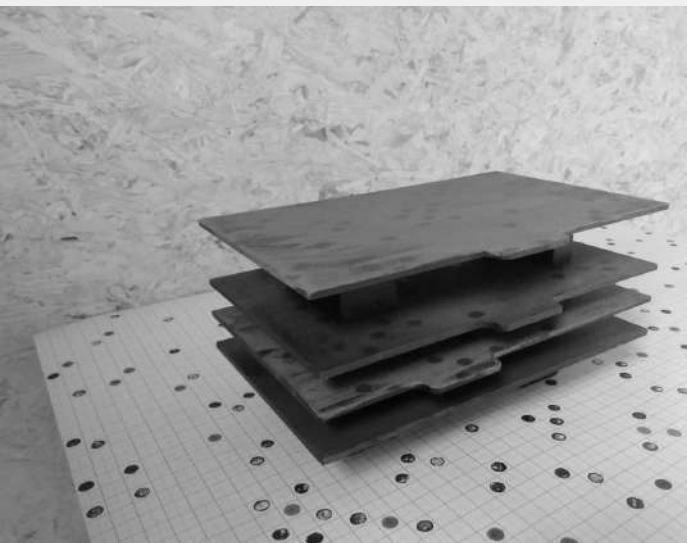


shift pattern 22 triangles, acrylic on mounting board in various configurations



component for room plan

Pythagoras theorem cut wall panels, each 55x55cm, and sections of room diagram, a paper tape wall work



Night Study for Sophie Germain

The components installed in cabin: space for visual and material research, UCA Canterbury in 2019 visualised a night studio for mathematician Sophie Germain.

An early iteration of the laser cut index card panels were constructed as though 2 alternative architectural models of an imagined space, one placed on a table, the other on a high shelf. 2 ulam spiral dot drawings, ink on graph paper, began the process of tracking Sophie Germain primes. One was laid on the table, one was pinned to the wall, each distinguished between primes and Sophie Germain primes by a shift in tonality. 2 wall mounted pythagoras theorem panels, 55x55cm, overprinted with an Ulam Spiral dot grid, were installed on the wall above the table. 1 index card panel, laid on the table, pointed to the centre of the Ulam Spiral. This was before the index panels had been fully articulated as a number system, before the innovation of inverted tabs, but their potential to instigate counting had still been recognised. A printed text *Grid Narrative: Notes for Night Study for Sophie Germain* was pinned to the outside of the wooden building (endnote 5).

afterword

room plan

Reimagining attentional capacities for painting has been facilitated by the conceptual fiction of a picture-diagram and steered by the attentional requirements of an imagined protagonist. A process of reimagining requires points of attachment as it drifts through precedents and possibilities, and the picture-diagram as a practice dependent conceptual schema (picture 87) has proved useful for mapping both a limit and its capacity for extension .

The strategy of the picture-diagram has enabled me to locate and activate a series of generative components for operating critically within painting's contemporary attentional potential. Aperture, Book and Window, Fabric, Grid and Profiles each reflect the selectivity of attention, and each opens up new space for a radical rethinking of the conditions for attentional capture and dispersal that painting can prompt. The complexity of painting's visuality, the mutuality of linguistic and visual responses, the embedded contribution of the tactile, the oscillations of surface and spatial mappings, the exchange between internalised and collective alignments co-ordinate and overlap to reposition the conceptual, structural, material, socially engaged and durational potentials of painting.

Proposing an anomalous art historical artefact as a holding space for painting's future attentional potential, is a provocation to idealised, stable and isolated accounts of attending to painting. The slippage of categories that the Bellini example operates through, its adaptive potential and internalised division that I have conceptualised as a cut in attention, offers a break in continuity that goes far beyond the splicing of picture space. It also assimilates art historical precedent into the space of contemporary production as a pliable resource rather than a burden (picture 88).

The first exchange between the Bellini work and the imagined protagonist is on the basis of narrative responsibility. As an active agent in the research and practice, the specifics of Sophie Germain's history and contribution have conditioned key decisions, but other protagonists are also identifiable. What is important is that the role of the protagonist has a flexibility and an agency as it identifies and radically reimagines restrictive attentional expectations,

This cut in attention has enabled an innovative exchange between painting as a set of demarcated conventions and discourses and the selective and capacity driven limits of attention, and between the expansive and shifting potentials of painting, and the flexible and fluctuating attributes of attentional experience. Working through the multiple modalities of attention moment by moment, I am not arguing for any specific mode of attention as more appropriate to painting than another, Rather the full spectrum of attentional responses are kept in play; the inclusivity of distraction, the collective potential of partial attention, the sensibilities of attentiveness.

As the writing closes the material components of the practice are configuring as a room plan ¶ actualising and imagining space for both a painter and a mathematician. Wall and floor based structures, and space responsive wall works have a shared set of measurements, ratios and compositional strategies. Their status as paintings is interchangeable with their potential as tables, shelves, screens and storage, or their readability as a number system or a mathematical diagram.

The component based nature of the work allows it to adapt to space and also to make space. As a visualisation and a proposition, *room plan* confers with the history of painting and its pictorial and diagrammatic potentials; it both pictures and proposes an approach to painting that is provisional and interdependent. Some elements can be handled and repositioned by visitors, sharing compositional discovery and adjustment,

and moving the work between process, display and storage.

Room plan is a work in progress in the sense of being actively unfinished ¶. When considering the relationship between women and fiction, Virginia Woolf described the need for a room of one's own, and here that room is understood as a cognitive space as much as a physical space (picture 89). The fluctuating and episodic experiences of attention are called upon, inviting attentional attachments that are externally reactive and internally reflective. From moments of extreme focus to the pulls of distraction and the scattering of dispersed attention. The components of *room plan* are approached as attentional co-ordinates that anticipate and reciprocate the spatial and imaginative participation of a visitor, a reader, a mathematician, a painter.

¶ see attached addendum: *room plan* documentation
installed at Studio 3 Gallery, School of Arts, Jarman Building, University of Kent 12 April - 11 May 2022



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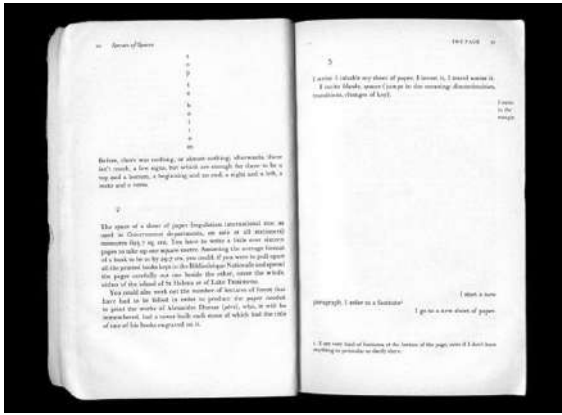
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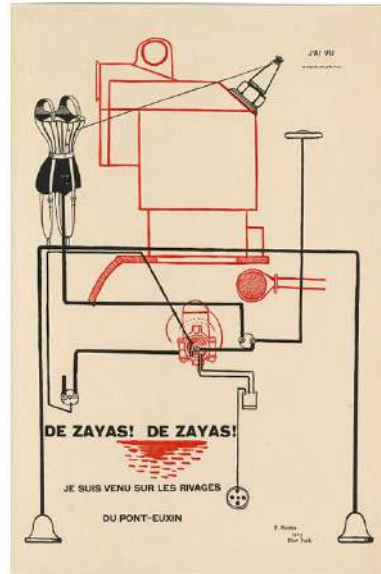
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https://www.huffpost.com/entry/a-defense-of-neuroestheti_b_8253078?quccounter=1

picture archive: attentional coordinates



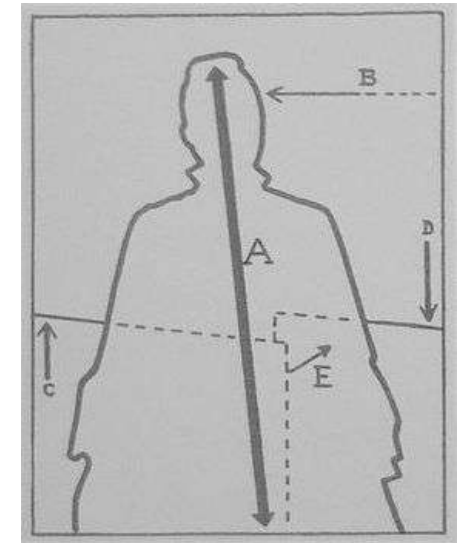
0 George Perec *Species of Space and other Pieces* 1974
 'I write, I inhabit my sheet of paper, I invest it, I travel across it. I incite *blanks, spaces* (jumps in the meaning: discontinuities, transitions, changes of key). I write in the margin.'



3 Francis Picabia
Marius de Zayas 1915



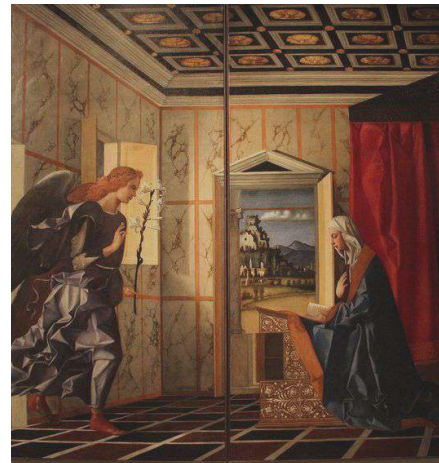
5 Diagram of binocular vision from Rene Descartes' *Opera Philosophica* 1692 and demonstrating the diagrammatic and directional potential of the profile.



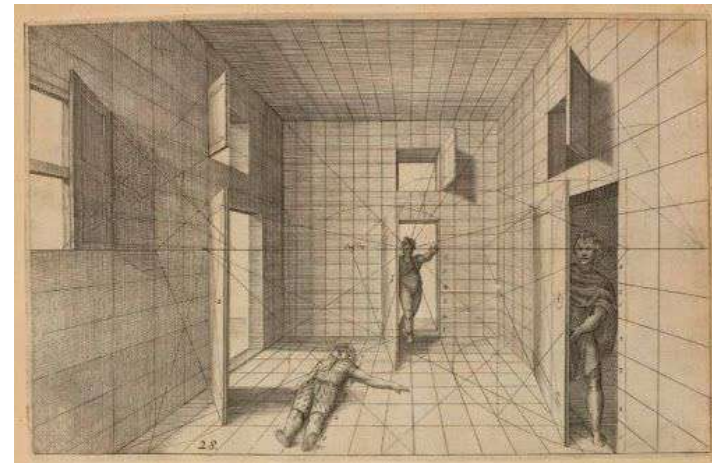
6 Erle Loran, 1943, diagram of *Portrait of Madame Cézanne* from *Cézanne's Composition*



1 Aby Warburg *Bilderatlas Mnemosyne*, panel 77, 1929 (recovered 2020)



2 attributed to Giovanni Bellini
Angel of the Annunciation and Virgin Annunciate, circa 1500

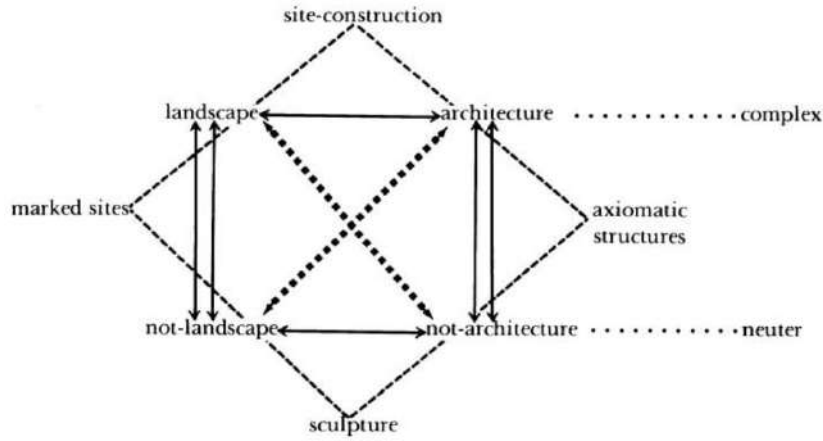


Perspective print from a book published by Vredeman de Vries, The Hague, 1604-1605 with 2 threshold figures, the address of a prone figure, and a series of room openings.

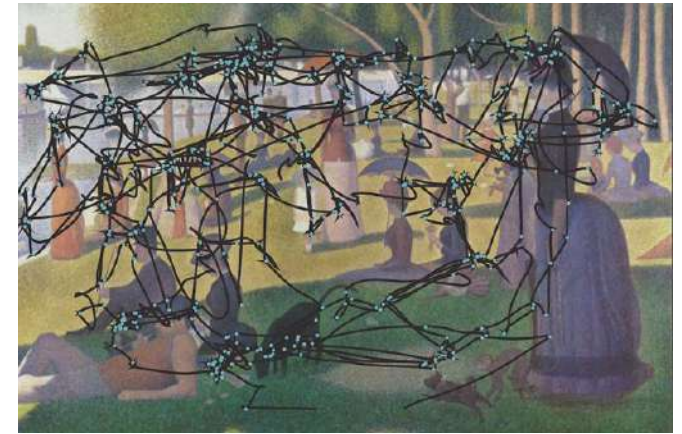
4



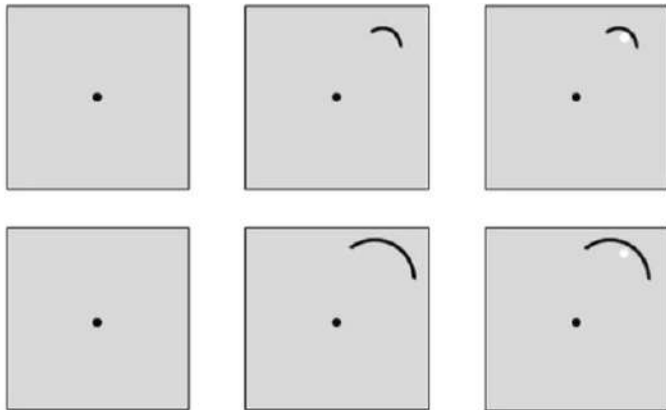
7 Oskar Pfister's & Sigmund Freud's overlay of da Vinci's *The Virgin and Child with St. Anne* from a 1910 essay by Anne from a 1910 essay by Freud: *Leonardo da Vinci and A Memory of His Childhood*.



8 Rosalind Krauss, Klein Group diagram in *Sculpture in the Expanded Field* 1979



10 Neuroscientist Robert Wurtz's eye tracking overlay on George Seurat's *La Grande Jatte*



9 diagram for peripheral cueing task testing attentional breadth in Mounts, J. R., & Edwards, A. A. (2017) *Attentional breadth and trade-offs in spatial and temporal acuity* Visual Cognition 24(7-8) pp 422-433



11 Google image search for Sophie Germain, demonstrating a displaced picturability and image misattribution.



12 detail from Bellini's *Annunciation*



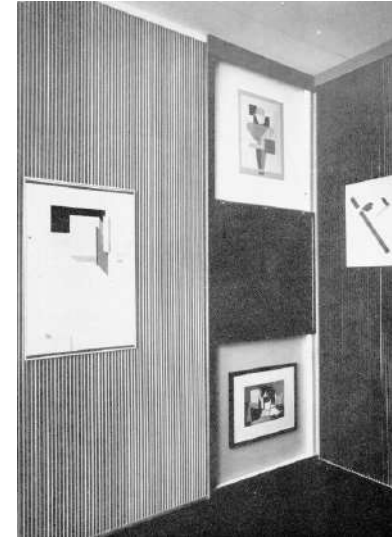
13 detail from Cézanne's *Mont Sainte-Victoire*



14 El Lissitzky *Kabinett der Abstrakten* room plan for BROOM magazine cover 1920s



15 Robert Rauschenberg *Almanac* silkscreen, oil & acrylic on canvas 1962



16-17 El Lissitzky *Kabinett der Abstrakten* 1927, a self contained room structure within the Landesmuseum in Hanover, and destroyed in 1936 during the Nazi regime in Germany.



18-20 Eileen Gray rounded wall/partition/screen/storage from Villa E1027 1926-29 prior to and during restoration circa c. 2012. In picture 20, the wall painting on the right is an act of pictorial graffiti by Le Corbusier done when Eileen Gray no longer lived at E1027 and completely at odds with her conception of interior space.



21 Alma Siedhoff-Buscher, modular design for a children's room, 1923, as part of the Bauhaus Haus am Horn.



22 Reading figure in profile using Alma Siedhoff-Buscher's modular design for a children's room, 1923.



found image source for *In My Masters Bedroom* as published in *The Optical Unconscious* by Rosalind Krauss, 1993

25



Max Ernst *In My Masters Bedroom* 1920 over painting on found image.

26



27 Henri Matisse *The Red Studio* 1911



23-24 Peggy Guggenheim's gallery *Art of the Century* New York c.1942 with install components designed by Frederick John Kiesler.



28 *Picture Room* Sir John Soane's museum, London, constructed c. 1824



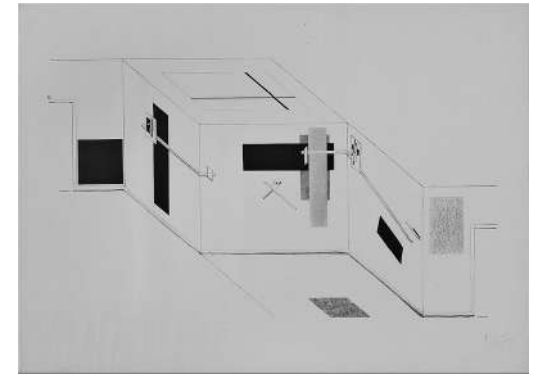
29 Johannes Vermeer *Woman Reading a Letter* c. 1663



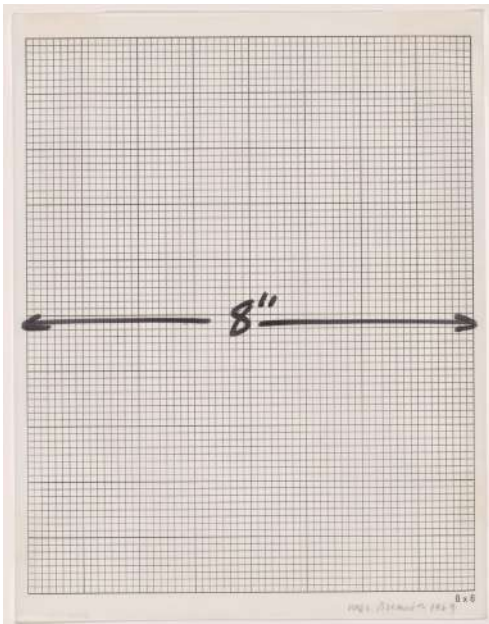
30 Mel Bochner *Measurement Room* 1969
Tape and leterset on wall, size determined by installation.



33 Antonello da Messina *Saint Jerome in his Study* oil on lime, 1475, and detail of the window view on the left.



34 El Lissitzky *Prounenraum [Proun Room]* room plan, lithograph 1923



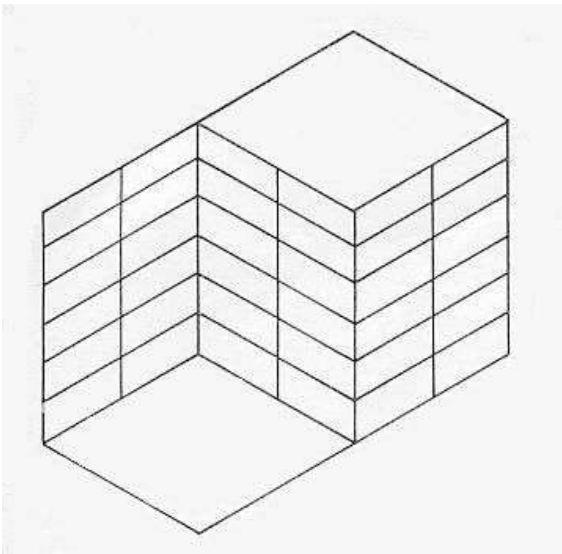
31 Mel Bochner *8" measurement series*
Ink on graph paper 1969



32 Robert Morris *Untitled (L Beams)* 1965
originally constructed in plywood with later versions in fiberglass.



35 El Lissitzky *Prounenraum [Proun Room]*
originally constructed in Berlin in 1923, reconstructed 1971



36 Thiery figure devised by the psychologist A.Thiery in the late nineteenth century.



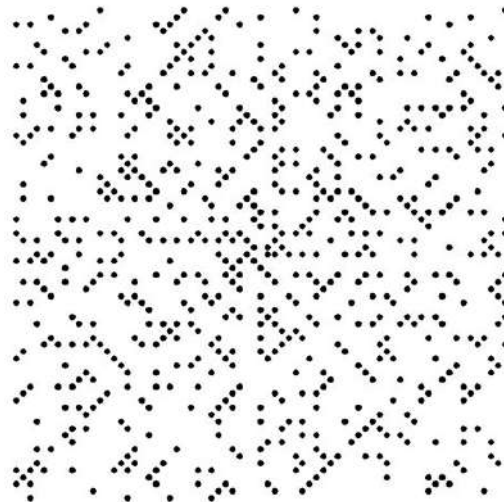
38 Eileen Gray
Four Panel Screen
c 1960



41-42 Counterpoint faces in Piero della Francesca's fresco *The Legend of the True Cross*, Basilica of San Francesco, Arezzo c. 1465 providing a pause and an equivalence in a sequential narrative sequence.



37 Daniel Buren
work in situ, Galerie MTL, Bruxelles, June 1970



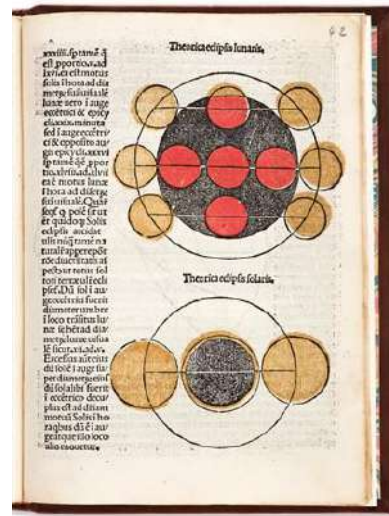
39 Ulam Spiral generated on github



40 Jean-Baptiste-Siméon Chardin
Card Player c. 1736 The interiority and focus of the inclined profile, and the drawer open towards the viewer.



43 Euclid *Elementa Geometriae* published by Erhard Ratdolt, Venice, 1482



44 Johannes de Sacrobosco *Sphaera Mundi* published by Erhard Ratdolt, Venice, 1485



47 Juan Sánchez Cotán *Quince, Cabbage, and Cucumber*, 1602



45 Reconstruction of Nicolas Poussin's 'great machine' used to position wax figures as compositional preparation for painting.



46 Nicolas Poussin - detail from the left side of *Seven Sacraments - Confirmation* c. 1640



48 Piero della Francesca *The Annunciation* on the left side of the window, as part of the fresco cycle *The Legend of the True Cross* c.1455, Basilica of San Francesco, Arezzo.



49 Piero della Francesca
The *Annunciation*, fresco,
Basilica of San Francesco,
Arezzo, c.1455. See picture
48 for the architectural
context.



51 Duccio di Buoninsegna
Annunciation predella from
the altarpiece *Maestà* for
Siena Cathedral, 1311



52 Fra Angelico *Annunciation*
fresco, convent of San
Marco, Florence c. 1445
positioned at the top of a
staircase, designed to be
viewed in low light.



Simone Martini &
Lippo Memmi
*Annunciation
with Saint
Margaret and
Saint Ansansus*
1333 for a side
altar in Siena
Cathedral, now in
the Uffizi.

50



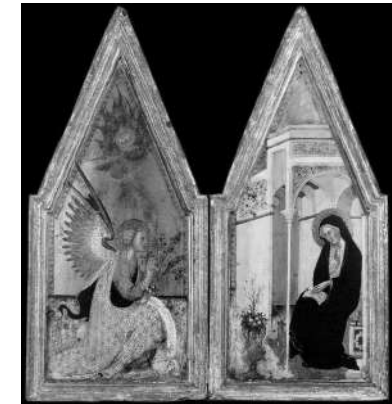
53 Giotto di Bondone *Annunciation* Arena
Chapel, Padua, c. 1305 spanning an
archway.



54 Jacopo Pontorno
Annunciation Capponi Chapel, church of
Santa Felicita, Florence c. 1527 frescoed on
either side of a window and a tabernacle.



55 Piero della Francesca,
Annunciation c. 1467
detached from altarpiece.



56 Andrea di Bartolo
Annunciation
c. 1383



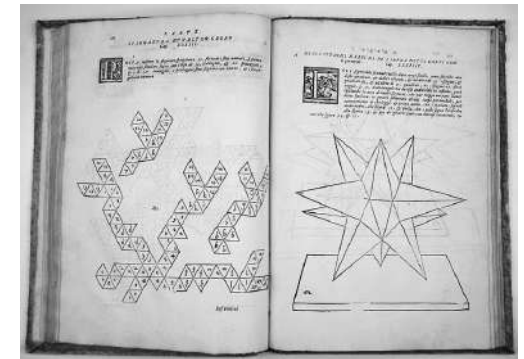
57 Paolo Veneziano
Annunciation
c. 1348



58 reverse sides of panels *The Trail of Moses* and *Judgement of Solomon* from circle of Giorgione, c.1495 showing their original context as paintings for doors (Rutherglen 2016: 441-442)



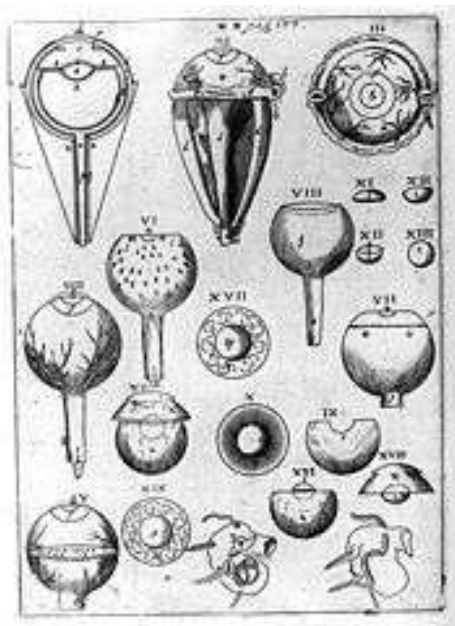
59 Johann Jacob von Sandrart
The Invention of Painting engraving 1683



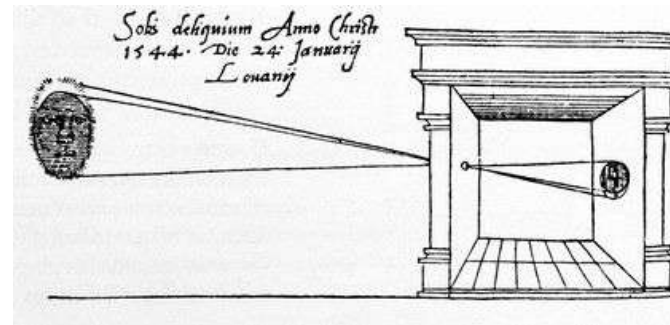
63 Daniele Barbaro
La Pratica della Perspettiva
Venice 1568



60 Jacques Henri Lartigue
My Brother Zissou Jumping
silver gelatin print 1910



61 Johannes Kepler plate from
Astronomiae Pars Optica 1604
showing the structure of the eye
in different species.

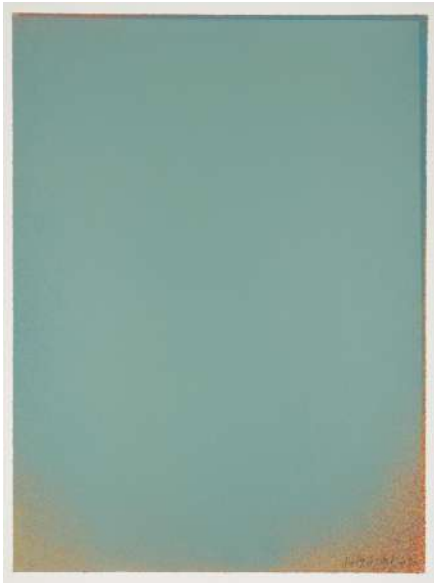


62 The first published picture of a camera obscura, Frisius Gemma's diagram from *De Radio Astronomica et Geometrica* demonstrating how he observed an eclipse of the Sun on 24 Jan 1544.

William Henry Fox Talbot
An oak tree in winter calotype negative & salted paper print c.1842-43

64





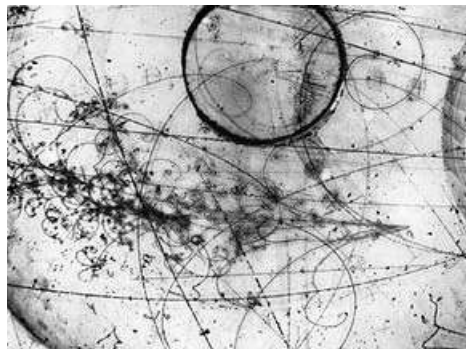
65 Jules Olitski
Pale Blue II 1970
screen print on paper



67 Simon Hantaï *Meuns* in the garden 1968
photo: Édouard Boubat



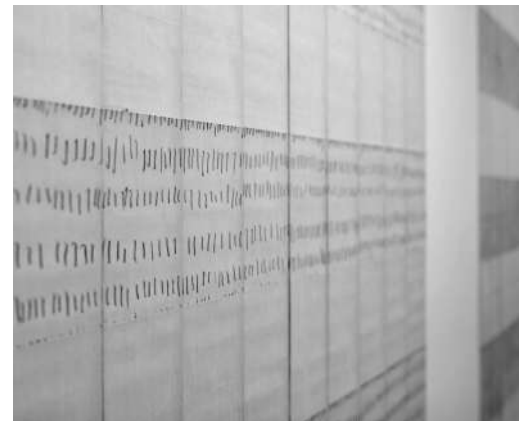
71 Eva Hesse, *Photograph of the Artist's work table*
1967



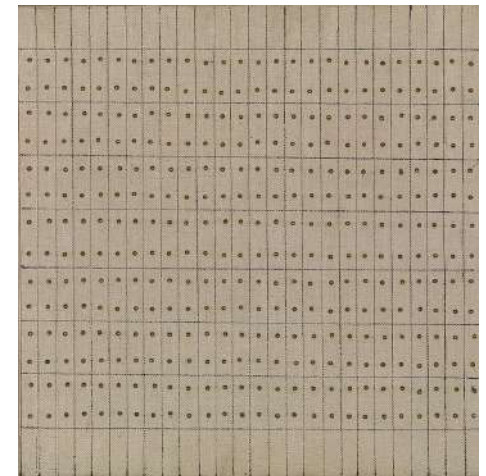
66 Picture of neutrino interaction in a Bubble Chamber, source Fermilab April, 1976. James Elkins references Bubble Chamber images in the particle physics chapter of *Six Stories from the End of Representation* (Elkins 2008: 156-190)



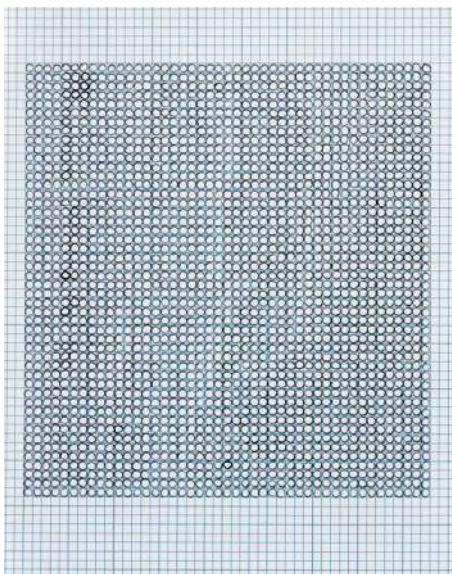
68 Helen Frankenthaler in her studio, NYC photographed by Ernst Haas, 1969



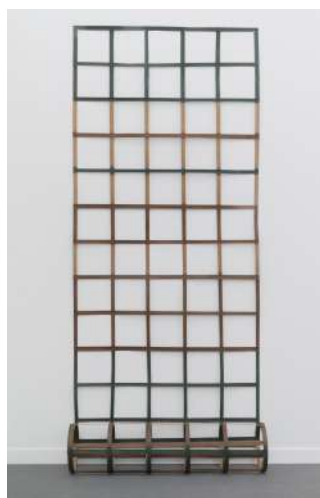
69 Michel Parmentier installation view detail, MSU Broad Art Museum 2018, graphite on folded paper



70 Agnes Martin *Little Sister* oil, ink, and brass nails on canvas and wood, 1962



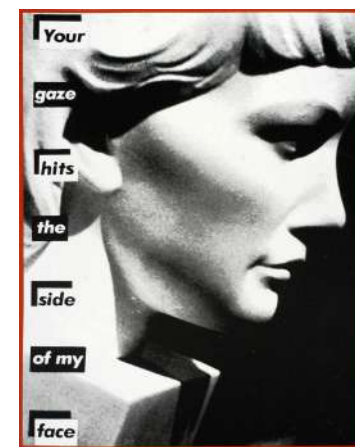
72 Eva Hesse, *Untitled* ink on graph paper, 1967



73 Daniel Dezeuze *Echelle (Ladder)* flexible wood painted 1975



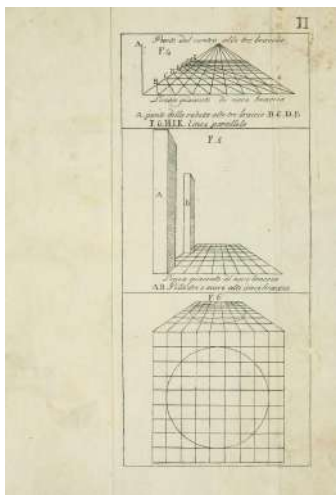
74 Piet Mondrian *Pier and Ocean 5* 1915



77 Barbara Kruger *Untitled (Your gaze hits the side of my face)* 1981



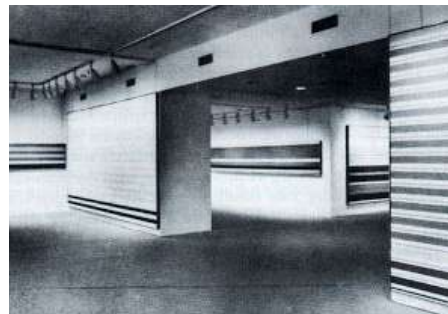
76 Piero della Francesca *Portrait Of Battista Sforza*, left side of a diptych c. 1475



75 Leon Battista Alberti perspective diagrams *Della Pittura* 1435



78 Rembrandt van Rijn *Syndics of the Drapers' Guild* 1662



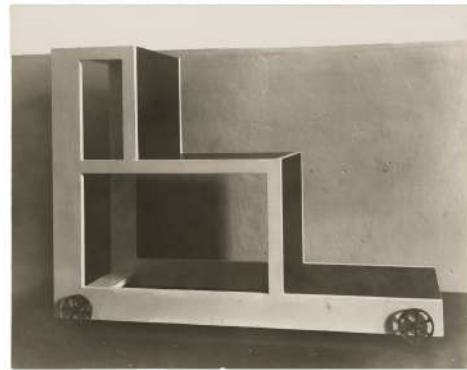
80 Kenneth Noland installation at André Emmerich Gallery, 1967



79 Kenneth Noland in his studio 1965 photographed by gallerist André Emmerich



81 Alma Siedhoff-Buscher, *small shipbuilding game* (detail) 22 part construction set, painted wooden blocks c. 1923

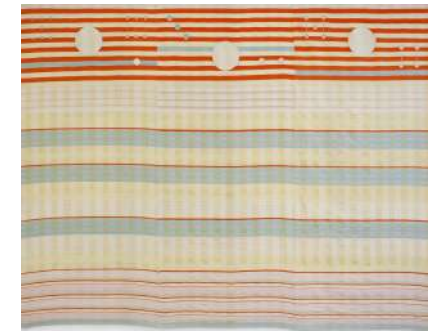


83 Alma Siedhoff-Buscher, *ladder chair for children's room*, c.1923

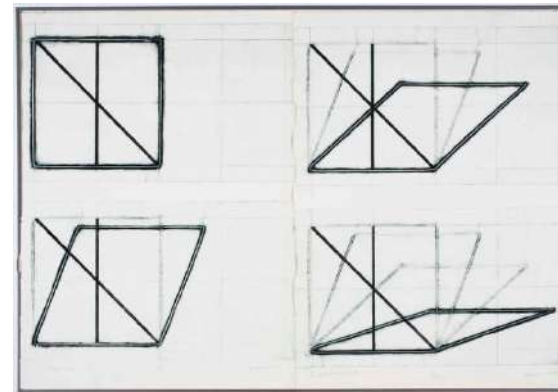
'children should, if at all possible, have a space where they can be what they want. Everything in it belongs to them – their imagination shapes it' (Siedhoff-Buscher 1923)



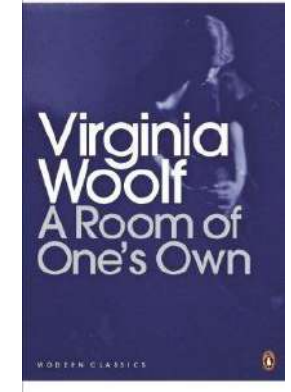
85 Otti Berger, *sample book*, mid 1930s



86 Benita Koche-Otte, woven wall hanging, c.1924



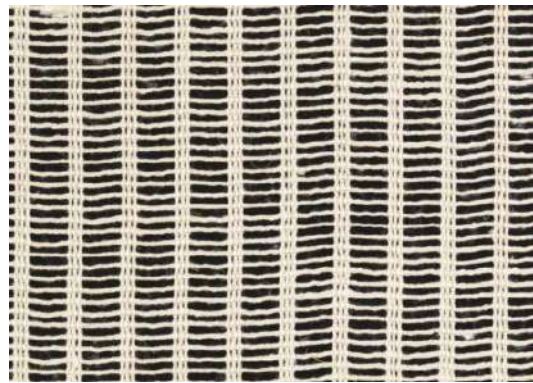
87 Dóra Maurer, *print sequence*, c. 1970



89 Virginia Woolf *A Room of One's Own*, 1929, *'I thought how unpleasant it is to be locked out; and I thought how it is worse perhaps to be locked in.'*



82 Alma Siedhoff-Buscher, *small shipbuilding game* (boxed) 22 part construction set, painted wooden blocks c. 1923



84 Anni Albers, *Rail*, linen casement weave material, 1958



Charlotte Perriand, a reconstruction of *Manifesto table*, 1937, with inlaid etching plates by Léger and Picasso, assimilating and repurposing pictorial precedents.

88

endnotes

Previously or concurrently published writing that intersects with *A Cut in Attention: Reimagining attentional capacities for painting*:

endnote 0

2022 *grid narrative for Sophie Germain*, information leaflet to accompany site responsive installation in the Sibson Building, School of Mathematics, Statistics and Actuarial Science, University of Kent

This information leaflet brings together interconnected research threads that have informed the activation of a preset and predictive compositional format, the Ulam spiral, and the engagement with Sophie Germain Prime numbers. The short numbered subsections cover 0: 'visual and tactile decoding' that outline the perceptual properties of the number key 1: 'painting logics' and the instigation of the painting index, 2: 'bored in a lecture' which notes the distracted origins of the Ulam Spiral as visualisation of prime numbers, 3: 'inappropriate for a girl' and 4: 'sleight of hand' that point to the strategies Sophie Germain adopted to circumvent the exclusions she faced as a female scholar, 5: 'grid narrative' which maps the art historical context of the grid that an Ulam Spiral evokes and diverges from, 6: 'tactile handling of numbers' which engages the touch based aspects of counting, 7: 'the numerical capacities of attention' which describes the contribution of focused and dispersed attention, 8: 'tangentially' which asks whether attentional displacement might lead to innovation, 9: 'Ulam Spiral for Sophie Germain' that tracks the prime count across and beyond the architectural limits of the building.

endnote 1

2021 *The Productive Inadequacy of Image for Contemporary Painting. Image Based Operations in the Work of Beth Harland, Jacqueline Humphries and R.H. Quaytman* JOLMA. The Journal for the Philosophy of Language, Mind and the Arts, Vol 2 (1)

This article considers the productive inadequacy of image for contemporary painting. The mutability of image is tested against the material, spatial and durational conditions of painting, and the attentional attachments it might mobilise through an examination of the working methods of Beth Harland, Jacqueline Humphries and R.H. Quaytman. Painting is not positioned as image, but as a processor of image information, able to prompt an image response. A resistance to image is framed by the art historical and philosophical legacy of image expectations and preclusions that each artist feels compelled to work against, and the expanding opticality of our contemporary social, cultural and economic interactions. Image is tested against the material, spatial and durational conditions of painting, and the attentional attachments it might mobilize. 3 functional sub categories of image that are pertinent to the discussion and emerge in the artists descriptions of working processes and responses are proposed: image as visual artefact, image as data, and image as visualisation. Image as visual artefact points to the categorising impulses of art history and a visibility that overlooks material and spatial circumstances; image as data indicates a destination of upload, circulation and exchange, and captures image as reference or image as information imported into or onto painting; image as visualisation opens up image as internal picturing, connecting to the anticipatory and reflective processes of imagination and memory. The article argues that these intersecting contexts that resist image as a category actually place contemporary painting in a unique position to open up an account of image.

endnote 2

2021 *picture-diagram* participatory painting structures and research presentation for 'Democratic Practices in the Creative University', symposium at Canterbury School of Architecture, Canterbury

A short research presentation that contextualised a set of participatory painting structures that due to lockdown needed to be accessed online and therefore remained a proposition. It asked a question about how a democratic approach to practice might disassemble a hierarchy of viewer and viewed within the conventions of painting and the creative university. In stating that a democratic practice requires the principle of accessibility, it discussed how the current pandemic was highlighting global gender inequality in accessing education.

endnote 3

2019 *Models of Attention* Journal of Contemporary Painting, Vol 5: 1

First presented as a research paper at the symposium 'Painting as ReModel' at Camberwell College of Arts, UAL, in 2018, that responded to Yve-Alain Bois' influential collection of essays 'Painting as Model' published in 1990, and subsequently published in the *Journal of Contemporary Painting*.

In this article the question posed by Yve-Alain Bois via Hubert Damisch in 'Painting as Model', 'what is the mode of thought of which painting is the stake?' is shifted to what is the mode of attention? Informed by current cognitive and neuropsychological research, painting's combative art history is assessed through the lens of attention. The unraveling of modernist painting is proposed as a conflict between models of attention, and divergent attentional expectations. Modernist values of immediacy, presentness, wholeness are considered conditions of an ideal attentional experience, one that attempts to hold back a partial, fragmented and distracted counter experience of modernity. 'Painting as Model' argued for painting's specificity, pulling away from a formalism that reduces painting to the visual, and theoretical structures that bypass the made object. This article proposes an attentional-specificity for painting; the limits of attentional capacity, distinctions between focused, distributed, and divided attention correlating with the cognitive complexity held by the structural, spatial and material conditions of painting.

endnote 4

2019 *Indexing Notes on Painting* catalogue text for 'Notes on Painting II' Koppel Project Central, London

A text contribution to the exhibition publication 'Notes on Painting II' alongside texts by Christian Bonnefoi, Amelia Bowles, George Bray, Tom Hackney and Laura Lisbon. The indexing of the text's title and the format which consisted of a set of short numbered notes, connected to the painting index works that were first shown in this exhibition. The first, fourth and last note are given as examples:

1: Notes on. Onto. Painting. Notes on, or about, or into painting. Edge notes and endnotes, retractions, clarifications or expansions. On the periphery, on the reverse, the marginalia of a practice scrawled over its surface. Painting as an annotated space, responsive, and open to modification.

4: In the 2009 text '*Remarks on Abstraction*', Hubert Damisch clarifies his use of the term 'remarks'. He makes the analogy to the sort of annotation, or *remarque*, found on the margins of a printmaking plate in response to a work in progress. A note in this context is a form of critique or commentary. Additionally, it can indicate a directive function, like the proof reading of a text: deepen the tone, increase chromatic value, sharpen the line, enhance contrast, cover over, erase. This might also capture the status of a text as a side note, an aside to the general thrust of an established narrative. Or it might be corrective, the introduction of an alternative thought, experienced as a gentle nudge that shifts an assumed trajectory further down the line.

11: The indexing of *Notes on Painting* might offer a formal system that incorporates uncertainty and impermanence. Held by the considerations of a proposition, not coalesced into an assertion of or candidature for the canon of painting. The logics of one after the other can be reordered endlessly, painting's history of the singular image spread out as sequences and dependencies, frame by frame, while also compressed into close proximity. Hierarchies assumed and consumed, compositional configurations generated as a consequence of the system, despite itself.

endnote 5

2019 *Grid Narrative: Notes for Night Study for Sophie Germain* work and text produced for 'prototype for a cabin', the inaugural occupancy of cabin: space for visual and material research, UCA Canterbury

Writing in response to Sophie Germain's early struggle to pursue her intellectual interests, a 2 page text was pinned to the exterior of cabin, a wooden structure on the edge of UCA's Canterbury campus that was first constructed by Canterbury School of Architecture as a prototype for a building, researching the insulatory properties of materials. The work inside was framed as a proposition for a space, a night study, that might provide the intensity of focused attention, and the flexibility of dispersed attention to foster creative thinking for a mathematician or an artist.

endnote 6

2018 *Interval [] Attention* in 'Interval [] still : now' published to accompany the exhibition of the same name at Tintype Gallery, London and as an archive of [] Interval research project ISBN 978-0-9956371-3-9

The text *Interval [] Attention* contributed to this archival publication of [] Interval research, and positioned the gaps and glitches of attentional processes within the formal decisions of framing and spacing that are key to an ongoing research collaboration between Conor Kelly, Moyra Derby, Nicky Hamlyn, Joan Key, and Jost Münster, initiated in 2015. *Interval* implies a break or pause, a spatial or temporal in-betweenness. The spacing of intervals approaches framing as a shared convention between film and painting, and framing as a consequence of the architectural and durational containment of work through exhibition. The research takes place through experimental set-ups of work, motivated by the potential for cross cuts, edits, and interruptions between works that operate as components within the expanded frame of a space. These set-ups are conceived as discursive and provisional, accessed as a pause in a sequence of possibilities, and providing feedback for the individual practice of each artist.

endnote 7

2016 *Constraints between Picture and Painting: some considerations at a distance* *Journal of Contemporary Painting*, Vol 2, 2

This article considers a series of constraints active in the abrasive interface between picture and painting. The term constraint is used in reference to Margaret Boden's research into the computational mechanisms underlying creativity, constraints understood as productive limits that test a given field or convention. The space between picture and painting is full of strongly defended divisions, and inevitable overlaps, and it can be a cluttered and contentious field for a practitioner to negotiate. The aim is in part to bypass an oppositional mindset that cuts off descriptive and imitative impulses for painting and picture from abstract positions and to access the constructed forms of pictorial convention by a different route. In order to avoid a dead-end opposition, a distance from painting and picture is established through a close examination of an early artefact of mark making and counting in the form of a small clay ball called a bulla. Dating from around 3500 bce, the bulla reference depends on the archaeological research of Denise Schmandt-Besserat and on a description by Georges Ifrah as a key example in the development of numeration. The bulla is identified as a point where distinctions between number, word, object and picture are not fixed and their interdependencies are clear and productive. In this article the particular qualities of the bulla facilitates thoughts about three interlocking terms: likeness, representation and depiction. Each term is addressed in turn, framed as 'testing likeness', 'retaining representation' and 'the material requirements of depiction', and each is considered through processes of recognition and resemblance. This is informed by writing on painting's mimetic and materially specific art history, including James Elkins, Michael Podro, Georges Didi-Huberman, W. J. T. Mitchell, Michael Baxandall and Jacques Rancière. Likeness is rephrased by a consideration of analogy, and the conceptual testing involved, opening a space between the notion of likeness and visual resemblance. Representation is thought through the processes of correspondence and reiteration, and the associations of both presence and displacement. Depiction is embedded into its material conditions and the circumstances of recognition that evokes. All three terms are considered as key to the constraints between painting and picture, even when functioning as exclusions.

endnote 8

2013 *Depth as Breadth in Rotation: tableau as holding apparatus* Journal for Visual Arts Practice, Vol 12: 1

This article was the first time I articulated an interest in attention. Presented as a research paper at CSM, then at Tate Modern at the Tableau: Painting Photo Object conference in 2011, and finally published in the Journal for Visual Arts Practice in 2013. In proposing tableau as a holding apparatus, the idea of holding attention was a key focus. Additionally the shift and switch of position described through the idea of depth as breadth in rotation informs current research on attentional and alignments:

In Phenomenology of Perception (1945) Maurice Merleau-Ponty warns against considering depth and breadth as interchangeable. Rather than following Merleau-Ponty's thinking, this article considers the productive potential of equating depth with breadth, citing works by British painters Jane Harris, Beth Harland and John Wilkins. The tableau is proposed in this context as a holding apparatus, one that facilitates and contains a switch and shift between positions and dimensions. Holding is considered in three key ways: holding back, holding fast and holding attention, each one describing both the internal mechanisms of the tableau and its external relations with an observer. This holding characteristic is put forward as part of the constraints and potential of addressing a pictorial form, and connected to Michael Fried's writing, and the absorbed and diverted attention described by Jonathan Crary. George Berkeley's theories of vision are discussed via Merleau-Ponty, with breadth offered as a sideways version of depth, exposing the space between things and implying a repositioning of an observer to facilitate visibility. Although Merleau-Ponty outlines this exchangeability in order to discount it, this flexibility between one position and another, thinking oneself into a position rather than being there, is considered here as an active part of a pictorial practice, one that can inform a stand off between oppositional terms.

endnote 9

2013 *Visualising Painting: A Space Drawn in Ratio* catalogue text for 'Limber: Spatial Painting Practices' catalogue essay to accompany group exhibition at Herbert Read Gallery, Canterbury and Grandes Galeries de L'Erba, Rouen ISBN 978 0 9570797 8 6

This catalogue text responded to the curatorial positioning of spatial painting practices. It proposed a diagrammatic consideration of painting. The text is subdivided by the terms Ratio, Comparison, Likeness, Diagram and takes the standard diagram of the golden section $a + b$ is to a as a is to b as a starting point for visualising painting. Key terms that still inform the research and practice are evident. A short extract from text is below:

Using the term painting draws an imaginary line around a set of practices. Where that line falls depends on the art historical moment, on diverging and converging ideas of what might qualify a work within the category painting. The imaginary line encloses a space and immediately puts into play other spaces that border or overlap or run parallel to a space that might be considered painting. How one approaches thinking about painting is worth examining. My visualisation of a line enclosing a space functions like a diagram of painting. As it attempts to describe what painting is like, it is also like a painting. The space it describes is conceived on a plane surface and the devices used: line, border, overlap, edge, are those of composition. As a starting point for an analysis of painting it discloses a flaw in the method by creating a self-referential loop; it presumes the qualities of the answer even as it asks the question.



interference pattern

double sided split screen, screen print and acrylic on plywood standing panels, 89 x 55 and 89 x 89 cm (34 cm from ground)
used as a projection screen for a super 16mm film in collaboration with Nicky Hamlyn.

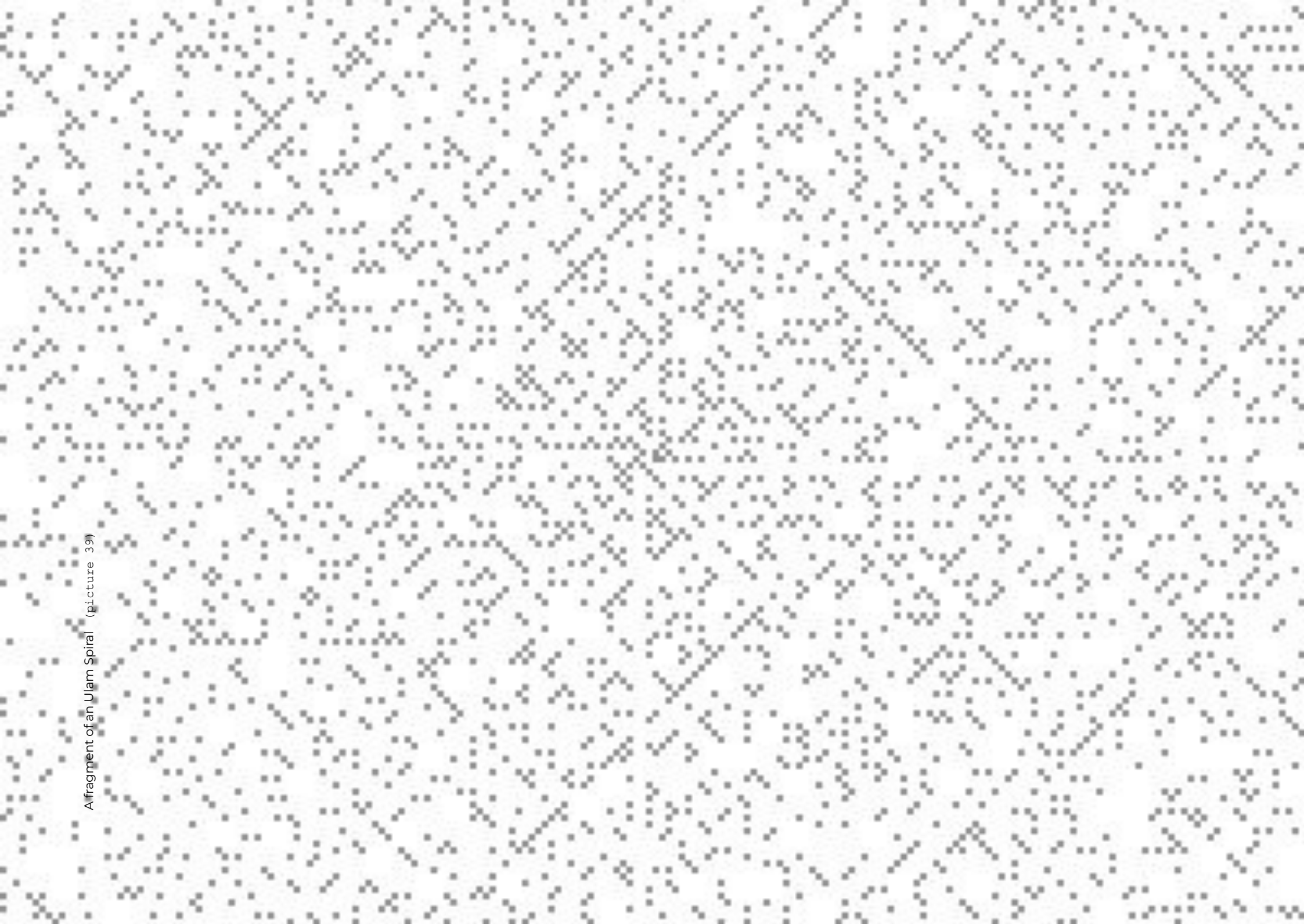
The screen print of recessional architectural information inferred that the space across the 2 screens was continuous, on both the inside and the outside edges.
The projection and sound by collaborator Nicky Hamlyn was generated by filming a section of a carbon transfer roll drawing on super 16mm film, and filming over the sound section of the physical film. The roll drawing can be seen on the floor with a speaker connected to the projector.

Installed as part of Interval [] stop-gap at the Herbert Read Gallery, Feb 2017, as part of Interval [] research group (endnote 6).



interference pattern double sided split screen used as a projection screen for a super 16mm in collaboration with Nicky Hamlyn, in Interval [] stop-gap. As the install moved from daytime into evening we didn't switch on the gallery lights, and the dominance of the paintings receded in relation to the projections (endnote 6).

A fragment of an Ulam Spiral (picture 39)



Moyra Derby
September 2022



addendum:

documentation of *room plan*

Installed at Studio 3 Gallery, School of Arts, Jarman Building,
University of Kent, Canterbury, CT2 7UG

12 April - 11 May 2022



tilted square Pythagorean Theorem wall drawing, paper tape, dimensions. variable

room plan



12 April - 11 May 2022

Studio 3 Gallery School of Arts Jarman Building
University of Kent Canterbury CT2 7UG

The works installed at Studio 3 Gallery are in progress. A series of painting based components configure as a room plan, actualising and imagining space for both a painter and a mathematician. Wall and floor based structures, and space responsive wall works have a shared set of measurements, ratios and compositional strategies. Their status as paintings is interchangeable with their potential as tables, shelves, screens and storage, or their readability as a number system or mathematical diagrams.

The component based nature of the work allows it to adapt to the space and also make space, and in its pictorial qualities to be space depictive. Some elements can be moved and repositioned by visitors, sharing compositional discovery and adjustment, and moving the work between process, display and storage.

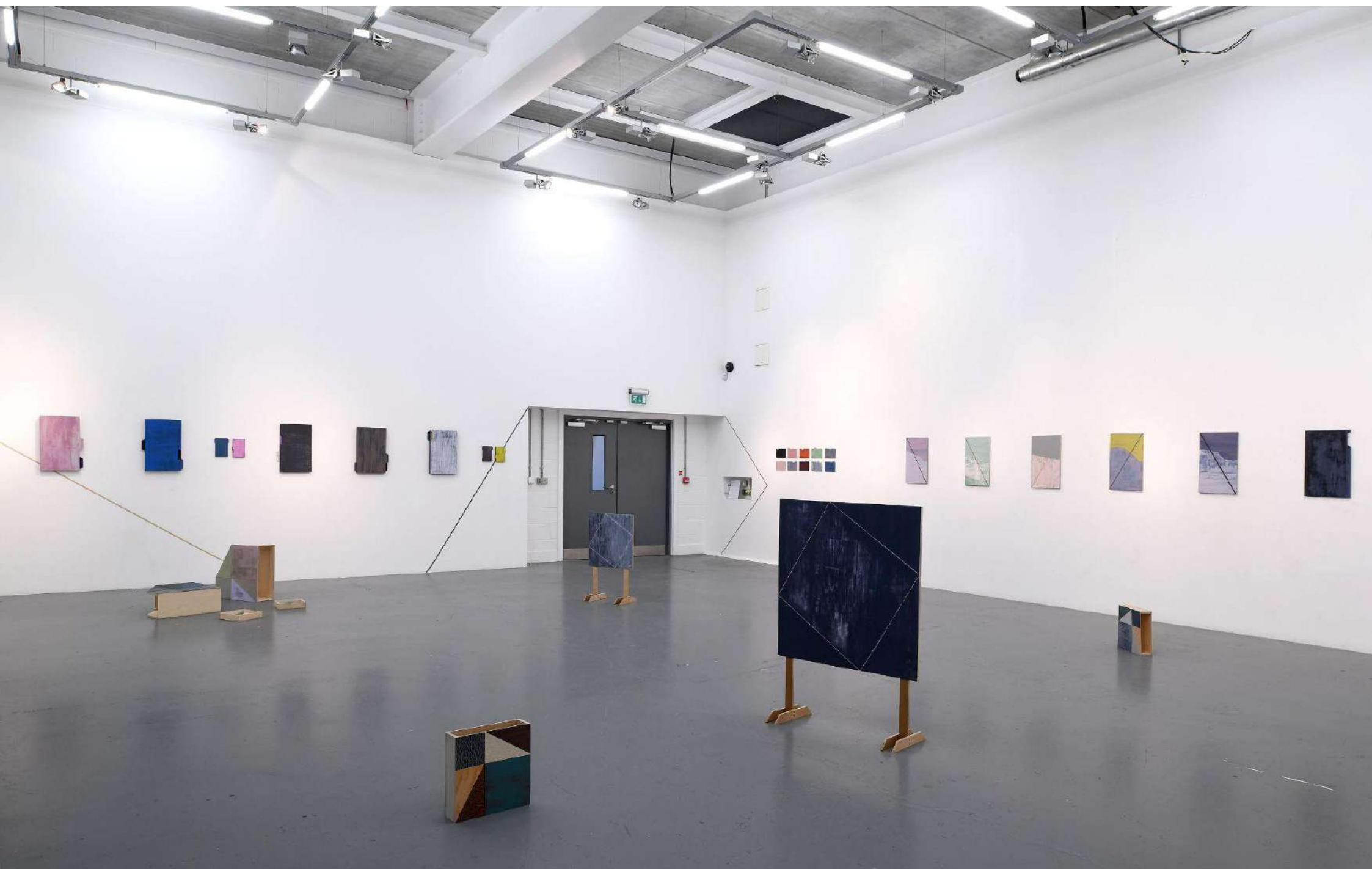
As a visualisation and a proposition, *room plan* confers with the history of painting and its pictorial and diagrammatic potentials.

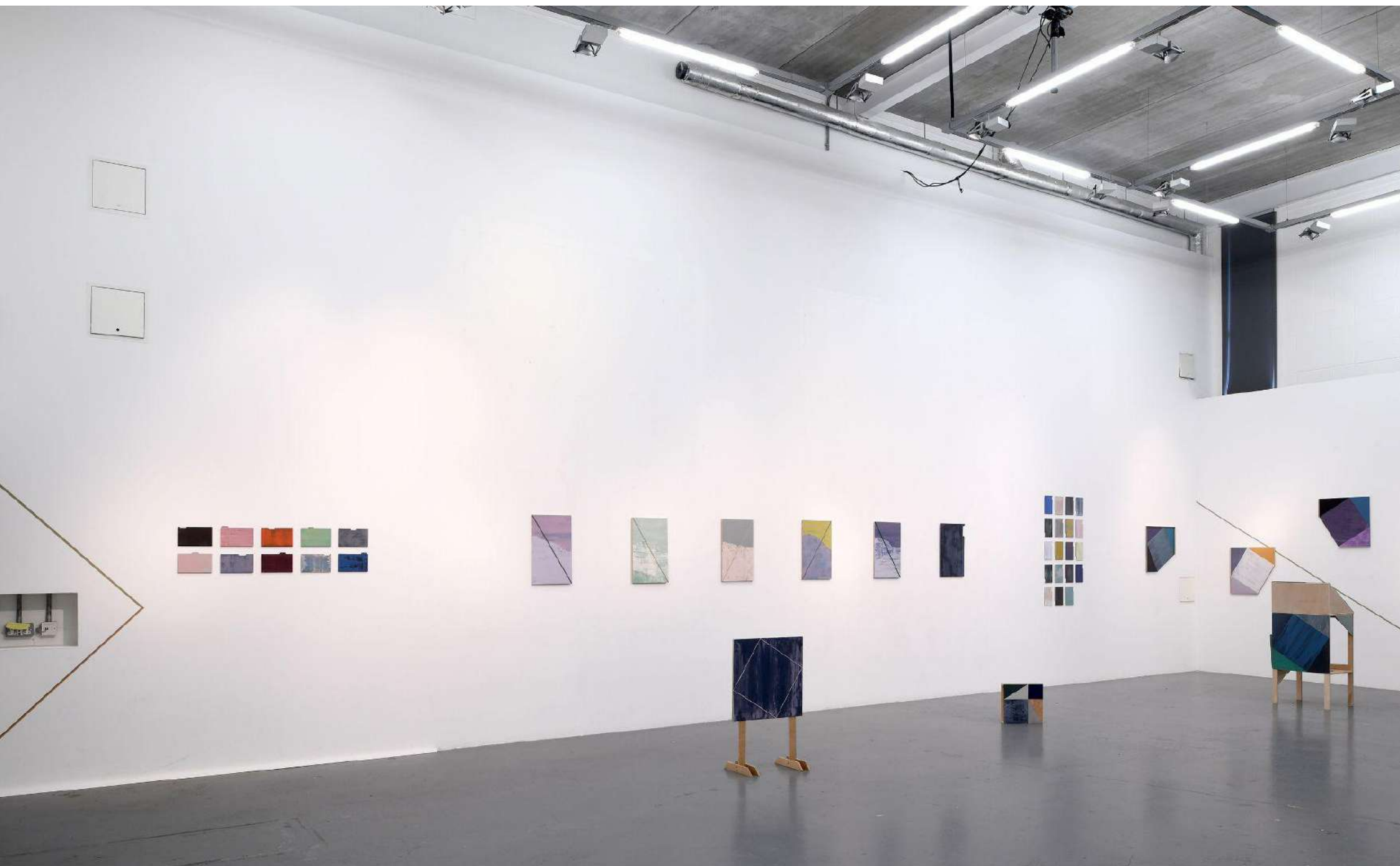


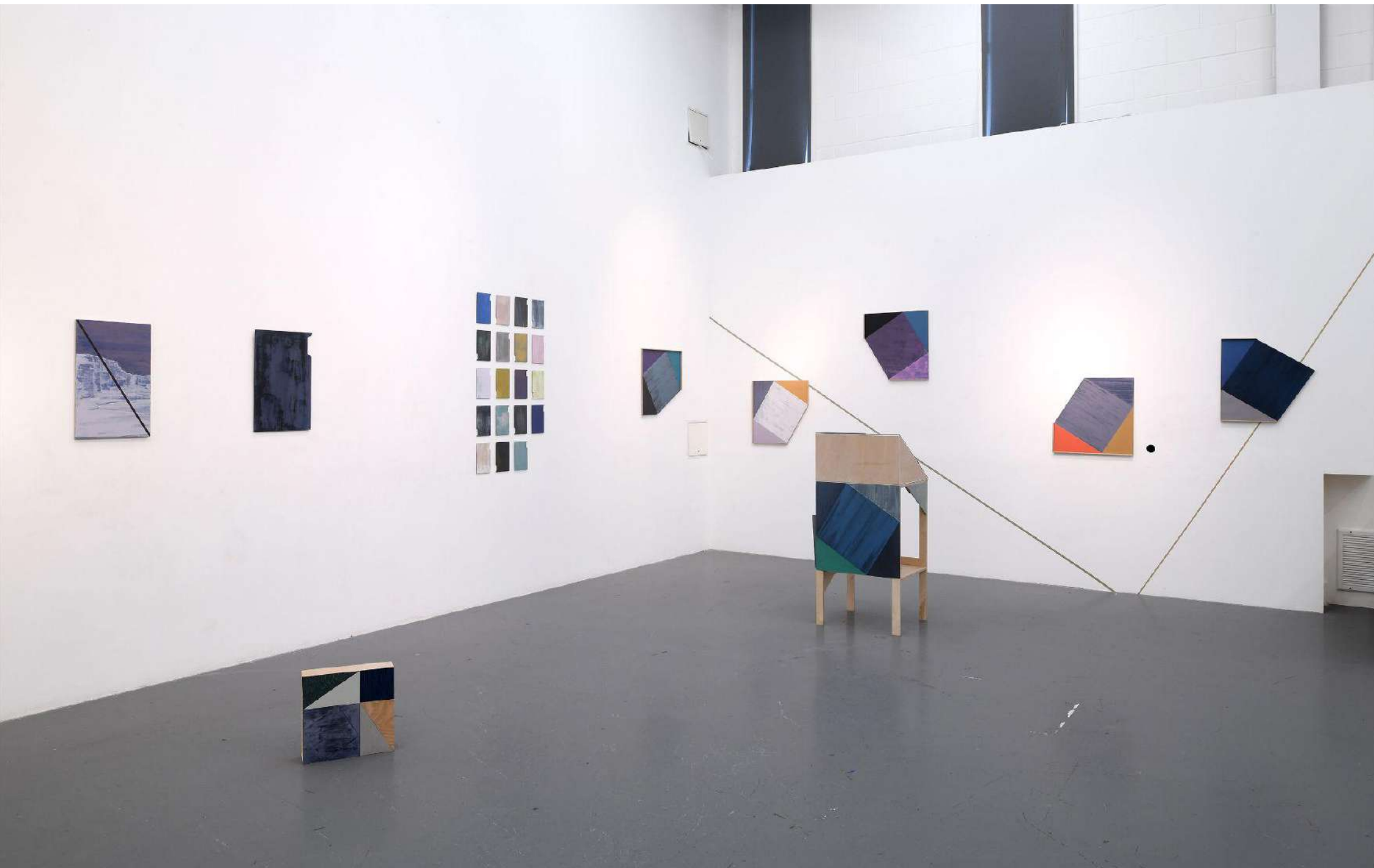
Picture and diagram both indicate forms of image that are derived from or overlaid onto another, or that prescribe or prompt a set of actions or associations. In this sense *room plan* both pictures and proposes an approach to painting that is provisional and interdependent. The components operate within the idea of an open work, with indecision and incompleteness offered as an expansively generative space for thinking and making.

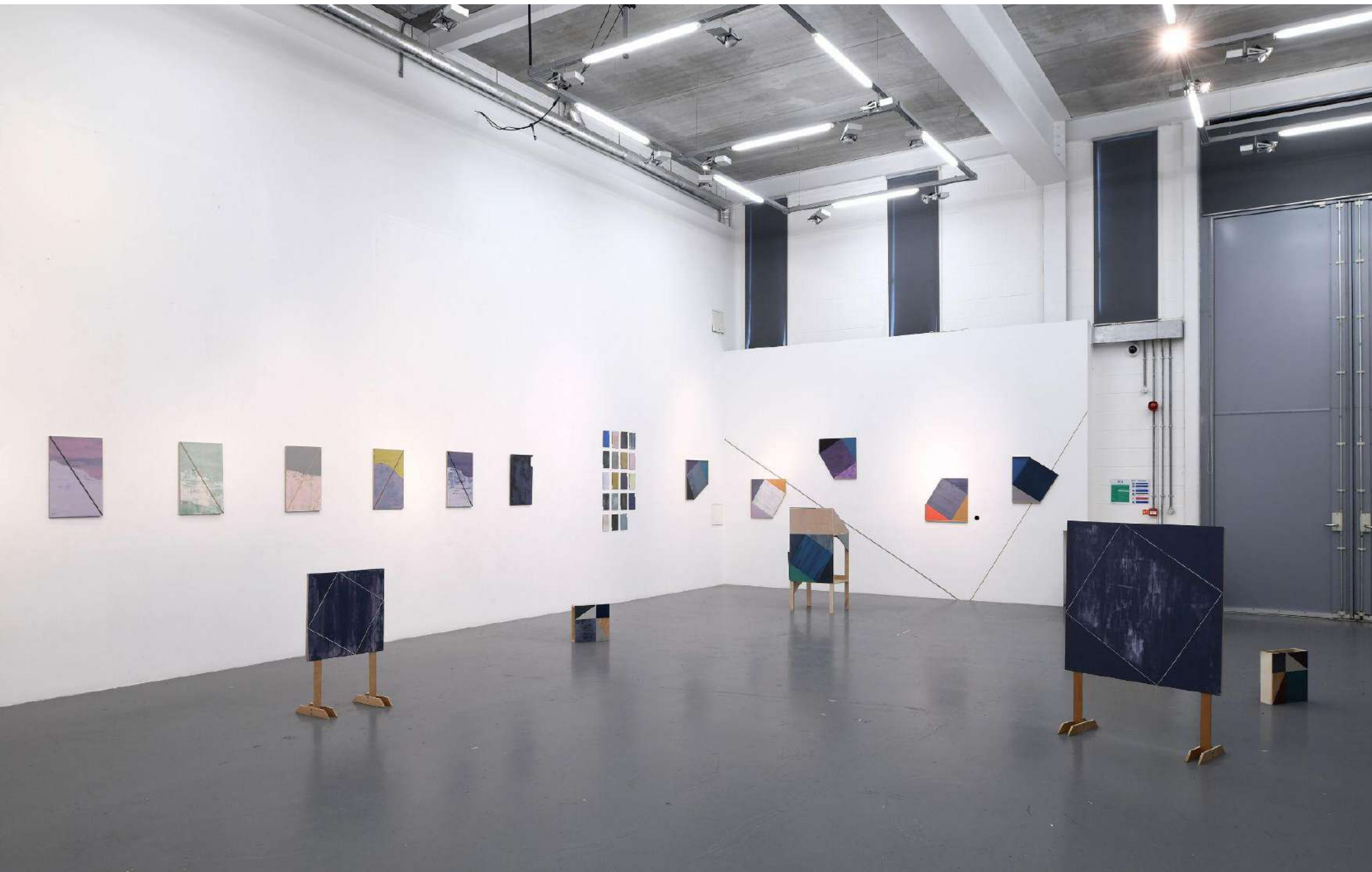
Virginia Woolf described the need for a room of one's own, and here that room is understood as a cognitive space as much as a physical space. The fluctuating and episodic experiences of attention are called upon, inviting attentional attachments that are externally reactive and internally reflective. From moments of extreme focus to the pulls of distraction and the scattering of dispersed attention. The components of *room plan* are approached as attentional co-ordinates that anticipate and reciprocate the spatial and imaginative participation of the gallery visitor.

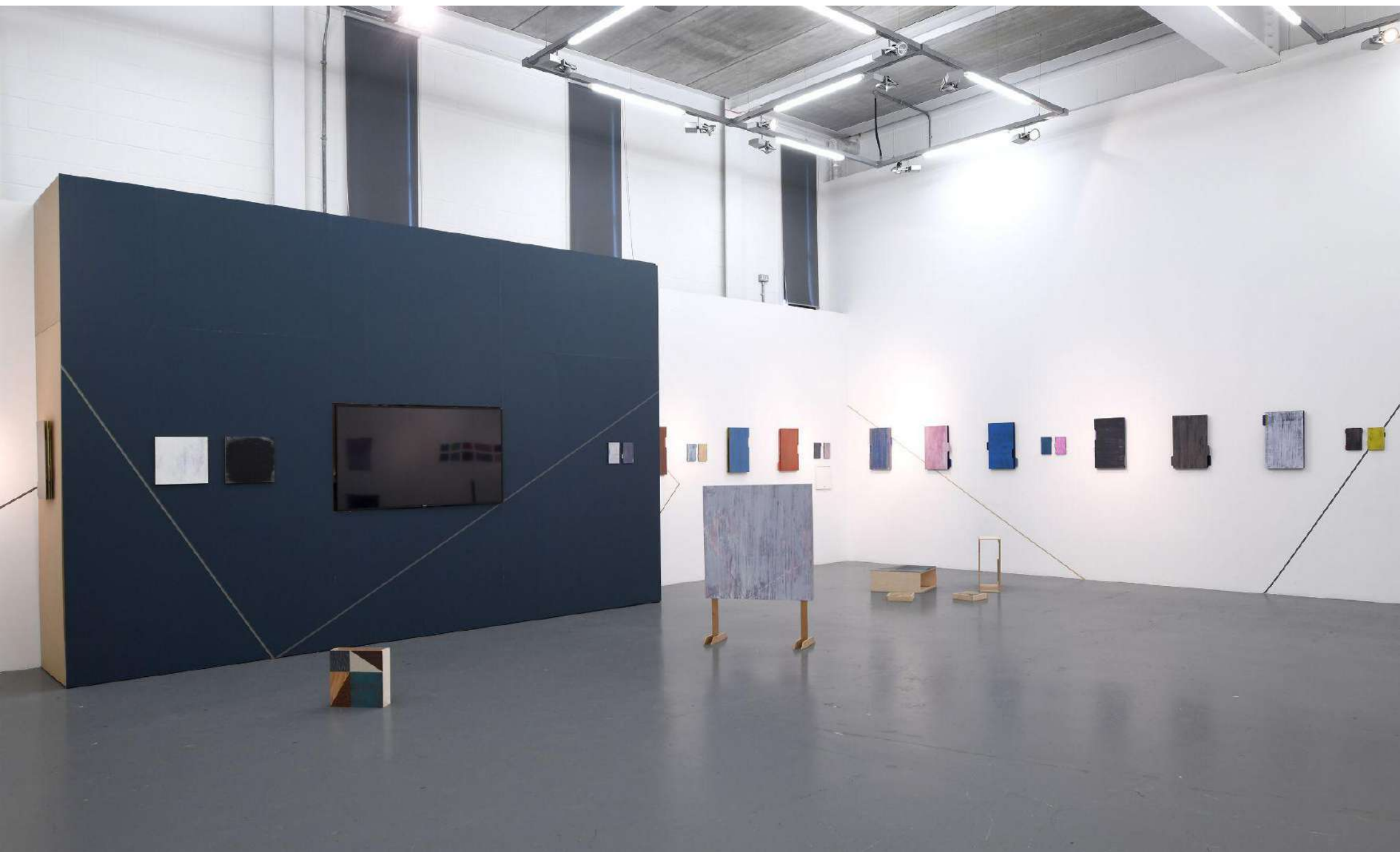
A short text 'incomplete notes for room plan' accompanied the exhibition.

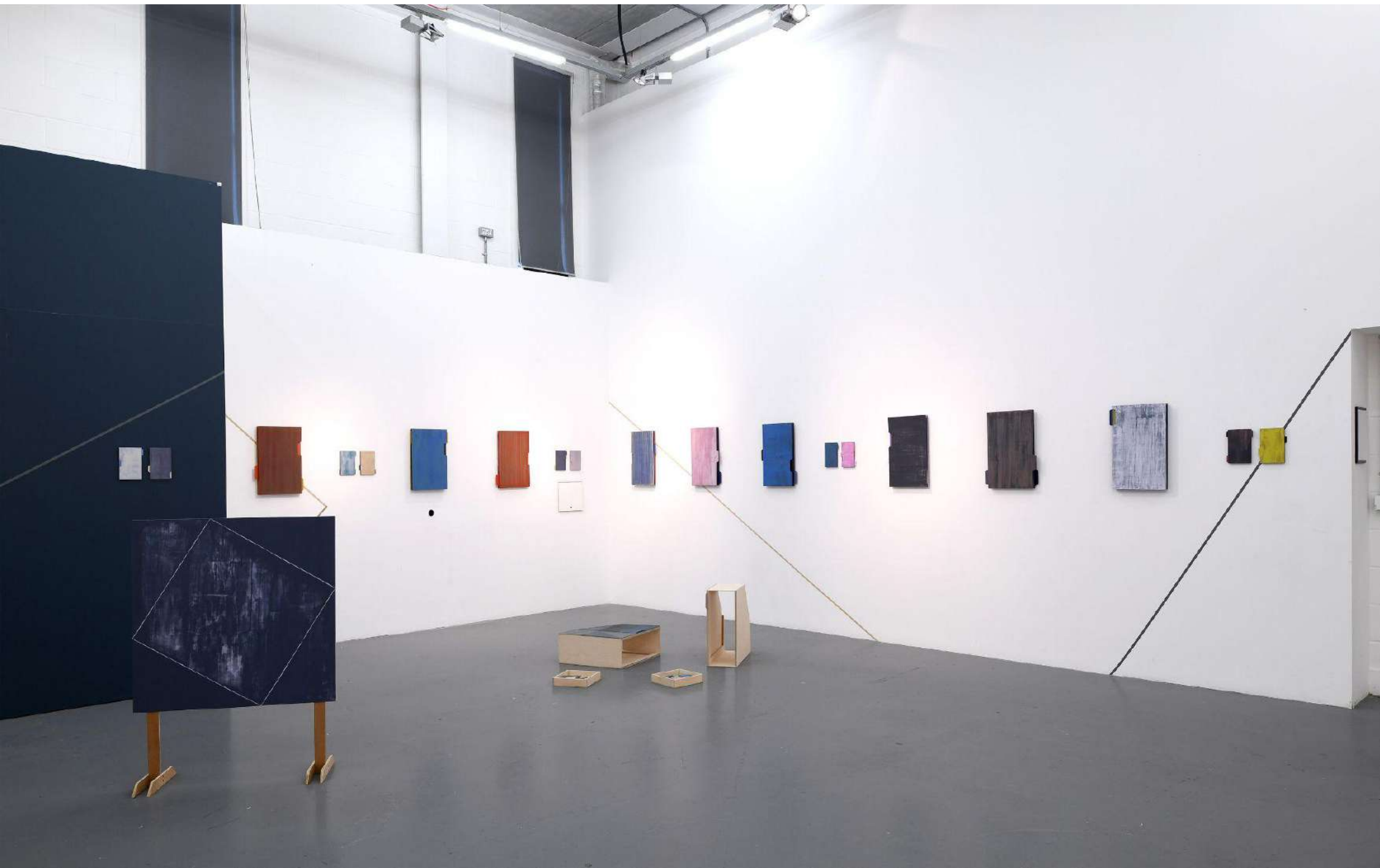




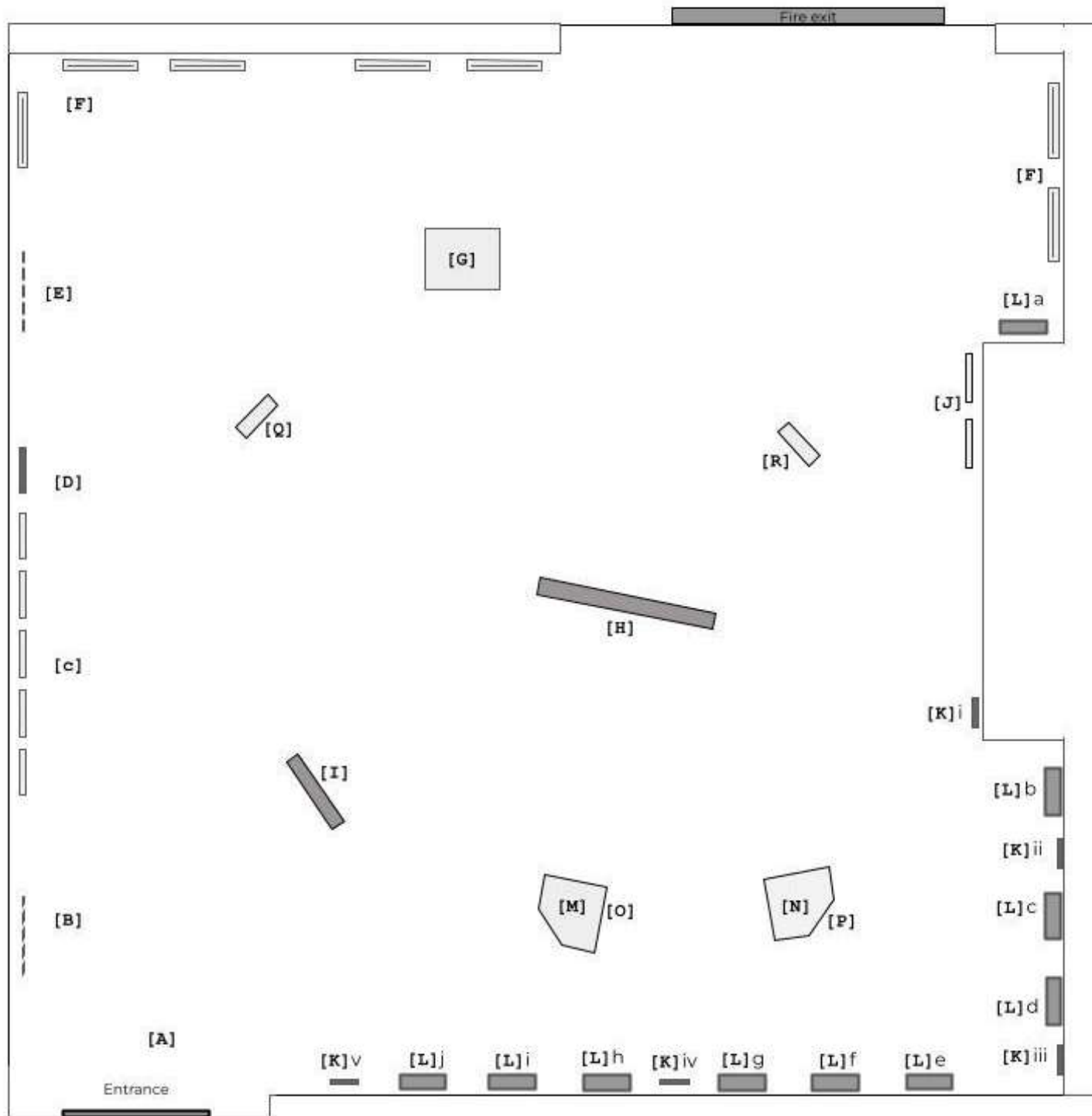








room plan



- [A] **room diagram**
paper tape wall work
dimensions variable
- [B] **painting index: number key**
(for Jarman)
01234
56789
acrylic on laser cut mdf
each 12.5 x 20.3 cm
- [C] **strike through landscape 1-5**
acrylic and paper tape on plywood panel
each 34 x 55 cm
- [D] **zero**
painting index: 0
acrylic on laser cut panel
34 x 55.5 cm
- [E] **zero grid**
19 section index grid
acrylic on laser cut mdf
each 12.5 x 20.3 cm
- [F] **picture structure series 1-7**
(phi ratio theorem diagram)
acrylic on cut and edged plywood panel
each 55 x 55 cm + edge
- [G] **composition table**
(phi ratio theorem diagram)
plywood structure with moveable components
55 x 123 cm
- [H] **scene dock 1**
- [I] **scene dock 2**
(phi ratio theorem diagram)
acrylic and screen print on double sided
free standing plywood panels
89 x 89 cm, 55 x 55 cm
- [J] **tilted square (white)**
tilted square (black)
acrylic on plywood panels
each 34 x 34 cm
- [K] **correspondence series**
painting index: paired primes
Sophie Germain Prime and corresponding Safe Prime when
that prime is also a Sophie Germain Prime
- i **correspondence: 41 to 83**
- ii **correspondence: 1019 to 2039**
- iii **correspondence: 1031 to 2063**
- iv **correspondence: 1229 to 2459**
- v **correspondence: 1901 to 3803**
paired composite index panels, 2 - 4 layers
acrylic on laser cut mdf
each 12.5 x 20.3 x various depths
- [L] **painting index:**
3 digit Sophie Germain Prime series
composites index panels, 3 layers
acrylic on laser cut mdf
each 34 x 55.5 cm
- a **painting index: 173**
- b **painting index: 239**

c painting index: 281
d painting index: 419
e painting index: 431
f painting index: 509
g painting index: 659
h painting index: 683
i painting index: 719
j painting index: 809

[M] document table: parity 0

[N] document table: parity 1

interconnectable plywood structures with painted and scored lino and composite board sections, orientations variable
each 55 x 55 x 21 cm

[O] compositional proof: printing

[P] compositional proof: painting

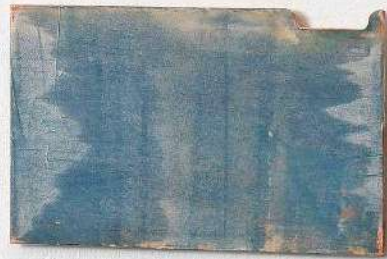
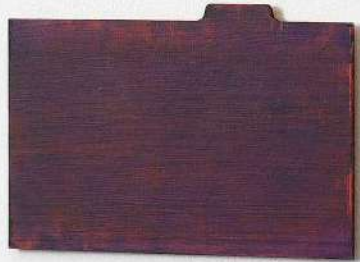
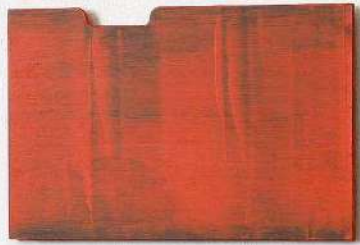
theorem game prototypes
Painting: acrylic on felt backed plywood components
Printing: scored lino & formica & composite components
each making 21 x 21 cm diagrams in 25.2 x 25.2 cm plywood boxes

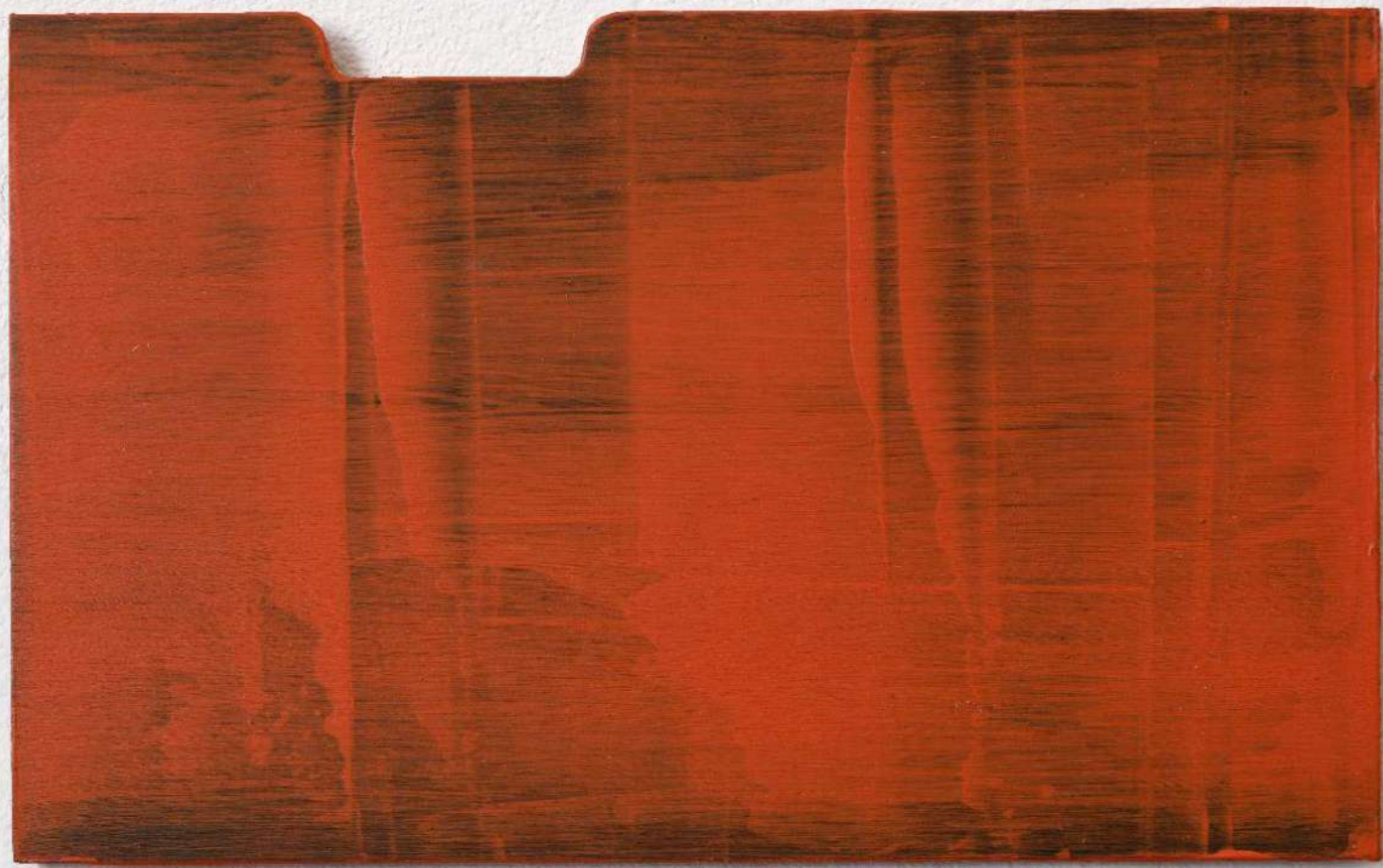
[Q] picture storage 1

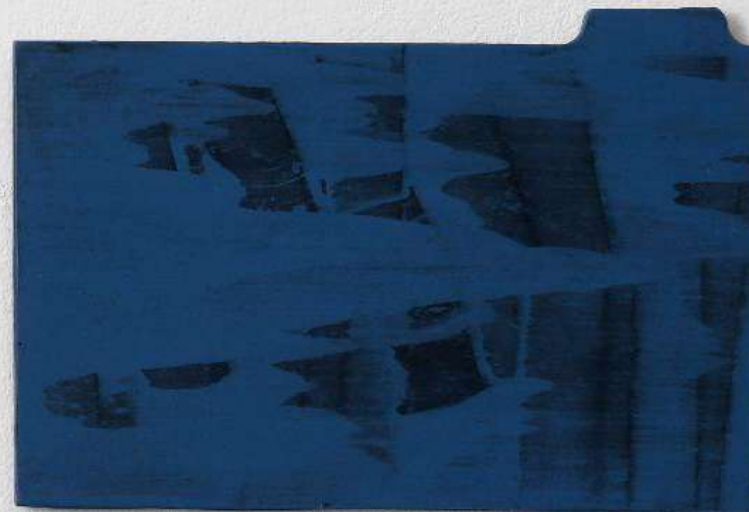
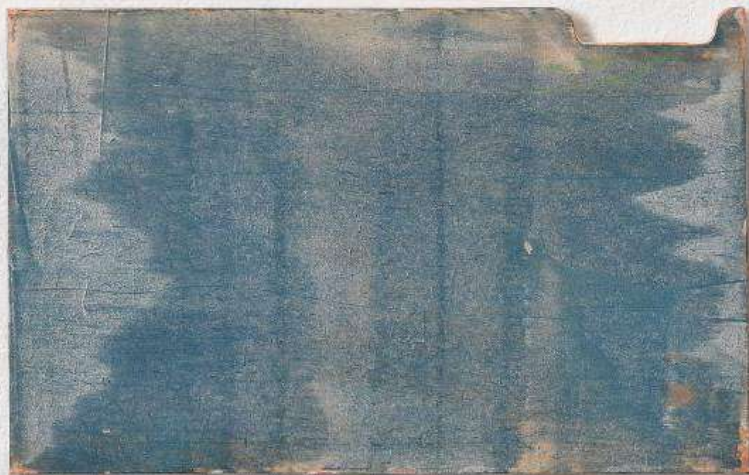
[R] picture storage 2

painted and scored sections
on plywood box structure
each 34 x 34 x 13 cm









































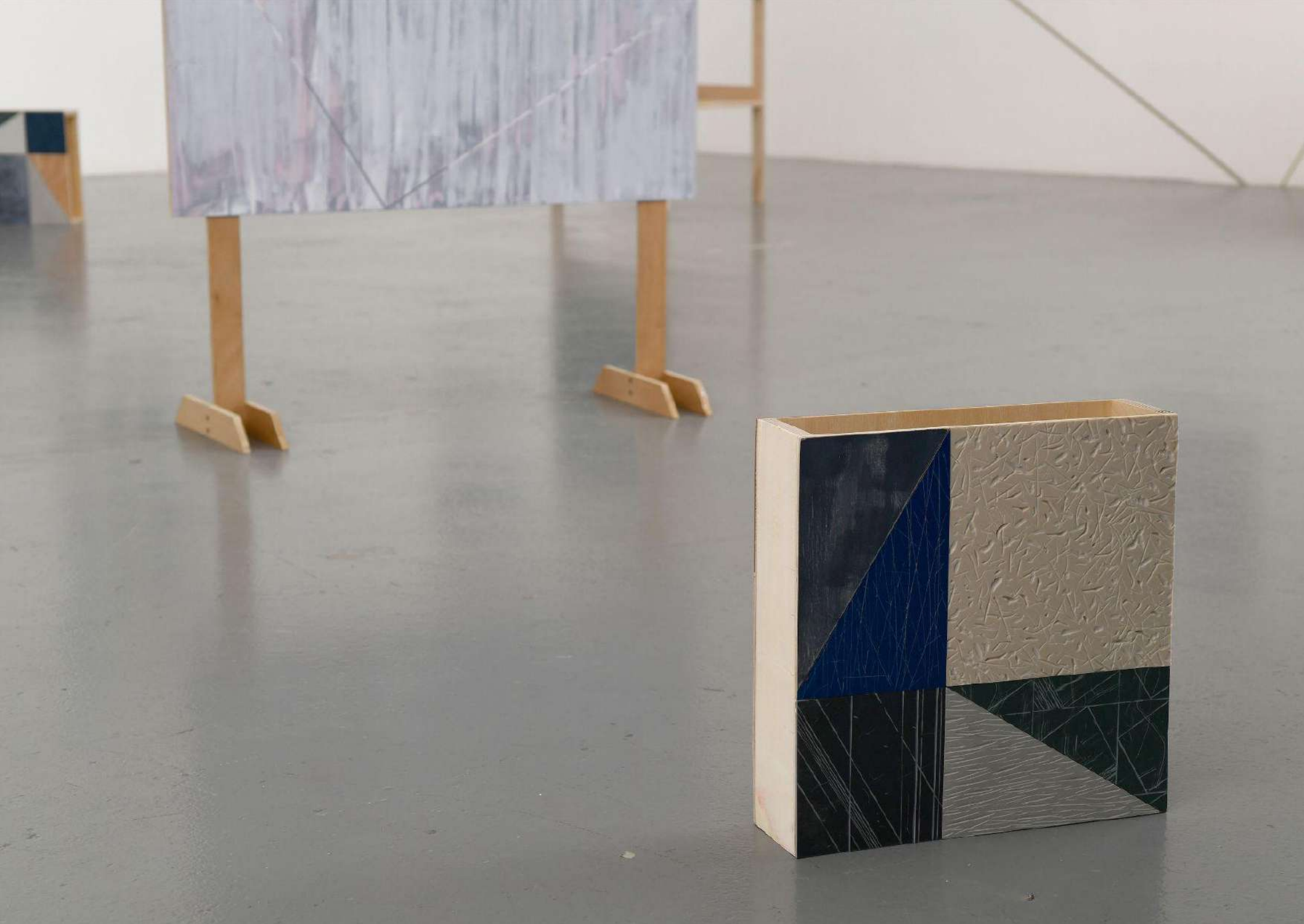


























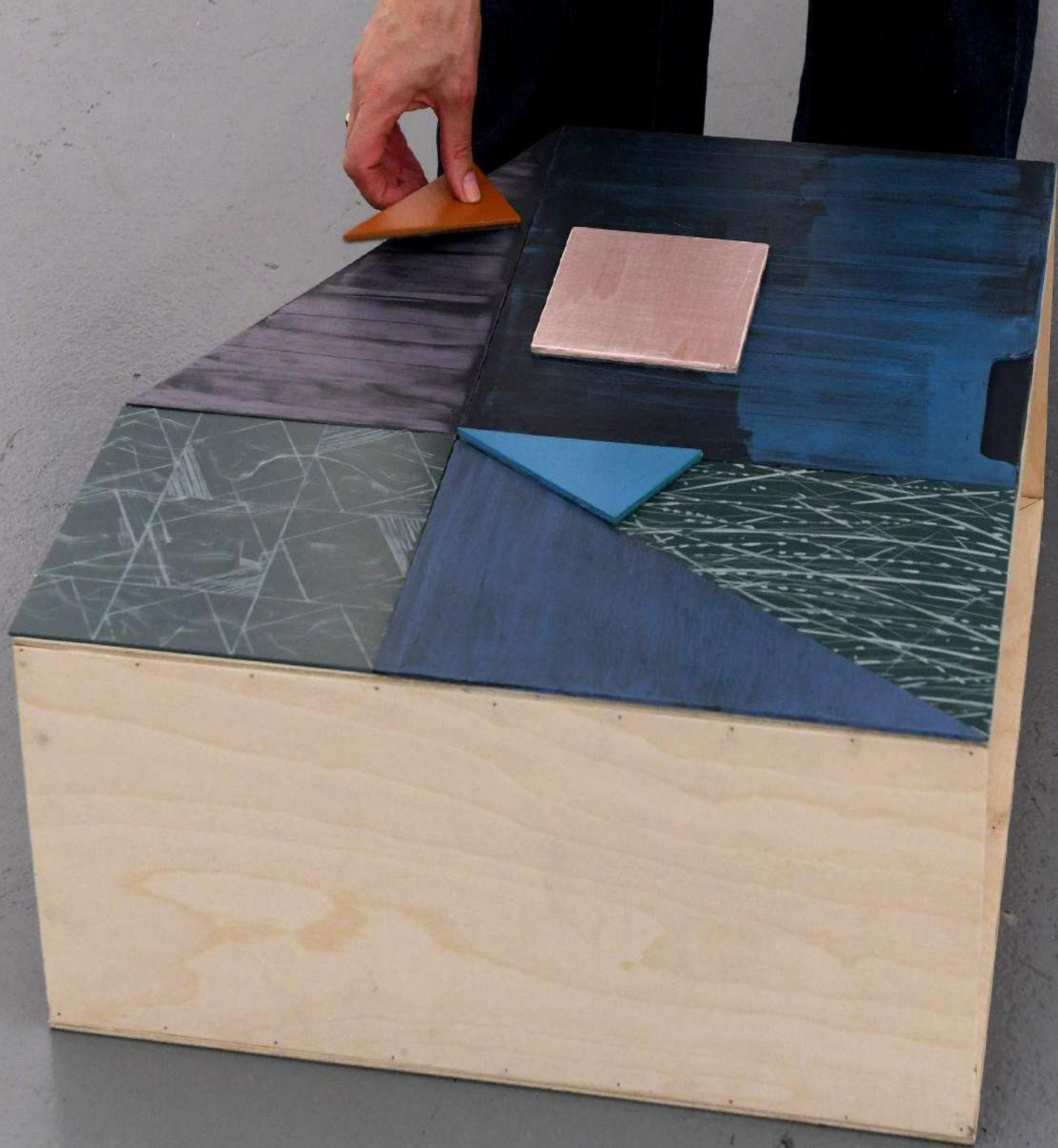




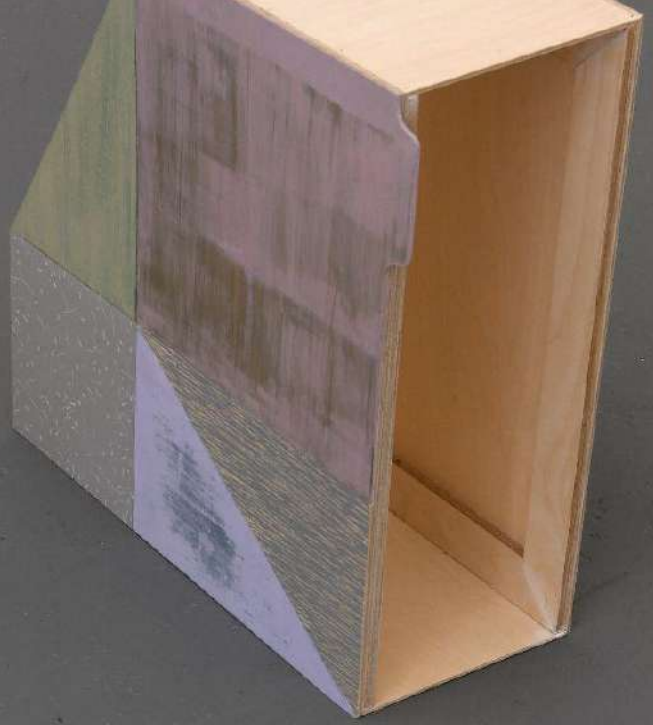


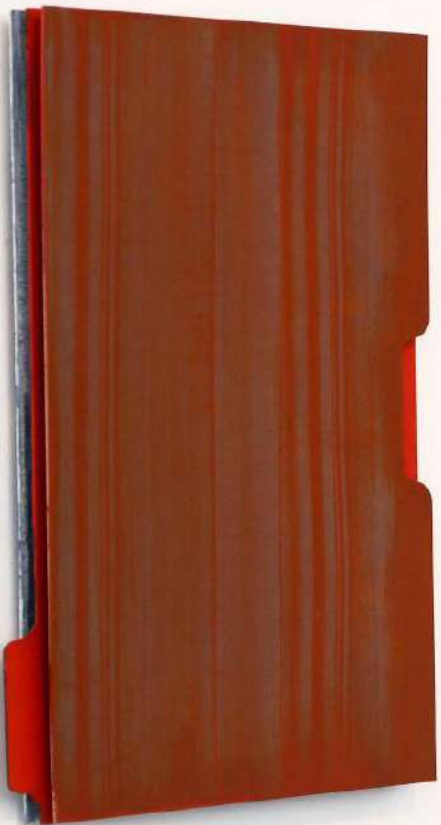










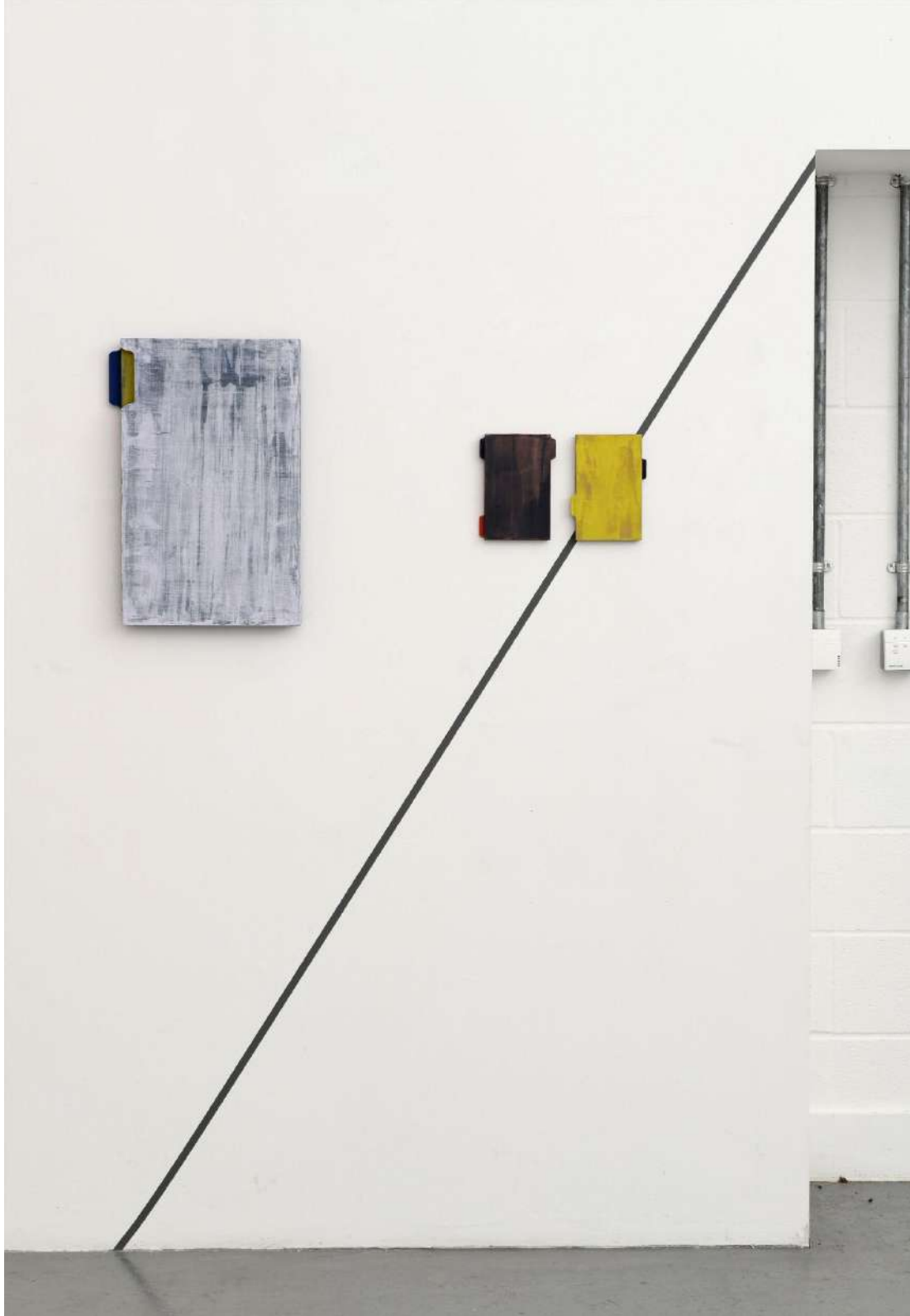


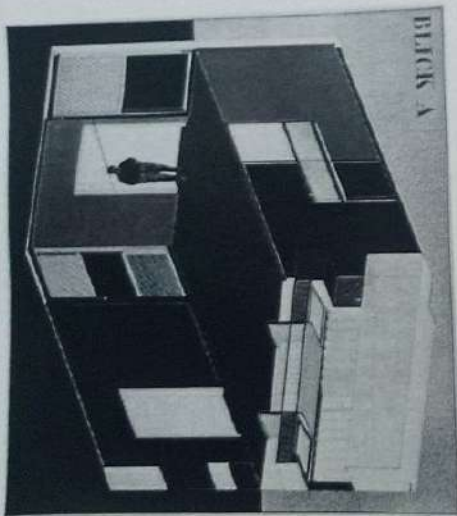




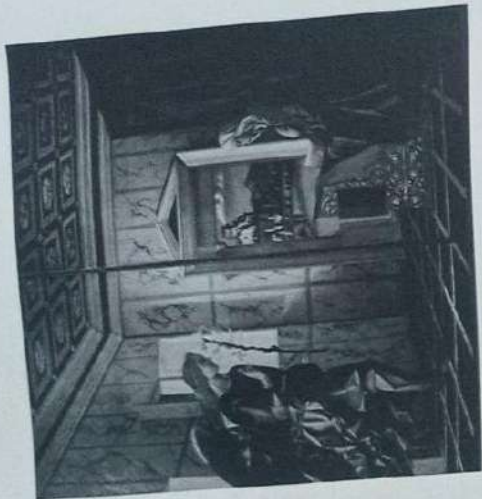








overlaid room plans:
interior



overlaid room plans: Lissitzky's diagram for a demonstration room and Bellini's divided renaissance

- § Bellini's Angel of the Annunciation and Virgin Annunciate, commissioned as organ shutters for Santa Maria dei Miracoli in Venice circa 1500, and now installed in the Gallerie dell'Accademia.
- || Lissitzky's Kabinett der Abstrakten was an experiment in exhibition design, commissioned in 1927 as a self contained room structure within the Landesmuseum in Hannover, and destroyed in 1936 phi 1.618033988749..
- ⊕ Yves-Alain Bois describes this spatial disorientation as an instance of 'radical reversibility' Bois El Lissitzky: Radical Reversibility Art in America, April 1988: 174-175

incomplete notes for room plan

An installation by Moyra Derby

studio 3 Gallery School of Arts Jarman Building University of Kent Canterbury CT2 7UG
12 April - 11 May 2022

These numbered notes follow the Sophie Germain Prime sequence 2, 3, 5, 11, 23, 29, 41

note 2

Counting: The act of counting is close to the action of pointing. Notch by notch, to mark in order to catch hold of or make sense of duration or recurrence. Counting depends on equivalence and also on difference. Counting separates figure from ground. Counting gets close to thinking about painting.

note 3

Schemas: In 'room plan' two depictions of rooms from art history are overlaid in my imagination. 1: a perspectively mapped room from 1500, gridded and light filled, with two figures in profile, one caught in movement on the threshold, the other head inclined, absorbed in reading §; 2: an axonometric diagram of a room from the 1920s, spatially reversible and without recession, with a single cut out figure framed in a doorway ||. Both rooms offer schemas of interior space, and each offers various models for the attentional capacities we might bring to painting.

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note 5

Index: Entering by the main doorway in 'room plan', if you move from left to right, a number key is the first wall work. The tabs of index card dividers have been modified to offer 10 distinct shapes, designated as the digits 0-9. Inset tabs are even digits, protruding tabs are odd. If you can hold the spacings in your head the numerical values of other works become readable. Index cards are made to be handled, and the tabbed shapes offer spaces for fingers to rest. An index is also a storage system; here it is paint and the residue of touch that is collated and contained.

note 11

Indecision: In 'room plan' decisions about size and ratio are preset, the measurements of individual panels are on a phi ratio Φ . Visualisations of Pythagoras Theorem $a^2 + b^2 = c^2$ circulate endlessly. Using a diagrammatic demonstration of ratio avoids an expectation of compositional originality, and yet enables novel colour and shape combinations as the components are moved and reassembled, facilitating indecision and interdependence.

note 23

Protagonist: The works in 'room plan' accommodate the attentional requirements of a specific historical figure, French mathematician Sophie Germain. The biographical and numerical frameworks offered by Germain gives the work the task of referring to content outside of itself. Recognition of Germain's innovations in number theory means that a special category of primes is named after her. In 'room plan' Germain is imagined as the protagonist, steering the works through production and reception.

note 29

Narrative: The compositional geometries of 'room plan' might seem to assimilate the history of abstract painting, but they assert a communicative function that discourses on abstraction tend to reject, offering compositional proof of a mathematical concept or carrying the responsibility of representing complex numbers. The works are invested in staging narrative, between the various components, the references they might evoke and the viewer or participant moving through the space.

note 41

Interruption: The depiction of the room from 1500 has a structural anomaly. The finely rendered description of interior space, attributed to Giovanni Bellini, is cut across 2 panels. Spatial continuity and narrative reading is interrupted by a concrete division. This cut is hard to account for when encountered as a wallbound work, but it needs to be reimagined with its original architectural setting and function; the two panel work masquerades as a painting in a gallery setting but is in fact a set of doors made to cover a church organ. Intended to open and close regularly, depictive decisions are in conversation with its role as an adaptive structure. Incorporating actual edge in the midst of illusionistic renderings of edges, it interrupts an expectation of stable pictorial space, and opens up a spatial and durational contribution for painting.

note 89

Flux: The axonometric diagram of a room is a cover design for modernist magazine *Broom*, designed by El Lissitzky in the early 1920s. It presented a room plan for his *Kabinett der Abstrakten*, a structure designed to house abstract paintings even as Lissitzky dismissed their pictorial limitations. The rotatability of the room design is marked by Lissitzky as a shift from A to B, the position of a magazine laid flat on a table top providing a positional prompt for breaking a single point of view ¶. Lissitzky referred to the *Kabinett* as a demonstration room, with its moveable wall sections and optically responsive striated surfaces contributing to a spatial and presentational flux.

note 113

Alignments: The components of 'room plan' invite movement through the space, and orchestrate pauses and shifts in spatial and attentional alignment. Individual works point out of themselves to other works, configurations of works are provisional and invite direct and imagined reconfiguration. Focus and dispersal, attention capture, divided attention and distraction are all called upon as positive and interdependent attentional responses.

note 131

Staging: In the centre of 'room plan' double sided panels screen parts of the space. The invitation to compare one side to the other requires memory recall. Titled 'scene dock' in reference to an off stage area that temporarily stores scenery, they provide a makeshift staging for movements through the space.

note 173

Edges: When building Sophie Germain primes using the index format, the order of the digits works front to back, following the facing logics of painting. Edge becomes an important compositional factor, as small chips of colour and process from the lower digits remain discernible, and pulls attention from centre to the periphery. The larger the number the further the painting extends into space; painting as surface and painting as object gets reiterated digit by digit. Then in the picture structure series, the edge of the theorem diagram can be cut or contained. The framing edge suggests the work's closure but also can be used as a ledge that invites a compositional edit.

note 179

Pseudonym: But that told you nothing about Sophie Germain, and yet it is the slippage of identity that is part of how the protagonist might operate. Born in 1776 Germain used a male pseudonym and the anonymity of letter writing to bypass the restrictions she faced as a female mathematician in the early 19th C. The biographical and numerical frameworks offered by Sophie Germain give the work the task of referring to content outside of itself, and a responsibility to a wider social context.

note 191

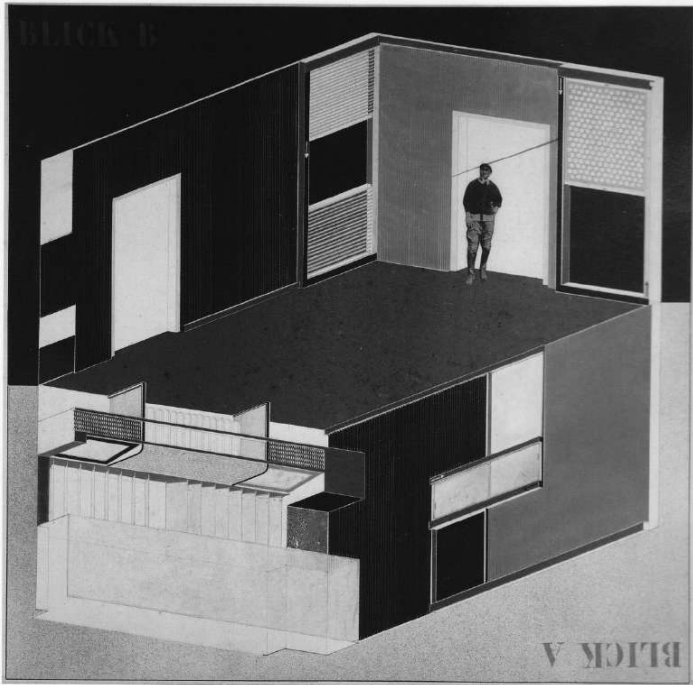
Equivalence: The room as a measured space, equivalent to the space of painting. From the blankness or ornamentation of walls and floor, to the mapping of recessional space and spatial enclosure, to the compositional divisions of edges, doorways and windows. The component based nature of the works in 'room plan' are space responsive and space making, and their pictorial qualities allow for spatial depiction.

note 233

Contact: The works are made under the conditions of touch, and are open to being handled. First in the studio as speculative components and then as shiftable units in a space that invite contact and acknowledge a collaboration between tactile and visual perception.

note 239

Reimagining: 'room plan' reimagines the attentional capacities we bring to painting. Prompted by the thought that the visual, tactile, spatial, durational and imaginative registers of painting offer perceptual circumstances that are conducive to the adaptability, fragility and responsiveness of attention. The figure in the doorway is perpetually ungrounded, the figures in profile unresolvable in divided potential.



overlaid room plans:

Lissitzky's diagram for a demonstration room and Bellini's divided renaissance interior

- § Bellini's *Angel of the Annunciation and Virgin Annunciate*, commissioned as organ shutters for Santa Maria dei Miracoli in Venice circa 1500, and now installed in the Gallerie dell'Accademia
- || Lissitzky's *Kabinett der Abstrakten* was an experiment in exhibition design, commissioned in 1927 as a self contained room structure within the Landesmuseum in Hannover, and destroyed in 1936
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Narrative: The compositional geometries of 'room plan' might seem to animate the history of abstract painting, but they assert a communicative function that discourses on abstraction hard to reject, effecting complementary proof of a mathematical concept or carrying the responsibility of representing complex numbers. The works are invested in staging narrative, between the various components, the references they might evoke and the viewer or participant moving through the space.

note 41

Interception: The depiction of the room from 1900 and the structural geometry. The finely numbered inscription of interior spaces attributed to Constantin Mallin, is cut across?2 panels. Spatial continuity and narrative reading is interrupted by a concrete division. The cut is hard to work, but it needs to be reimagined with its original architectural setting and function: the two parallel work surfaces as a painting in a gallery setting but is in fact a set of doors made to cover a church organ. It opened to open and close regularly, suggestive of a door in a church organ. The role of the cut is to suggest a structural division. Interpreting actual scenes in the midst of illuminative connotations of walls, it intercepts an operation of stable pictorial space, and speeds up a spatial and directional contribution for painting.

rebuild room plans: Lissitzky's diagram for a reconstruction, 1900 and Sophie Germain's circular construction, 1920

- 5 Mallin's floor plan of the reconstruction of a room, 1900, with the circular construction of Sophie Germain's diagram, 1920, overlaid on it.
- 6 Lissitzky's diagram for reconstruction, 1900, with the circular construction of Sophie Germain's diagram, 1920, overlaid on it.
- 7 A self-referential room structure, which is a reconstruction of a room, 1900, with the circular construction of Sophie Germain's diagram, 1920, overlaid on it.
- 8 The diagram shows the spatial organization as an instance of 'spatial reversibility' (see also: Lissitzky: Spatial Reversibility Art in America, April 1989: 192-193)

incomplete notes for room plan

An Installation by Moyra Derby
 10001 Colby School of Art, Human Building, University of Kent, Canterbury CT2 7PU
 12 April - 11 May 2022

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Edges: When building Sophie Germain primes using the index format, the order of the digits works front to back, following the facing logics of painting. Edge becomes an important compositional factor, as small chips of colour and process from the lower digits remain discernible, and pulls attention from centre to the periphery. The larger the number the further the painting extends into space; painting as surface and painting as object gets reiterated digit by digit. Then in the picture structure series, the edge of the theorem diagram can be out or contained. The framing edge suggests the work's closure but also can be used as a ledge that invites a compositional edit.

note 179
Pseudonym: But that told you nothing about Sophie Germain, and yet it is the slipper of identity that is part of how the protagonist might operate. Born in 1776 Germain used a male pseudonym and the anonymity of letter writing to bypass the restrictions she faced as a female mathematician in the early 19th C. The biographical and numerical frameworks offered by Sophie Germain give the work the task of referring to content outside of itself, and a responsibility to a wider social context.

note 191
Equivalence: The room as a measured space, equivalent to the space of painting. From the blankness or ornamentation of walls and floor, to the mapping of recessional space and spatial enclosure, to the compositional divisions of edges,

doorways and windows. The component based nature of the works in 'room plan' are space responsive and space making, and their pictorial qualities allow for spatial depiction.

note 233

Contact: The works are made under the conditions of touch, and are open to being handled. First in the studio as speculative components and then as shiftable units in a space that invite contact and acknowledge a collaboration between tactile and visual perception.

note 239

Reimagining: 'room plan' reimagines the attentional capacities we bring to painting. Prompted by the thought that the visual, tactile, spatial, durational and imaginative registers of painting offer perceptual circumstances that are conducive to the adaptability, fragility and responsiveness of attention. The figure in the doorway is perpetually unaccommodated, the figures in profile unresolved in divided potential.

note 53

Label: Attention, as perceptor's selective interface, operates like the framing of a picture, the social demand to pay attention acknowledges the oscillations of attentional attachment and the limit in attentional capacity, but as a collection, anxieties about a deficit in attention are focused by attention understood as a community. Les Eleveurs translated as forcedly value in a market of competing pulls on attention.

note 83

Association: The exponential nature of prime sequences is a numerical way into thinking about how processes of association are generative within the visual and material conditions of a painting practice. A prime number is a number that is only divisible by itself and 1. A Sophie Germain prime is a specific category of prime number that produces another prime through doubling and adding 1. The primes they generate are termed Safe Primes, establishing a pairing of numbers that are used in cryptography. The correspondence series tracks Sophie Germain Primes and their Safe Primes also that Safe Prime is also a Sophie Germain Prime. As 1019 is in correspondence to 2039, so associations in 'room plan' can jump the spans and contexts.

note 23
Protagonist: The works in 'room plan' accommodate the attentional requirements of a specific historical figure, French mathematician Sophie Germain. The biographical and numerical frameworks offered by Germain give the work the task of referring to content outside of itself. Recognition of Germain's innovations in number theory means that a specific category of prime is named after her. In 'room plan' innovations in number theory means that a specific figure, French mathematician Sophie Germain, is named after her. In 'room plan' innovations in number theory means that a specific figure, French mathematician Sophie Germain, is named after her.

note 11
Indications: In 'room plan' decisions about site and ratio are given, the measurements of individual panels are given as 10:1 ratio & 10:1 ratio of Pythagorean Theorem $a^2 + b^2 = c^2$ calculate endlessly. Being a diagrammatic demonstration of ratio avoids an expectation of compositional originality, and yet enables novel contact and shape comparisons as the components are moved and reassembled, facilitating identification and interdependence.

note 5
Index: Numbering by the main doorway in 'room plan', it is the index that is the key to the work. The index is also a storage system: here it is point and leaded shapes offer space for figures to rest, and leaded shapes are made to be handled, and the leaded shapes offer space for figures to rest, and lead the numerical values of other works become readable. Index cards are made to be handled, and the index is also a storage system: here it is point and leaded shapes offer space for figures to rest, and lead the numerical values of other works become readable. Index cards are made to be handled, and the leaded shapes offer space for figures to rest, and lead the numerical values of other works become readable.





