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Gestural Minimalism: Developing a Pictorial Model in Light of Deleuzoguattarian and *Enactive* Theories

This thesis is submitted for the Degree of Doctor of Philosophy

at the Lancaster Institute of Contemporary Arts.

September 2018

To my Dad

Declarations

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Abstract

The purpose of this practice-based research project is to define a dynamic and non-representational model of abstract painting based on Deleuzoguattarian philosophy of *becoming* and Varela et al.'s *enactive* model of cognition. The aim was to integrate it to my own pictorial practice, which, before engaging in this research, was only based on geometric abstraction and, which I considered was too static and representational. Consequently, a principal practical outcome of this project is a hybrid pictorial style – between static and dynamic approaches – that I call *gestural minimalism*. I first discuss antecedents of non-representation in painting by introducing the use of Euclidean geometry in abstract painting during early 20th century. This leads to a discussion about different conceptions of pictorial representation and abstraction from two perspectives: a transcendent (static) and an immanent (dynamic), and further to the argument that paintings based on geometric shapes reflect static models of thought. The dynamic model is developed theoretically, through research and analysis of painting by Lee Ufan, Simon Hantai, Agnes Martin, Eva Hesse and Jane Harris and, practically, through my own practice. I present fractal geometry, a principal referent in *gestural minimalism,* to introduce a non-exact but relational approach to this science. This model is non-representational because is based on reciprocity. This concept is also a main idea of the *enactive* framework used in this project. I analyse painting as an enacted practice and a co-emerging assemblage in *becoming*, where a

reciprocity between medium and painter co-functions to shape meaning. Painting is also explored as an artefact for extended cognition and as intensive processes that can grant individuals the access to abstract psychological spaces. The aim is to examine the capacity of the medium to facilitate the actualisation and modification of affective registers, and to aid processes that aim at transforming an individual's identity. Haptic properties of pictorial surfaces are signalled as primary non-representational elements, whose traces are document of enacted processes of making that can give relevant information about cognitive and psychological features of individuals.

Research questions

How might we define through practice a dynamic and non-representational model of painting based on Deleuzoguattarian immanent smooth space and Varela et al.'s *enactive* model of cognition?

Supporting questions

How can elements of a dynamic and non-representational model of painting be integrated within a highly static and representational pictorial practice of geometric abstraction?

Does a dynamic and non-representational model of painting facilitate processes that aim at transforming an individual's identity?

How can a pictorial method that integrates strategies of painting, hand-weaving, meditation and pixel-based digital images be created through practice?

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Format considerations

* Unless stated, any italics within direct quotations are the author's.

I -   Introduction

  1.   An *enactive* non-representational model of abstract painting

This thesis is part of a practice-based research project that aims at elaborating a dynamic and non-representational model of abstract painting using principally a Deleuzoguattarian philosophy of *becoming* and an *enactive* model of cognition (Varela et al. 1991). These philosophical and cognitive models propose a dynamic relation between individuals and the material world in which none precedes the other, but reciprocally co-create each other and continuously co-evolve through time. The relevance of the ideas presented by these dynamic models, encouraged me to use them to analyse the relation between painters and the medium during the practice of painting.

A first motivation of this research came from the feeling that, before engaging in it, my pictorial practice – which was exclusively based on geometric abstraction and fractal geometry [figure 1] – was not relevant in relation to more contemporary ideas. I thought my practice was too "static", formalist and representational. I do not consider these attributes as bad, but I thought they were making my work to be sort of outdated in relation to more contemporary philosophical and academic contexts. These are filled with ideas addressing a more "dynamic" view of the world through the use of concepts such as immanence, time, action, complexity, emergence or transformation, to mention some, and I wanted that my work could stablish dialogues with those ideas. Consequently, the aim to develop a dynamic and non-representational model, was to integrate elements of it within my highly static and

representational practice. Thus, a principal practical outcome of this practice-based research project is a hybrid pictorial style – between what I defined here as "static" and "dynamic" approaches – that I call *gestural minimalism (GM)* [figures 2&3].
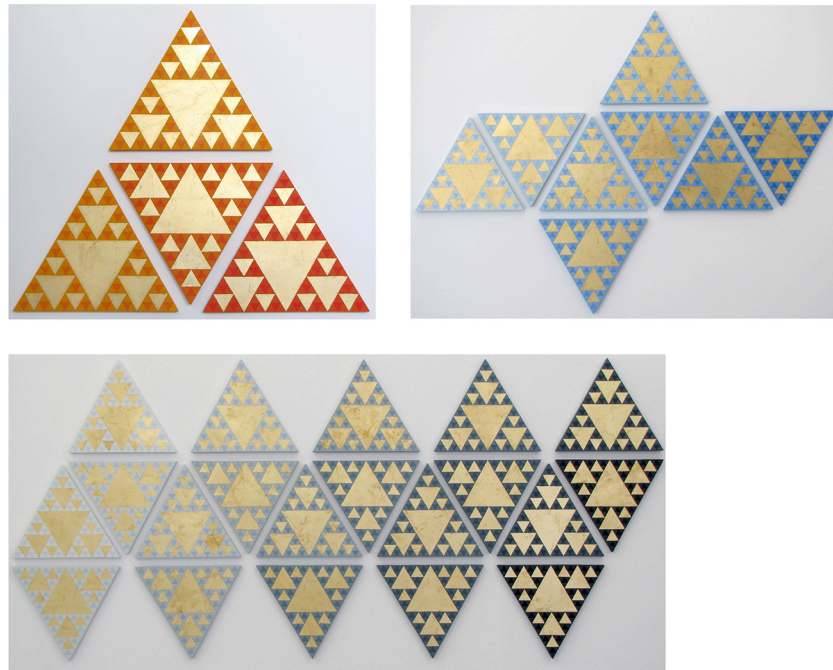
1. *Fractals: Platonic Solids: Un/Folded* (2013) – Macarena Rioseco – Tetrahedron (up left), Octahedron (up right), Icosahedron (down) – equilateral triangles of 300/250/200mm side – egg tempera and gilding (coper and zinc alloy) on wood.

For example, a dynamic aspect of *GM* is that is has a strong focus on movement, as it consists of the repetitive performance of a singular pictorial gesture. This gesture is reduced, rhythmic, regular and precise. It draws from mechanical movements typical hand-woven and hand-knitted textile techniques and I also relate it to natural repetitive rhythms of waves, vibrations and breathing. I experience the practice of *GM* as a meditation that attunes with my body, triggering soothing affective sensations and a peace of mind, enabling me access to a Deleuzoguattarian immanent smooth space.
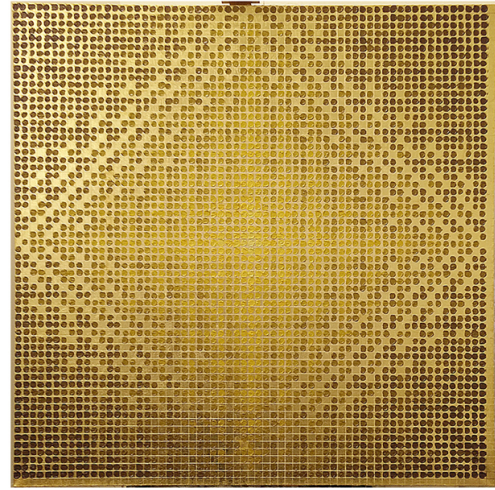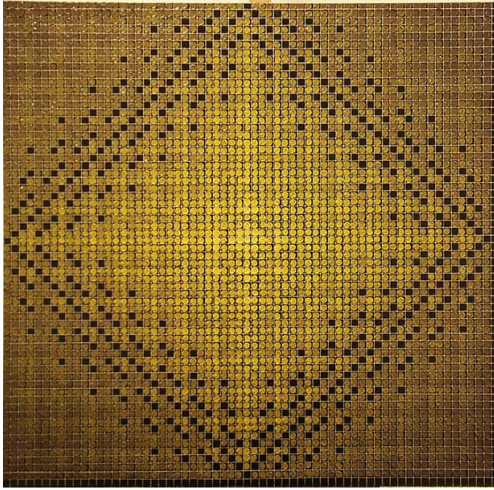
2. *Atoms (diptych)* (2015) - Macarena Rioseco - cotton threads, gilding (copper and zinc alloy) and oil on canvas - 96x96 cm (each).

3. *Atoms* (details) - Macarena Rioseco - cotton threads, gilding (copper and zinc alloy) and oil on canvas.

On the other hand, when composing a work, I begin by dividing the pictorial plane in a grid. This I argue, is a static element of my practice. Then, I place the marks produced through this repetitive brushwork inside each square. These strokes cover all the plane's surface and are regularly distributed. Every mark is a small amorphous monochrome unit, whose imprinted textures and haptic properties are evidence of the tool I use (a brush), the repetitive minimal movements performed, and the sharp focus

I maintain throughout. Accumulations of strokes on the pictorial plane compose fragmented surfaces with multiple variations of a brushstroke that together structure continuous chromatic degradations. Due to the level of detail, a strong relation between parts and wholes is a marked characteristic of my paintings. From afar, the images in the paintings look like continuous textured surfaces. However, from close up the individuality of each stroke gains presence and the aggregate nature of the compositions is evidenced. Visually, my paintings suggest a variety of associations ranging from op-art work, such as Victor Vasarely (1906-1997) [figures 20-23] or Matilde Pérez (1916-2014) [figures 24 and 25], light and water waves, hand-woven textiles and pixel-based digital images.

In this thesis I discuss whether the use of geometry in abstract painting, a former non-representational approach to painting, analysed from this dynamic perspective, can also be considered as representational. I argue the dynamic model proposed here stands truly in opposition to representation because it explores painting primarily as material and intellectual practice that, instead of representing, has the capacity to construct a reality and to produce concrete ontological repercussions.

Concerning non-representation, this project aims to define a model of painting whose principal focus is the analysis of its performative and material dimensions. This model considers that, rather than representing a world, painting has the capacity to construct new ones. I develop an understanding of painting as mixed 'assemblages' (Deleuze and Guattari 1988) of objects (material and abstract) and individuals, formed through *actions* (mobile and immobile) (Engel et al. 2015) performed by the latter. I look at

relations established between subjects and objects within pictorial processes and their specific roles, aiming to find elements of reciprocity between them.

I propose the different agents of these 'acting ensemble[s]' (Sampson in Bolt 2004: 78) are not closed and fixed *beings*, but are assemblages in themselves. Therefore, these are Deleuzoguattarian 'multiplicities' (1988). I also endorse a temporal view of assemblages as agents in constant change and always in processes of *becoming*. Consequently, this non-representational model of painting advocates an approach to 'the world as an endless and contingent constellation of encounters between all kinds of human and non-human elements' (Beyes and Steyaert 2011: 103). I use this perspective to examine how within pictorial practices, objects, individuals and *actions* are woven together through unfolding reciprocal interactions that generate meaningful work through time.

Regarding enaction, this project proposes an enquiry of pictorial practices as embodied cognitive processes (Macleod and Holdridge 2005) of enacted and non-verbal material thinking (Carter 2004). I propose to look at pictorial materials and tools as artefacts that couple with our bodies and thus, as devices for extended cognition (Clark 2011). The aim is to explore contributions of those material resources in joint sense-making processes through practice. Crowther (2017: 3) argues 'our body orientates us towards the world, and drawing and painting do this with a complexity that exemplifies intuitive meaning'.

I explore how *actions* performed by an individual when entering into contact with pictorial materials can be seen as resonating with that individual's 'singularities' (Deleuze and Guattari 1988) characterising personal Deleuzoguattarian (1994)

'affects'. Examples are subconscious psychological qualities or states of mind. In addition, the ways objects react to individuals' manipulations are observed to uncover singularities of those objects too. An object's singularities are discussed using Gibson's (1986) *affordances* to determine their role within assemblages. Overall, this project questions the capacity of painting's material dimension to facilitate accessibility of individuals to Deleuzoguattarian (1988) 'smooth spaces'.

I pursue this by analysing haptic and optic elements in paintings of various artists and also my own works to look for traces of singularities of all agents composing the acting assemblages. Pictorial haptic properties are proposed as non-representational traces left by gestures, and are central objects of enquiry, whereas, optic elements can be representational, as well as, non-representational. Crowther (2017: 1) describes the practice of pictorial mark making as 'the autographic making of the picture' and observes that the 'relation between gesture and outcome gives drawing and painting intrinsic significance' (ibid.). Considering pictorial images as 'records of movement[s]' (ibid. 3), I examine in detail particular bonds and tensions between haptic and optic visualities, or between 'materiality and its way of projecting virtual space' (ibid.), or between non-representational and representational properties of paintings. The goal is to identify their roles within the discipline's specificity in relation to a coexistence of 'two levels of reality' (ibid.) — one immanent and one transcendent — particularly in pictorial works. I agree with Crowther that pictorial marks contain meaning that is extended deeper and differs from what a painting might represent. Accordingly, these two levels of reality – of haptic and optic visualities – contain different levels and kinds of meaning. In light of this, I propose that haptic meaning is non-representational, whereas optic meaning can be of both natures.

My stance differs from Crowther's because his main concern is on the metaphysical implications of the aesthetic experience, while my approach's main interest is ontological. For Crowther (2017: 2) '[d]rawing and painting have a gestural and ontological *subconscious*'. This subconscious is contained in material characteristics of pictorial surfaces and linked to 'the very act of marking' (ibid.) it, whereas I propose that pictorial gestures are recorded in haptic properties of surfaces, hence, these properties can give information about the ontological subconscious of individuals. Accordingly, in this thesis I will focus principally on ontological ideas, and I will not address metaphysical issues. I examine the competence of painting as a means to access, experience and modify individuals' psychological smooth spaces. Ultimately, I aim to understand whether practices of painting can facilitate processes of Guattarian (1995) 'resingularisation'. For example, I discuss later how my approach to painting strongly resonates with a personal affective register whose singularities are in tune with Worringer's (1908: 4) 'urge to abstraction'. This awareness has allowed me to modify these singularities inclining them towards an 'urge to empathy' (ibid.) by means of painting. Nonetheless, this thesis does not aim to develop psychotherapeutic aspect of painting, neither does my practice and it is not a thesis engaging with art therapy. It focuses principally on analysing how the medium of paint and the practice of painting can give information on cognitive processes of learning in the context of a creative practice, and to reflect on their possible ontological implications.

Accordingly, I propose a view of painters' identities as multiple assemblages constituted through unfolding dialogues between individuals (subjects) and paintings (objects). I also endorse a dynamic account of these identities, not as fixed *beings* but

as assemblages in *becoming* that are affected by every new work composed and by the changes of the extended network to which they belong. Regarding enaction, a painter's identity is co-created by the individual and the paintings, hence, both are equally responsible for the painter's *becoming*. I use my own experience as a painter to explore the power of artificially constructed identities to transform individuals' singularities and to develop new subjectivities.

Consequently, this practice-based research project seeks to theorise the pictorial, that is, what a painting is made of and how the work of painting works. I focus on the 'once-traditional material support' (Rottmann in Geimer et al. 2012: 10) to produce theoretical and practical outcomes. These are consequences of an acute engagement with pictorial materials and methods in the context of an introspective practice. I analyse methods of my practice, aiming to discover elements that define its intellectual activity. I also examine my paintings, seeking to identify traces of enacted processes of painting underlying their physical appearances. I explore whether those features can reveal information about intuitive levels of meaning and the ontological subconscious of individuals.

2.   Hybrid pictorial methods

The question about painting's role within contemporary society in relation to its extended cultural context – such as history, emergent digital technologies, political activism or the market – has gained increased attention, deviating it from a scrutiny of materials and methods. Crowther argues that paintings and drawings' material natures

are in conflict with their condition as cultural objects. For him 'the more networking is labored as the main cultural *entrée* to drawing and painting, the more their status as material practices is suppressed' (Crowther 2017: 2). For instance, Rottmann and Joselit think a painting's network is more important than its material characteristics. In Rottmann words, paintings are not 'self-contained entities', hence, their meaning and value depend on other factors, such as historical and social conventions (in Geimer et al. 2012: 11). Joselit (2009: 125) claims a painting exists and signifies only in relation to other works, and stresses 'painting has always belonged to networks of distribution and exhibition'. He mentions the painter Kippenberger, who believes that 'an individual painting should explicitly visualize such networks' (ibid.).

For instance, contemporary artist Jutta Koether's exhibition *Lux Interior* (2009) mainly draws on pictorial networks. She combines painting, performance and installation to create a space alluding to theatrical scenarios. She treats the only painting presented, as a character placed at the very edge of the stage, half of its body occupies the space while the other half is out of it. She also makes references to how the work relates to art history (Poussin) and theory (Clark 2006). Joselit (2009: 128) indicates that Koether's work is not intending to represent the social network it belongs to, but 'actualizes the *behavior of objects within networks'*. I acknowledge the non-representational efforts of this exhibition, in particular objects' treatment as subjects to question their roles within networks. Nonetheless, in treating painting as a character on stage, Koether has reduced all matters of painting only to a problem of narrative and left aside any question regarding pictorial language (materials and methods). In this exhibition, questions of what constructs pictorial narratives and how these are composed have been overlooked by a predominance of questions about roles

of painting within a wider artistic context. Consequently, I argue that this exhibition is about painting, but I would not consider it a work of painting.

I agree with Crowther that assigning principal roles to contextual matters in pictorial signification risks overlooking relevant aspects of these objects' physicality. For instance, Joselit describes ready-mades integration, monochrome productions and serial paintings as efforts to make explicit '*the status of painting as matter*' (ibid.). However, I see these methods as efforts to extend painting's territory towards other disciplines, also as deviations from attending to the medium's materiality. Actually, pictorial cultural contexts are highly unstable and easily susceptible to changes, such as constructions of new works or new interactions with viewers. Hence, in my view analyses of works based on extended networks will provide greater information about those networks rather than about the paintings.

Bois wonders whether is possible to theorise the pictorial without falling into loose claims and contrive connections failing to recognise the value of this practice's material dimension. He also questions if it is possible to entitle a place to 'the theoretical in painting without doing violence to it' (1993: 245) and to articulate a theory of painting without neglecting 'painting's specificity [… or attaching it to a sort of] applied discourse' (ibid.).

In light of this prevalent discussion around painting, my main research question – How might we define through practice a dynamic and non-representational model of painting based on Deleuzoguattarian immanent smooth space and Varela et al.'s *enactive* model of cognition? – aims to address some of these issues concerning

painting's specificity, while also integrating it within a wider contemporary interdisciplinary discussion. The practical side of this practice-based research project focuses principally on pictorial materials and methods. A goal was to pursue a traditional practice of painting in terms of materials – that is, using oil, acrylic and gilding on canvas – but hybrid in terms of methods, by introducing compositional techniques from other technologies such as hand-knitting and digital media. The particular resemblance of images produced through those means encouraged me to search for a common territory where elements of both could coexist, mediated by painting. A challenge was to compose a pictorial method that integrates elements of hand-weaving and hand-knitting techniques, and pixel-based digital images, but crucially, without neglecting the materiality of the pictorial medium.

My intention was to translate a hand-knitting or hand-weaving method — that is, reduced, mechanical and repetitive movements that produce continuous and aggregate surfaces — into a pictorial method. For matters of this translation or 'blending' (Morley 2015) between painting and hand-woven pieces, I appropriated elements of these textile techniques, such as counting, repetition, and designing compositions based on multiple accumulations of only one monochrome square, which is the only compositional unit I use. Also, as discussed more in chapter IV, using the grid as a basic structure is another characteristic of woven pieces. Apart for woven surfaces, uses of monochrome squares as a basic compositional unit is characteristic of mosaic and pixel-based digital methods. I see the pixel as a digital revisitation of representational methods of those older traditional techniques. For instance, Harland (2009b: 79) discusses 'the early development of the computer is linked to the punch cards of the automated loom', which was a contribution of the English mathematician

Ada Lovelace. Constructive methods of all media mentioned above are based on accumulations of simple units that together construct more complex wholes, presenting the emergent property of depicting continuous images.

Consequently, an aim of the practical side of this practice-based research was to break the 'formal and semantic structures' (ibid.) of a traditional practice of painting through integrating methods of other socially less-valued practices to create pictorial works, which are materially traditional, but hybrid in their compositional methods. In this thesis I only briefly address handmade textiles and digital practices, and only in relation to the integration of their compositional methods within my practice. I do not develop with depth any aspect of these practices, because that is not relevant for the main purpose of this research, which is analysing the contributions that the pictorial medium can offer to the understanding of cognitive processes enacted within the development of a creative practice.

In the context of discussing the Korean pictorial movement Dansaekhwa, Morley (2013: 207) observes that 'forms of hybridity [are] found where cultures meet and merge'. This mixed style of abstract painting emerged from the influence of 'modern Western art but also [from] the inspiration of indigenous artistic technique, of philosophical traditions' (ibid. 195). Morley (2015: 475) observes that hybridity as a concept is widely used in the West 'to critique essentialism'. It is also commonly used to address postcolonial issues and 'to discuss the clashing and binding of cultural influences' (ibid.) produced by influences of dominant nations over weaker ones.

Similar to Dansaekhwa a 'complex […] weave of ideas […] underpin[s]' (Morley 2013: 198) my practice. My work is also hybrid and is a product of a South-American culture that is indigenous, ritualistic, handcrafted, post-imperialist, theocratic, multicultural, conservative, liberal, technological and digital. More concretely, my work is rooted in traditional practices such as hand-weaving and hand-knitting, painting, gilding, drawing, writing, rituals and meditation. However, it also draws from newer technologies such as modern mechanised processes and digital media. Influences of traditional media make my paintings convey 'a very strong sense of *process*' (ibid. 201) whereas, impacts of technological and digital culture are reflected in serial and repetitive elements that give machine-like qualities to my works. Ritualistic aspects of my paintings come from weaving practices. Tapestry weavings are crucial elements of ancient Latin American indigenous cultures. The ritualistic performance conducted by women during the production of these weavings, involving reverence and devotion, acknowledges the importance these have within those groups. These practices and objects are considered to be expressions of their philosophy and sacred. Also, some of these pieces are created for ceremonial contexts and for special rituals such as those for worshiping ancestors, where advice is asked for the living. The presence of elements of ritual in my work is also influenced by religious practices that relate to an early Roman Catholic education and to later discoveries of other Latin-American indigenous ancestral traditions and ceremonial practices. Exceptionally, the ritual of meditation also influences my work. This reflects the filtering of 'East Asian philosophical and religious concepts […] into Western [and also Latin American] cultures since the nineteenth century' (ibid. 204, 205). For all of these reasons, I live my practice as a ritual existing as 'a dynamic suspension between' (ibid. 204) painting, weaving, pixel-based images and meditation. Despite

the presence of these elements of ritual in my practice, in this thesis I will not develop with depth any idea related to the topic of religion or spirituality. The reason is that, as discussed above, similar to metaphysics, art therapy or psychotherapy, due to the hybrid nature of my practice – which integrates many different concepts, ideas and practices by means of painting – all these topics that are somehow related to my practice are not very relevant in the context of the main objectives of this thesis, which are related to notions of ontology and cognition.

3.   Practice-based research methodology

Practice-based research methodology consists of processes of enquiry that integrate theory and practice through weaving ideas and critical theory within making processes. The aim is to embrace openings of new spaces where it is possible to bring forth to the world '[w]hat is "not yet"' there (Finley 2014: 532).

This methodology foments imagination and embraces emotional aspects of intelligence during learning processes, practices ideation and making processes, producing interpretations and knowledge creation. Finley calls 'critical arts-based research' (ibid.) these mixed processes of research and artmaking, highlighting their capacity to enable practitioners-as-researchers to critically analyse affective responses to personal experiences. For example, this practice-based research project on abstract painting aims to explore affective aspects of cognitive processes involved in making, observing and experiencing a painting. I also analyse in detail how my understanding,

experience and approach to painting changed dramatically as I engaged in research on Deleuzoguattarian *becoming* and Varela et al.'s *enactive* cognitive model.

A general goal of practice-based research methodologies is to develop theory about subjective aspects of human experiences, and to provide space to examine 'affective ways of being and knowing' (ibid. 690). This is contrasted to more traditional research goals such as 'truth finding, proofs' (Finley 2005: 683) and obtaining conclusions, which seek for and validate only reproducible objective outcomes. On the contrary, outcomes of critical art making-as-research are accounts of individual and subjective experiences of living that can further inspire others' experiences.

Moreover, artmaking-as-research involves mixed — physical and intellectual — cognitive processes. These practices engage body and mind, which work together in the efforts to acquire knowledge, manipulate materials and make sense of both together, through making. Lazzarato (in Zepke and O'Sullivan 2010: 102) observes the introduction of theory into art signifies a 'constitution of another assemblage in which manual labour and intellectual labour […] are caught up' forming an apparatus. For example, I explore processes of embodied cognition at play within my own practice-based research on painting. I propose that similar cognitive processes are also activated in viewers when encountering my paintings, who further respond by performing specific *actions*. Nevertheless, this thesis is presented as a topic that does not address the viewer's responses to the works produced. The reason is that instead of addressing the observer, this thesis aims at analysing, principally, the reciprocal dialogue and responses produced between practitioners and the pictorial medium within the very practice of painting.

A principal challenge of practice-based research projects is that outcomes should be empirical demonstrations informed by relevant theories and not mere demonstrations of theory. Therefore, links between theory and practice should make them both 'precede, prefigure and follow after one another' (Pickles 2004: 29). In other words, theory and practice should work together and co-function as if they were maps of each other. They should shape one another and influence how the other is seen, explored and comprehended. Knox-Williams (2012: 90) agrees that research approaches to art should not be simple illustrations, applications or reflections between theory and practice. She proposes a relation thought as '*activation[s]*' (ibid.) of theory through practice. As consequence of such interactions 'concepts [… are] extended, adapted' (ibid.) pushed and 'made operative' (Buchanan 2006: 119) through making. For example, my practice strongly resonates at a material level with a Deleuzoguattarian smooth space. I propose the activation between my practice and Deleuzoguattarian theory not in terms of cause and effect, as suggested by Knox-Williams, but of a *synergy* that activates an assemblage.

For Deleuze and Guattari (1988: 8) what characterises an 'assemblage is precisely [the] increase in the dimensions of a multiplicity that necessarily changes in nature as it expands its connections'. Nonetheless, creating an assemblage with a right balance between creativity and conceptual accuracy is one of the most delicate aspects of research approaches to art, since it is extremely easy to deform rigorous theoretical notions while being creative. In O'Sullivan's view, the challenge of using an interdisciplinary approach to Deleuze's thought is to preserve its 'pragmatic and constructive nature […] whilst at the same time creatively bringing it into contact with other worlds' (2006: 3), but most crucially, without deforming its meaning.

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4.   Action research methodology and deterritorialisation of errors

Action research differs from other methodologies because it supports a view of practices as valid sources to produce cultural knowledge. This methodology can be used to produce mixed research projects addressing theoretical and practical aims. Beyes and Steyaert (2011: 103) suggest 'the collaborative character of action research aims at generating both theoretical understanding and practical impact' and Drummond and Themessl-Hube (2007: 431) observe that the 'action research process is often motivated by theoretical standpoints as well as grounded in participatory practice'. Researchers within action research projects are also given roles of participants, hence, this methodology is extremely compatible with practice-based inquiries. Also, other 'participants become equal partners and co-researchers' (Dick and Greenwood 2015: 195). For example, I propose all the elements of the assemblages I form with materials, techniques, theory and actions are co-researchers and co-responsible for the outcomes produced. Dick and Greenwood stress '[a]ction research is done *with*, rather than *on*, the participants' (ibid.). In the same way, this methodology also supports subjective, personal and creative enquiries where researchers do 'not simply describe the world as it is, but also enact it' (Law and Urry 2004: 390). This is relevant, since, as Beyes and Steyaert (2011: 103) emphasise, 'different methods enact different worlds'.

Action research embraces projects combining action and reflection, and puts them in regular confrontation 'coupled together into an iterative cycle' (Dick and Greenwood 2015: 195). Iterative processes are repetitive cyclical operations (Drummond and Themessl-Hube 2007) using outcomes of one operation as inputs for the next one.

Spiral structures help to visualise the processes of 'informed trial and error driven by the evidence' (Dick and Greenwood 2015: 195) obtained in all previous operations, which this methodology defines. As a result, any final outcomes produced integrate resulting elements of every previous cycle undertaken. Consequently, the iterative and self-referent character of action research produces self-regulated cyclical processes combining practical engagement together with theoretical research.

The mixed methodology used in this project – between action research and practice-based research – structures iterative processes interweaving cycles of theoretical inquiry, painting design and making, and critical reflections. Outcomes, problems and findings of one cycle are used as information to design subsequent ones. Hence, while theory informs and shapes practice and its outcomes, simultaneously, these latter modify and contribute to the former's understanding and evolution.

Smith (2016) proposes artmaking can be used in combination with action research methodology as a method for Deleuzoguattarian deterritorialisation. Although she addresses social issues, this ensemble between artmaking, action research and deterritorialisation is also useful for creative and reflective practice-based research projects. Smith (2016: 38) describes a Deleuzoguattarian territory as an assemblage of 'objects, bodies, expressions, and qualities localizable at a specific point in space and time'. A territory is delimited by interaction between subjects, objects, ideas and actions that come together to produce knowledge. Meaning, for Deleuze and Guattari, is contextual and relational to other meanings. Accordingly, within processes of signification, objects form chains of relations with other objects and networks of meaning, or semantical territories. Deterritorialisation then, refers to practices of

expanding the network that something belongs to through establishing new connections to other things. Smith proposes it as a 'process of forming new ideas and ways of thinking [which further] changes the territories from which' things originate (ibid. 39). Consequently, through processes of deterritorialisation, objects 'change in nature and connect with other' (Deleuze and Guattari 1988: 8) territories or networks. In other words, it is a transformative process where what is transformed occupies new territories, and introduces new perceptions and ways of thinking.

Deterritorialisation in an interesting concept to analyse "errors" occurring during practice. When things do not work as planned, habitual modes of thinking are challenged and practitioners are forced to think differently. These moments are crucial because they shape practices from within, affect further decisions, guide the practice's evolution to new territories and determine outcomes produced. In painting, for instance, unexpected material behaviours suggest new directions and ways of doing, to painters. Thus, instead of being 'marked with a negative value' (Deleuze and Guattari 1988: 135), I propose an account of errors as creative elements and as agents of deterritorialisation.

For example, when working on sketches [figures 4-6] for my paintings I prepare each tone only once. After painting all the grid's spaces with that tone, I use the remains as a base to prepare the next one. If I forget to paint one space with its tone, afterwards it is difficult to mix the exact same tone again. In some of these sketches a few spaces are empty because I realised I missed them only after the next tones were mixed. Since they are sketches, I left them without paint. These tests crucially affected the technical evolution of my practice. They brought the idea to integrate empty spaces

within definitive compositions, which activated a figure and ground dynamics in later paintings, and opened a new array of possibilities of doing.
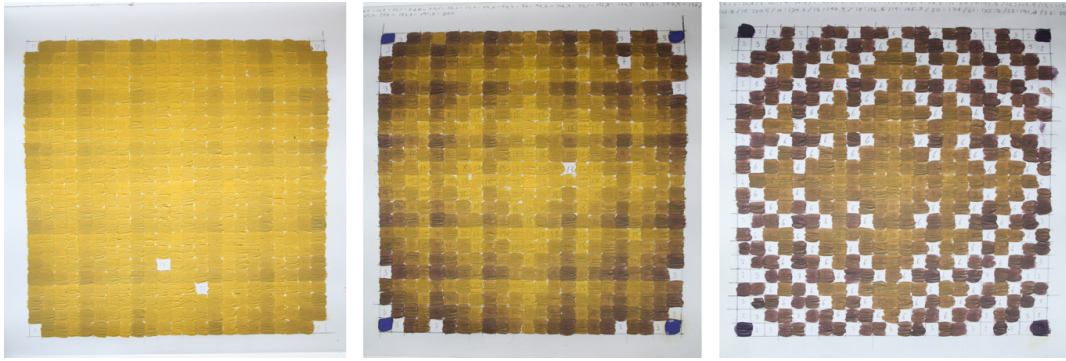
4-6. Sketches for *gestural minimalism* (2015) - Macarena Rioseco - acrylic and pencil on paper- 30x30 cm.

Consequently, what I previously considered mistakes (empty spaces in the grid) emerged as important compositional elements for deterritorialisation. They showed me new unthought directions and transformed my practice. Now I see errors as *events* that generate difference and opportunities for change.

5.   A practice-based research to revisit non-representation in painting

This practice-based research project contributes to the field of non-representation in abstract painting. It proposes a non-representational pictorial model endorsing dynamic and immanent models of thought consistent with Deleuzoguattarian (1984, 1988, 1994) philosophy of *becoming* and the aforementioned *enactive* model of cognition. I elaborate this model using several abstract painters' works as examples

and also articulating descriptions of my own practice's evolution, from representation towards non-representation. A main difference between these two approaches is while the former has a formalist focus and aims at constructing images, the latter's main goal is analysing the implications of material processes involved during the actual practices of painting.

As mentioned, the *enactive* and non-representational approach devised in this project proposes an analysis of painting as assemblages in *becoming*, which develop as dialogues between objects, individuals and *actions*. The role of all the agents of these assemblages are explored in this project to determine their inputs and responsibilities when producing outcomes. Deleuzoguattarian (1988: 7) 'singularities' is a key concept used to identify functions of each agent within these interactions.

The aim of analysing painting through this non-representational perspective is to enable an understanding of the works produced as designating enacted 'events' instead of depicting representations of essences. For example, Deleuze and Guattari (ibid. 427) observe that a circle is an Ideal *form*[1], an exact and transcendent essence. On the contrary, roundness is a vague and fluid quality that is different from, but always embodied in circles and round things. Then, through perspectives of this kind, any form is seen as outcomes of specific processes of formation rather than as fixed objects.

To outline the non-representational model, this thesis begins in chapter II, by discussing the use of Euclidean geometry as a pictorial resource to compose abstract

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[1] As discussed more in detail later, capitalised 'Idea' and italic *'form'* relate to Plato's transcendent *Theory of Forms,* which establishes a separation between the Idea (model) and its copies instantiated by the physical world.

works during early 20th century. Painters of the time considered this to be a first non-representational approach to painting. This chapter develops the argument that such works – which are sometimes referred to in this text as geometric abstraction – can also be considered as representational - as mimetic paintings. Also, through discussing the work of Kazimir Malevich (1878-1935), I rethink the relation of these paintings to representation, and propose that a non-representational understanding of these works reflects the influence of static models of thought. Endorsing Benjamin's (1996: 8) view that 'the development of art reveals the nature of the present', I propose that the majority of modern[2] paintings reflect static ontological models that dominated philosophical and scientific thought during that period.

This chapter then discusses Worringer's aforementioned urge to abstraction to analyse features of static worldviews visually conveyed in painting which are based on geometry. Worringer's urge to empathy is further used to outline a dynamic perspective, basis of the *enactive* model of painting I define throughout this text. The aim is to propose a view of pictorial representation supported by static and transcendent models of thought, and of non-representation grounded on dynamic and immanent models. I present geometric works such as the Concrete movement (1850s-1950s), neo-geo (1980s) and Tomma Abts (b.1967) as examples of static and representational approaches to this kind of paintings. I also introduce expressive approaches to geometric paintings such as Paul Klee (1879-1940) and Wassily Kandinsky (1866-1944) to present geometric works located in-between static and dynamic models, which are further signalled as precedents of abstract expressionism.

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[2] For the purpose of this text "modern" paintings refers to works produced under dominant trends in western art during the period of time between 1880s and 1980s.

Subsequently, this chapter proposes Jackson Pollock's (1912-1956) work and his particular engagement with the medium's material nature correspondent to a first truly non-representational and dynamic approach to painting. A discussion of the material approach in Pollock and abstract expressionism, in relation to the viewer and a purely sensuous experience of these works, leads to the introduction of what Greenberg (1993: 81) calls this 'act of sheer presentation' the 'at-onceness' of modern painting, and a new source of signification of abstract painting, different from representation. In opposition to Greenberg, I suggest at-onceness still belongs to a representational discourse. Finally, I present Benjamin's (1996) new 'economy' of abstract painting consisting of a reciprocity between being and doing, elaborated as a response to Greenberg's model. I propose Benjamin's idea is indeed non-representational, and present its inclusion in the *enactive* model of painting developed in this project.

Chapter III outlines the *enactive* model of painting I propose in this practice-based research project, which is non-representational and dynamic. I begin introducing 'fractal geometry' (Mandelbrot 1983), a non-representational and relational approach to geometry, and another referent in my paintings. Deleuze and Guattari (1988: 565) describe fractals as the 'mathematical definition of a smooth space'. In order to develop a deeper analysis of my work, I then introduce a Deleuzoguattarian dynamic and immanent model. I compare this system of thought to static and transcendent views discussed in chapter II, and describe how *GM* relates to it. For example, I discuss in detail the Deleuzoguattarian (1994) 'compound of sensations' to propose an understanding of my practice as 'intensive processes' and a medium for 'actualisation' of 'affects'.

To explore further dynamic elements of my practice, I expand on Benjamin's idea of reciprocity between the being and doing of abstract painting. This leads to a discussion about 'tacit knowledge' (Polanyi 1958, Barret and Bolt 2007), to finally introduce the aforementioned *enactive* model of cognition. Gibson's (1986) *affordances* is then used to discuss 'co-responsiability' (Bolt 2004: 52) between individuals and media for constructing meaningful outcomes. As mentioned, in light of enaction, painting is proposed as embodied thinking consisting of dialogues between medium, painter and *actions* that produce knowledge. Painting is also explored as an artefact for 'extended cognition' (Clark 2011) and for acting directly upon the world. Finally, the pictorial gesture and haptic properties of painted textures are explored as pictorial non-representational agents. To provide examples of the ideas discussed and to present *enactive* analyses of paintings, I use my practice of *GM* and also other painters' works such as Lee Ufan (b.1936); Simon Hantai (1922-2008); Eva Hesse (1936-1970) and Agnes Martin (1912-2004).

Chapter IV provides a detailed analysis of the development of *GM*. Descriptions are organised by topics such as pictorial plane, the grid (Krauss 1979), the Deleuzoguattarian compound of sensations, 'emergence' (Johnson 2001) and colour. This chapter's aim is to explore how different elements composing my practice co-function to produce theoretical and practical outcomes. I explore hybrid characteristics of my work in relation to static and dynamic elements discussed in previous chapters such as the optical division of pictorial planes in grids, and haptic material relations between multiplicities of marks.

This chapter also analyses different material and performative aspects of my practice, and the process of emergence of *GM* in relation to Deleuzoguattarian (1988) 'smooth and striated spaces', and 'templates' and 'squaring'. The aforementioned compound of sensations is also explored in detail to identify introspective elements in my work that guided the development of *GM*. I analyse those elements from an *enactive* perspective to discuss the transformation experienced by my interaction with the medium. I also present an *enactive* view of the chromatic spectrum and analyse my paintings individually. I conclude by proposing that my paintings based on *GM* present meditations on enacted events and are truly non-representational works.

II -   Pictorial abstraction and representation

In order to elaborate a non-representational model of painting, this chapter brings into discussion ideas of pictorial abstraction and representation to propose a way to think about these concepts as non-antagonistic, which is different to Malevich's approach. The goal is to reconceptualise these ideas in a way that feels contemporary. I analyse how the understanding of these two concepts has evolved, comparing Malevich's time — in the context of the introduction of pictorial compositions purely based on geometry — to today. Although geometric abstract works were created as a non-representational (Malevich 1915; Drutt 2004; Blazwick 2015) approach to painting, I discuss how they reproduce transcendent models and hence, can also be considered as highly representational paintings. The discussion of this chapter aims to outline the "static" and representational approach to painting defined in this practice-based research project. This is relevant to understand the evolution of my pictorial practice – whose principal and original referent is geometric abstract paintings – from a purely static model towards a hybrid approach that also integrates dynamic elements, and which is a fundamental part and outcome of this research project on abstract painting.

In this chapter I propose representation in painting is related to transcendent and static ontological views that see the world as pre-given. Bolt (2004: 12) endorses this view that it is 'not just concerned with realism or figuration, but rather, representation posits a particular relation to, or way of thinking about the world' as independent of individuals. Perspectives of the kind are reflected in paintings that draw from models and look at capturing essences. I also argue representational paintings can even be abstract and of varied degrees between this latter and mimesis.

Throughout the chapter I present abstract works based on geometry of painters such as Kasimir Malevich (1878-1935); Paul Klee (1879-1940); Josef Albers (1888-1976); Victor Vasarely (1908-1997); Matilde Pérez (1916-2014); Peter Halley (b.1953) and Tomma Abts (b.1967). The selection of these painters is in relation to their relevance and usefulness to explore different stances about the relation between geometry and representation. As it will be described, some of these painters, and also their critics, believe geometric works are radically non-representational while, others firmly promote the representational potential of geometry.

After outlining a static approach to representation endorsed in this thesis, towards the end of the chapter I introduce Jackson Pollock's (1912-1956) work. The aim is to explore notions of pictorial expression, performativity and haptic visuality, to start delineating a more dynamic approach to abstract painting based on reciprocity between being and doing (Benjamin 1960). In contrast to static transcendent views supported by representation, dynamic stances correlate with immanent perspectives. This latter ontological view is explored in depth in chapter III.

This chapter is organised as follows: section 1 describes historical, theoretical and formal antecedents, which led painters from the beginning of the twentieth century to use geometry in their practices to produce abstract works. It also presents and contextualises Malevich's (1915) idea of non-representation discussed in Blazwick (2015), which is completely different to the one I propose. This section's main aim is to develop the argument that geometric paintings can also be conceptualised as highly representational works and to further open up a discussion about models of thought that underlie representational approaches to painting.

Section 2 discusses different approaches to relations between abstraction and representation in abstract painting to propose that representational pictorial models reflect a worldview rooted in transcendent and static philosophical frameworks. I further argue static perspectives are also represented in geometric works and present works of painters such as Klee, the Concrete movement, neo-geo and Abts, whose works endorse representational approaches to geometry.

To define more in detail these static and dynamic worldviews, section 3 correlates Worringer's (1908) notions to these two perspectives. It outlines characteristics and differences between them, and exemplifies these models in relation to representational and more dynamic approaches to geometric abstraction.

To continue elaborating the argument that representation and abstraction are not opposed, section 4 describes similarities and differences between academic (mimesis) and modern (abstract) painting. I identify traditional representational methods maintained in abstract paintings and argue these similarities reveal a continuation between both practices. Thus, this thesis supports Greenberg's (1965) and Fried's (1998) views that modern abstraction is not as real break with tradition. I then describe new methods, technologies and media used by painters working with geometric compositions, which aimed at working with a more direct and creative engagement with the medium.

Section 5 explores in detail analytical and expressive trends of geometric works in relation Worringer's urges to abstraction and empathy to present static and dynamic aesthetic pictorial elements. Dynamic features presented in expressive trends of

geometric paintings such as Paul Klee and Wassily Kandinsky's works are suggested as precedents of expressionist styles of painting. This section concludes by discussing Pollock's work and proposes it is a first truly non-representational approach to abstract painting. The reason is that this work introduced new pictorial methods and compositional strategies, which are in line with a dynamic model.

Finally, section 6 introduces Greenberg's (1993) at-onceness, which he presents as a new source of signification of abstract painting. I argue this notion still belongs to a static and representational discourse. Then, this section presents Benjamin's (1996) idea of economy of abstract painting that is based on reciprocity between being and doing, and I propose it corresponds to a new framework. Accordingly, I present reciprocity as a principal idea used in the non-representational model of painting of this project.

1.   Geometric abstraction and non-representation

The use of geometry to compose purely abstract compositions is a practice that became popular among many Western painters during early twentieth century. The extremely formalist compositions produced with these shapes – referred to as geometric abstraction in this text – are 'characterised by pure forms based on mathematically defined systems and monochromatic and non representational surfaces' (Blazwick 2015: 9). These paintings are rigorously planned, ordered, highly structured and display extremely flat and optical surfaces. The first traces of these pure abstract works came from Russia and are sometimes characterised as derivations

of a hybrid style between cubist and futurist aesthetics (Borchardt-Hume and Bouras 2014). *Black Square* (1915) [figure 7] is the celebrated painting created by the founder of Suprematism Kasimir Malevich. It later became an icon of the twentieth century.

7. *Black Square* (1915) - Kasimir Malevich - oil on linen - 79.9x79.5 cm.

New ideas such as 'non-objective' works [figure 8] and 'non-representations' (Malevich 1915; Drutt 2004) circulated among painters of the time reflect a desire to break with pictorial tradition and to transform the discipline. These ideas express a rejection to compositional aims to mimetically represent the material world. As Sturgis (in Clark et al. 2011: 7) describes, in order to create 'a world apart, open to all' modern painters progressively disconnected their work 'from any direct engagement with the world that surrounded it' (ibid.). For example, representations of depth and

3D treatments of pictorial space were displaced by a recognition of the plane's flatness. Harrison (in Harland and Manghani 2016: 178-179) suggests that the 'accentuation of surface is supposed to be a defining tendency of Modernist painting'.

Geometry was the formal resource used by these painters to reformulate painting as an autonomous discipline. These forms were ideal means to achieve these painters' aims since, first, these are not perceptible material objects and second, these precise flat figures are useful for drawing upon the 2D nature of pictorial surfaces. In addition, geometry served to address 'deeper and more varied levels of meaning' (Tuchman et al. 1986: 17) and to draw upon more abstract aspects of reality, such as space, time and physical forces constantly interacting with bodies.
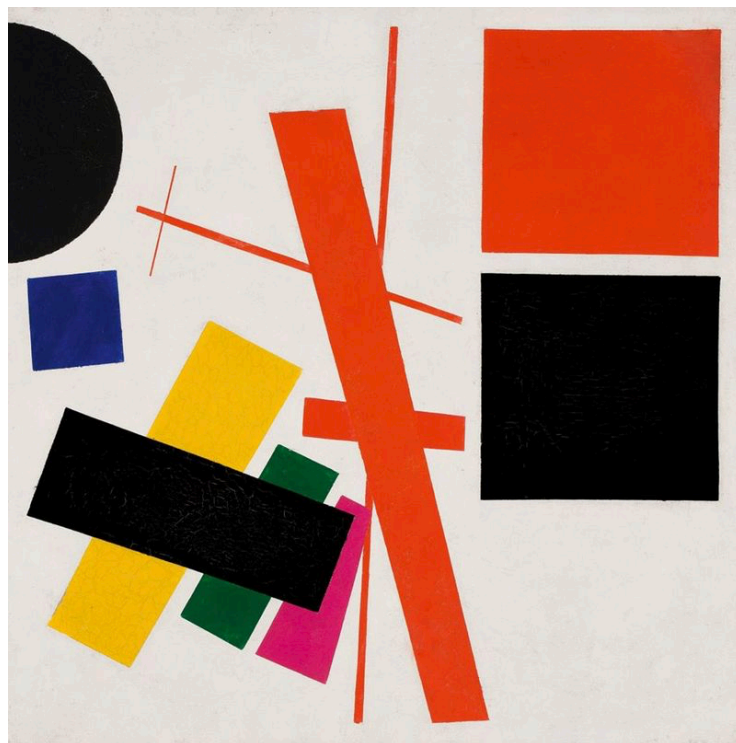
8. *Suprematism: Non-objective Composition* (1915) - Kasimir Malevich - oil on canvas - 80×80 cm.

Malevich developed a transcendent approach to geometric abstraction. He was in search of a 'pure art' (Rosenberg 1952: 23) that could be expressed through absolute aesthetic elements such as 'perfect relations of space and color' (ibid.). Worringer (1908: 134) also supports a transcendent view of geometry and claims 'these abstract forms, liberated from all finiteness, are the only ones, and the highest, in which man can find rest from the confusion of the world picture'. Indeed, Malevich (1915: 116) believed he had ideated a 'New Painterly Realism' by liberating art from mimesis and 'creating a world beyond appearances, an absolute [reality]' (Worringer 1908: 133). By virtue of infinite and abstract models of this, 'colours, planes and shapes could exist in their own right' (Blazwick et al. 2015: 15). Piet Mondrian (1872-1944) also developed a transcendent stance to the use of geometry in painting. In his essay *Natural Reality and Abstract Reality* Mondrian (1919: 1) proposes painting 'should find its expression in the abstraction of form and colour, that is to say, in the straight line and the clearly defined primary colour'. Abstract form and colour were alleged to represent universals because they are opposed to natural form and colour, which correspond to particular appearances.

Regarding the traditional dependence of painting to the visible world, Bernstein (1996: 10) proposes that abstraction shaped a freer practice of painting manifested purely as 'an essay on the visibility of the visible'. He argues abstraction terminated painting's needs to rely on 'objects locked into the circuit of meaning' (ibid.). Consequently, apart from a liberation from the material world, abstraction also granted painting freedom from semiotic relations and gave way to questions concerning more literal issues regarding the visible. For example, Malevich proposed an emancipation of colours from objects and argued for the use of colours only to

express pure qualities such as 'weight, speed, and direction of movement' (1915: 123) or even to simply 'transmit the movement of red, green, or blue masses' (ibid. 130).

Since geometric paintings give actual bodies to virtual objects, Malevich considered them as non-representational works of pure creation. He believed geometric depictions allowed painting to be a 'material presence in space, not an image of something else, but an irreducible reality' (Blazwick et al. 2015: 15). However, since geometric forms are abstract mathematical objects, here I propose a representational view of geometric abstract works. For example, a square is a transcendent object, then, it is not possible to consider Malevich's painting *Black Square* as non-objective. Since this painting is a pictorial instantiation and a new physical version of it, it can also be considered as representational.

2.   Representation and stasis of geometric abstract paintings

This section explores varied views of the relation between abstraction and representation to discuss how the understanding of these concepts has evolved from Malevich's time to the present day. For example, Malevich, Mondrian, Shaw and Moszynska believe these two concepts stand in opposition. Moszynska (2010) firmly maintains throughout the posture that abstraction is non-figurative and non-representational. Gooding (2001: 8) supports the view that geometric works are non-objective paintings and argues that components such as 'structure, line and shape, texture and facture, rhythm and interval, light and shadow, colour and tone […] are

abstract, in the sense that they are perceived properties and qualities of things not things themselves'.

On the contrary, Benjamin (1996: 21) argues 'abstraction is not representation's negation and that there are several possibilities for abstraction'. He thinks it is opposed to mimesis, but not to representation, and states 'abstraction could be understood as the movement in figuration in which there is no longer any reference to the literal' (ibid. 29) [figure 9]. Bolt (2004) also endorses the view of abstraction as not opposed to representation and stresses this latter is neither the same as realism or mimesis. She partly supports her ideas on Deleuze and Guattari's (1988: 578) work, which disseminates the view that 'abstract is not directly opposed to the figurative […] imitation and representation'. Bolt (2004: 17) even claims 'abstraction may be as representationalist as realism'.
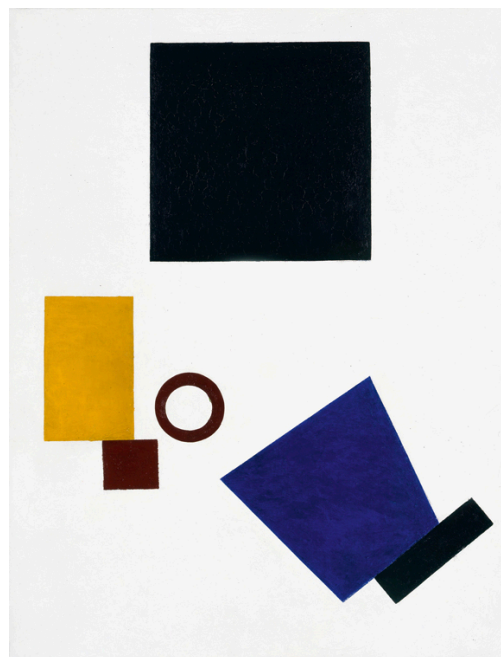
9. *Suprematism. Two-Dimensional Self-Portrait* (1915) - Kasimir Malevich - oil on canvas - 80×62 cm.

Benjamin (1996: 7) considers that thinking of abstract painting simply in relation to non-representation is problematic and argues 'the space of abstraction is irreducible to [a mere] representational space'. Nevertheless, if abstraction is considered only in relation to a physical world then, geometric works can indeed be seen as non-representational. Shaw (2013), for example, supports this by writing that 'Black Square is radically non-representational [...] repudiating nature in favour of abstraction'.

Considering these paintings as representational adds elements that diversify their possible significations because the representation of transcendental objects is complicated. Both object and its representation seem to 'melt into an undifferentiated unity' (Champagne 2015: 3). For instance, *Black Square,* cannot exist as a sign of the Idea of a black square because it has 'fully merged with the signified' (Furton in Champagne 2015: 3). From this perspective, rather than merely imitating such an abstract object *Black Square* becomes the object itself. Consequently, this is a case where the 'representation of the thing is impossible' (ibid). As Poinsot puts it, since a representation 'stands for something else' (in Champagne 2015: 6), the same thing 'never represents itself' (ibid.).

Consequently, the relation of geometric abstract works to non-representation is problematic and rather complex. Considering Malevich's painting gives another image to the Idea of a black square then, it not only represents, but also, modifies and actively contributes to its ongoing creation. The conception of an Idea as an ongoing process of creation or, a *becoming* (see chapter III), is controversial because it implies

transcendental objects are not fixed, but change with every new representation that appears.

Damisch (2009: 143) discusses geometric forms existing '"in the abstract"' and observes that these are 'figures that belong neither to figuration, nor to […] non-figuration' (ibid.). For example, he argues it is not possible to represent or imitate a triangle 'but only to trace it, to produce it' (ibid. 144). Thus, as Damisch proposes, the use of geometry in abstract paintings is not merely a formalist game but refers 'to a process of abstraction', that is not only conceptual but that 'certainly goes far beyond any production of signs' (ibid.).

10. *House under construction* (1915-1916) - Kasimir Malevich - oil on canvas - 97x44.5 cm.

I agree with Greenberg's view of abstraction not necessarily against representation but corresponding to a different 'source of signification' (Benjamin 1996: 13). Greenberg (1965: 6) emphasises if there is a non-representational approach in modern painting it is not in relation to physical objects or to nature but, to the space that 'three-dimensional objects can inhabit'. Graphic elements in geometric paintings such as 'lines and blocks of colour [are a] reiteration of the logic of representational space' (Benjamin 1996: 13) embedded in mathematical perspective. Indeed, in works such as *House under construction* [figure 10], relations between forms still create and hold a 'space within the frame' (ibid.). However, as a rather flat space, it produces 'a kind of spatial dislocation' (Moszynska 1990: 55), whose effect suggests these figures are floating in a timeless space without gravity.

For Riegl, physical connection between things in space provides 'their temporal value and draws them into the cosmic interplay of phenomena' (Worringer 1908: 38). Abstracting an object from its context wrests it 'out of the unending flux of being' (ibid.17), and provides it with a feeling of being timeless and eternal. 'Space is therefore the major enemy of all striving after abstraction and hence, is the first thing to be suppressed' (ibid.). According to Worringer, suppressing space can be achieved simply through 'avoiding the third dimension' (ibid. 39) restricting the work to flatness.

Crowther's view about the relation between abstract painting and representation is interesting. He says what is at stake in modern painting is not different ways of representing reality, but the introduction of 'new possible relations between representation and reality […] a new relation to experience, phenomenologically

speaking' (Crowther 2012: 68). Crucially, the emergence of abstraction in painting represents a change in the way of thinking about the relation between individuals and the world. For Crowther, abstraction reveals a new kind of meaning, which he describes as 'ontological reciprocity' (ibid.). Reciprocity is a main idea of the dynamic ontological perspective I introduce in chapter III, which defines the non-representational model of painting elaborated in this project. This new mode of thinking determines a horizontal relation between subjects and the world based on mutual co-operation, instead of a hierarchical one based on representation. Reciprocity poses subjects and the world as works-in-progress constantly interacting and actively shaping one another.

Accordingly, I propose to understand representation as 'a mode of thinking and a relationship to the world' (Bolt 2004: 17). Representational approaches are rooted in transcendent philosophical frameworks such as Plato's *Theory of Forms*, Aristotelian *essences*, Cartesian *dualism*, or Objectivist models (Johnson 1987). According to Bolt (2004: 21), by introducing the notion of *Forms,* Platonic thought 'enabled a separation of what-is from presence'. That separation set the foundations that prepared a theoretical landscape for a later representational era. Transcendent frameworks share the assumption that the world is a 'pregiven world' (Varela et al. 1991: 148), existing in a certain way, and ruled by universal principles and absolute values that transcend matter and form. These models also believe the world is independent from subjects' experiences and individuals can only have access to it through their senses and processes of 'mental representation [that stand for] features of the world' (ibid. 8), which are only approximations of reality.

For instance, DeLanda (2002: 2) explains how, in Aristotle's static and 'essentialist account' of nature, traces of this transcendent reality are found in 'essential traits' (ibid.) shared by groups of similar objects. These traits demonstrate the existence of different categories of *beings*, which 'explain both the identity of [… a] species and the fact that particular members of the species resemble each other' (ibid.). Essence thus, implies an object has 'fundamental traits without which [… it] would not be what it is' (ibid. 1). Also, categories have 'unified and timeless identit[ies]' (ibid. 19) and do not experience change throughout time.

Powers (2013: 319) proposes that 'abstraction refers to the "extraction" of the essence of an object' and modern painters aimed to represent 'some essential truth about an object' (ibid. 322) by approximating 'it to its absolute value' (Worringer 1908: 17) through reductive processes of abstraction. Damisch supports the view that modern aesthetics are based on static models of thought. He argues 'the modernists justified the adoption of a technical-geometric idiom exclusively on the grounds that it was objective, universal and unequivocal' (in Auerbach 2011: 9). For example, Klee used nature as main model for his abstract works [figure 11]. Hence, these paintings endorse a representational approach to abstraction.

11. *Calix abdominis (Belly bud)* (1934) - Paul Klee - pen and ink - unknown dimensions.

Klee (1961: 17) analysed natural forms as material traces of specific processes of formation aiming to understand 'nature's way of building things'. Argan (in ibid. 11) explains that Klee's intention was to see natural 'formation as a process'. As a result, Klee created original compositional methods and envisioned a new pictorial approach. He also developed a theory of painting that he taught for many years at the Bauhaus School and recorded in his *Notebooks* (1961). Klee acknowledges the representational potential of abstract images by writing '[i]t is interesting to observe how real the object remains in spite of all abstractions' (ibid. 463) [figure 12]. He indirectly alludes to non-representable elements when he argues that '[i]n abstraction, reality is preserved. We find a bridge to the *experience* of reality' (ibid.) (my emphasis). Experience is a non-representable element that for Klee can only be conveyed through abstraction.

12. *Ancient Harmony, (no 236)* (1925) - Paul Klee - oil on cardboard - 38.1x37.8 cm.

The Concrete movement, with members such as van Doesburg (1883-1931) and Max Bill (1908-1994), supports the non-representational approach to geometric paintings. They preferred the word concrete to abstract when describing their works, implying that immaterial ideas acquire material forms through paintings. They claimed line, colour or surface are concrete objects. Hence, using them had as principal aim to emphasise the concrete 'objecthood' (Morley 2013: 205) of their works, that is, to highlight their condition as objects. Members of the Concrete movement considered the objecthood of painting stood in opposition to pictorial representations because these latter depict other objects. During the 1940s, Max Bill introduced the Concrete movement in Brazil and Argentina, which further developed into to the Neo-concrete movement (1959–61) and gave fruitful results in Latin America.

Neo-geo a late geometric style composed by artists like Peter Halley (b.1953), Jeff Koons (b.1955), Sherrie Levine (b.1947) and Haim Steinbach (b.1944) developed a strong representational approach to geometry to draw on social and cultural issues. Their works aim to 'criticise the commercialisation and mechanisation' (Tate 2017), or what Halley refers to as the 'geometricisation of modern life' (ibid.). These paintings also draw about 'technology and critical (sociological and structuralist) discourse' (Moszynska 1990: 226), about social and material structures of organisation, and new forms of digital communication. Neo-geo artists appropriated elements of previous styles such pop-art (1950s), op-art (1965), minimalism (1960s and early 1970s) and conceptual art (1960s-1970s). Thus, 'neo' is related to a 'revival and imitation, rather than "new"' (Moszynska 1990: 226). The works of this rather loose group are cold and distant. Despite being highly critical of social systems, these artists took advantage of an avid consumerist society and made considerable profit selling their work.

For instance, Halley firmly endorses representation while working with geometry and abstraction. He aims to counterpoise and criticise other branches of abstraction such as expressionism and non-objective abstraction. His work is profoundly influenced by Baudrillard's (1929-2007) critical writings on hyper-realities, technological networks of communication, and crises of truth, essence and meaning. Halley's paintings from 1981 onwards are based on cells such as prisons, divisions of spaces or urban grids, common elements of a post-industrial technological society. His works also make references to facades of structures, such as architectural buildings — shells hiding underlying systems of conduits — or computers and robots — containing complex networks of electrical circuits. Other topics Halley touches on are characteristic elements of information technology and the world wide web such as large magnitudes of virtual information being constantly distributed and spread at previously inconceivable high-speed rates.

Sarah Morris (b.1967) also works with a representational approach to the use of geometry in painting, drawing on architectural and urban elements of developed cities. Using titles in her paintings, she references big organisations such as governmental and administrative institutions. Morris's works are highly abstract and graphic, mainly composed of lines of colour fields that combine several bright and highly contrasting tones. She distances her work from its references, and finished pieces barely display any similarities with models.

Contemporary artist Tomma Abts (b.1967) [figures 13-15] thinks an abstract painting is 'a representation of itself, of having been made' (Nickas 2015: 160). She describes

images in paintings as representations of processes of the making and thinking which composed them. She also argues her works are not abstract and that she does not work with processes of abstraction. The reason is she does not use models and never draws or plans a composition but starts from scratch, and images evolve as she develops them. Consequently, her paintings pass through many different stages before she finds the right compositions (Godfrey 2013).
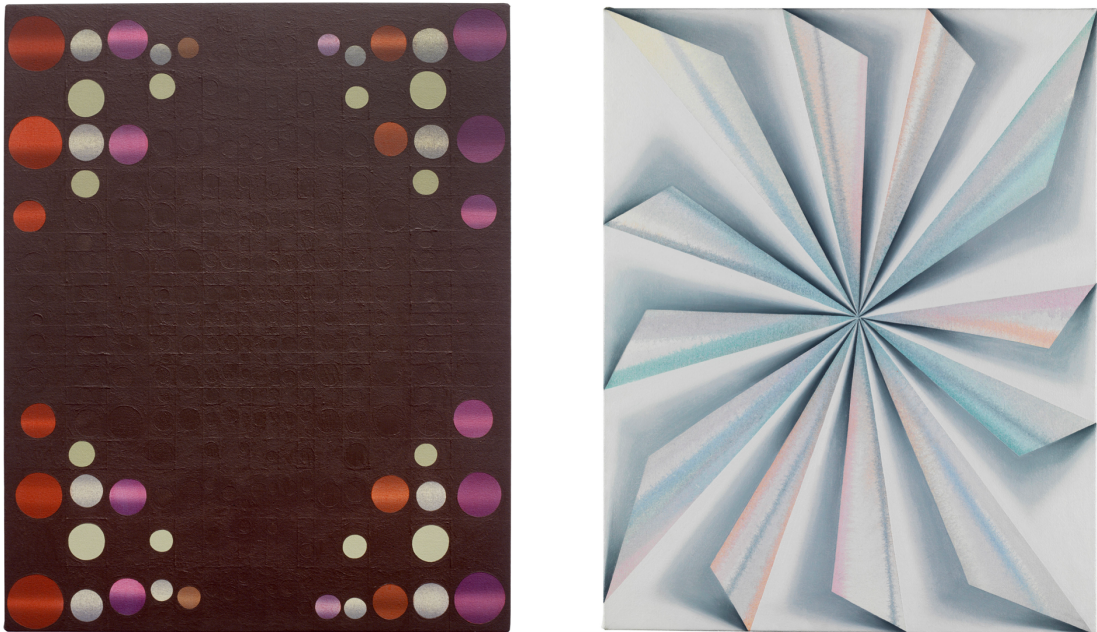
13. (left) *Kena* (1999) / 14. (right) *Tehe* (1999)

Tomma Abts - acrylic and oil on canvas - 48×38 cm. Photos: Marcus Leith. Courtesy Greengrassi, London.

As discussed above, a thing never represents itself, hence, I propose Abts' works simply present themselves. I explain in chapter III and IV my view that processes, which generate paintings, are not represented by the works but documented by traces of paint. It is later in the encounter between viewers and works that the former imagine new processes of making based on haptic properties of those traces. I further

propose productions and analyses of paintings that account for them as objects that *were made,* and focus on making processes not as representational practices but as *enactive* processes. On the contrary, productions and analyses with their attention on images, that look for relations between paintings and pre-given objects or models external to those paintings, are representational approaches. Two examples of such are Morris and Haley.
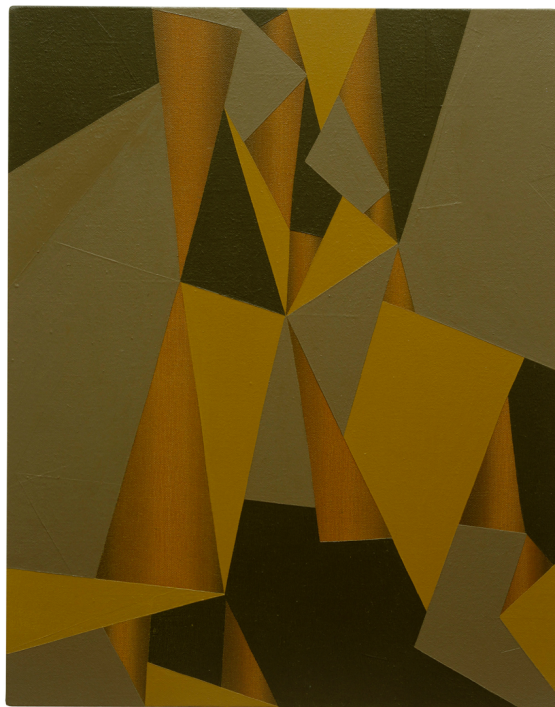
15. *Noene* (2002) - Tomma Abts - acrylic and oil on canvas - 48×38 cm. Photos: Marcus Leith.

Courtesy Greengrassi, London.

3.   Worringer's self-enjoyment and fear

Worringer uses Riegl's (1893) term 'artistic volition' to analyse abstraction in art in relation to the two aforementioned 'latent inner demand[s]' (Worringer 1908: 9) of individuals. He proposes these two extreme urges are sources of creativity and

influence the 'artistic experience' (ibid. 45) and that art history has developed through a continual dispute between these antagonist tendencies. Crowther supports Worringer's thesis and describes this polarity as interplay between rationality and impulsivity. Crowther (2012: 86) discusses 'the need for restraint and rational control in art' as well as the 'function of [art as] sheer physical, sensuous, sensual embodiment' (ibid.).

The urge to abstraction emerges as a reaction to fear of temporality, an ever-changing world and ultimately of death. Worringer (1908: 15) proposes abstraction as 'the outcome of a great inner unrest inspired in man by the [flux of] phenomena'. Accordingly, the transcendent character of abstraction comes from the 'urge to eternalisation' (ibid. 83), which leads individuals to long for fixation. Because geometry is 'free from all external connections with the world' (ibid. 35) it offers individuals 'an absolute' (ibid.). In addition, Worringer describes geometric shape as 'also the morphological law of crystalline-inorganic matter' (ibid.) whose regular and stable forms convey a sense of rest and simplicity. Moreover, since geometry is also independent 'from the contemplating subject himself' (ibid. 36) it affords individuals a sense of purity and even an escape from themselves.

Worringer's urge to empathy is associated with an 'inner need for activity' (ibid. 33) and 'objectified self-enjoyment' (ibid. 14). He proposes 'naturalism' (ibid. 45) as the outcome of empathy, which projects 'our own vital feeling' (ibid. 14) to objects. It is an act of 'affirmation of the general will to activity that is in us' (ibid. 24). The drive to move, to be active, *in-action* (see chapter III) or to perform, is a natural condition of what is 'organically alive' (ibid. 28), because life is motion and change. For

Worringer, empathy is only manifested when individuals come into peace and feel at ease within temporality and flux of phenomena. In his words, 'the urge to empathy can become free only where a certain relationship of confidence between man and the external world has developed [which he describes as] sensuous assurance' (ibid. 45). It is the joy of being alive manifested through confidence and pleasure of motion.

Worringer's abstraction enjoyed a central status in modern art and it was 'claimed to be the mechanism through which all art originates' (Hodson 2016: 2). Worringer's (1908: 35) hypothesis helps to comprehend the common use of geometry during the modern period, since, as Bolt (2004: 36) highlights 'the will to fixity […] is the condition of modernity'. Perhaps geometry was an excellent resource to 'create resting-points, [and] opportunities for repose [or] the certainty of absolutes' (Moszynska 1990: 54), within such unstable socio-cultural contexts of the time, was sought as an opportunity to bring comfort within the contingencies of a chaotic, changing world.

The main topics addressed by painters working with geometry can be divided in two main groups: one analytical and one expressive. The analytical is centred on technological developments of industrialisation and changing life within high-pace developing cities. Constructivism is a principal example of this trend, with artists such as van Doesburg (1883-1931), El Lissitzky (1890-1941) and Lyubov Popova (1889-1924). These compositions have radical objective appeal, extreme mathematical precision and cool impersonal aesthetics. Key (2009: 558) observes geometry was a 'formal resource' that allowed central things to modernist experience that were difficult to communicate with other means, to be visualised, like 'patterns of industrial

production […] dynamics of particles in wave-formation, or the sensation of stasis in motion' (ibid.). The expressive trend is related to 'esoteric thought' (Powell in Tuchman et al. 1986: 11) and mysticism. Painters, such as pioneer abstract painter Hilma af Klint (1862-1944) [figure 16], Wassily Kandinsky (1866-1944) and Paul Klee (1879-1940) saw geometry as a vehicle to formalise and communicate 'pure abstract visions' (Powell in Tuchman et al. 1986: 11). Their works draw upon the occult and what is 'not readily available to ordinary understanding or scientific reason' (Tuchman in ibid. 19).
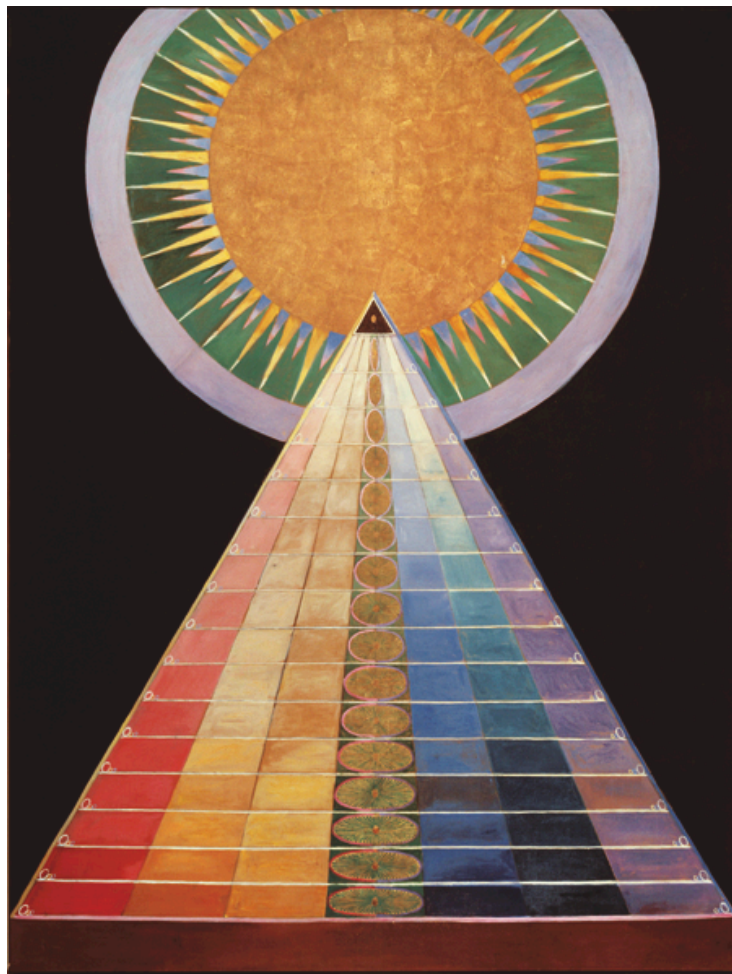
16. *Altarpiece, No. 1, Group X, Altarpieces* (1915) - Hilma af Klint - oil and metal leaf on canvas - 185x152 cm.

© Stiftelsen Hilma af Klints Verk. Photo: Albin Dahlström.

As a reaction to an unstable world characteristic of the modern period, doctrines such as 'Theosophy and other related philosophical and metaphysical systems' (ibid.) acquired value and popularity among people, including visual artists. A range of antimaterialist ideas started circulating and became favourite resources for making sense of life. Some artists turned away from objects of an unsettling world and redirected their attentions to universal philosophical ideas and mystical values. Moszynska (1990: 54) claimed that painters 'wanted art to reflect a higher reality, or a truth that transcends nature'. The works of these painters correspond to a 'more intuitive, subjective and expressionist' (ibid. 98) approach to geometry. Therefore, I propose that such works occupy an intermediate space between Worringer's urges. Painters, such as Mondrian or Malevich, made mixed works integrating constructivist aesthetics with mystical ideas, perhaps addressing issues about changes experienced by spiritual values within the development of big technological cities.

Worringer's model also gives a feasible explanation to the simultaneous use of geometry within religious images in many different cultures and throughout history. Worringer (1908: 103) stresses '[i]t is evident that transcendental notions in a religious respect, and the urge to abstraction in an artistic respect, are expressions of a same psychic disposition'. Rosenberg (1952: 17) agrees that some works of geometry reflect a 'desire to express spiritual, utopian, or metaphysical ideals that cannot be expressed in traditional pictorial terms'. For Worringer (1908: 103), fear paralyses individuals so that they strive to 'create resting-points within the flight of appearances, necessities within the arbitrary' and search for redemption from the anguish caused by relativity and life's uncertainty.

In light of the above, I correlate the urge to abstraction to transcendent and static worldviews and propose to think about these later as representational stances. Also, I associate Worringer's (1908: 109) need for empathy to 'more vigorous [pictorial] expression[s]' that draw principally on performativity. These expressions are in line with immanent and dynamic ontological perspectives discussed in detail in chapter III, such as Deleuze and Guattari's philosophy of *becoming* and the *enactive* approach to cognition.

The view of representation I endorse here is as a relationship of individuals with the world, whereby the world is seen as independent of subjects of experience. I propose this representational perspective is embodied in all pictorial works drawing from and presenting again pregiven models (abstract or material), aiming to tear them from the sensuous and temporal particular, and to raise them to universal values that could somehow eternalise them. Actually, I understand pictorial representation — ranging from abstract to mimetic — as processes of extracting concrete or abstract objects from a pregiven world, to remove them 'from the flux of happening and to render them perceptible […] by projecting them onto a plane surface' (ibid. 83).

As mentioned, extracting a thing, person or scene from its context to approximate it to absolute values or to geometric 'abstract crystalline forms [… wrests it] from its temporality' (ibid.) and eternalises it. Bernstein (1996: 9) observes that extracting a thing 'from [its] sensuous givenness [… sacrifices] sensuous particular[s]' in favour of universal features. For those reasons, I relate representational approaches to painting to transcendent and static frameworks. This definition of pictorial representation, as reflecting a transcendent ontological model, is actually extremely

similar to how abstraction is normally defined. In fact, any type of pictorial representation necessarily involves a process of abstraction. Thus, representation is clearly not antagonist to abstraction, but rather, these two are complementary.

It is interesting that in East Asian cultures reactions to fear are expressed in opposite ways to Worringer's descriptions. Morley (2013: 200) describes how, in these cultures fear of death is related to the notion of 'the void' and it is actually empathy that emerges from it. Morley explains that 'seeking to identify with a sense of the emptiness of the self, the East Asian artist is put in harmony with the world —with breath resonance or *ch'i*— and becomes its mirror' (ibid. 204). Breathing is a main method used in East Asian cultures to connect with the present and to feel part of the world. Hence, breathing is a tool that facilitates a connection between urges, or between fear and joy. I explain in chapter III and IV the importance of breathing in my practice. It had a major role in enabling a change in my practice from an absolute urge to abstraction towards a more balanced approach. In Worringer's (1908: 109) words, my current practice is a 'contradictory, hybrid formation', mostly composed of elements of abstraction in combination with a few others of empathy.

4.   The medium revealed through self-criticism

In this thesis, I endorse Greenberg's (1965) view that the discipline's transformation carried out by modern painters was not a real historical break with tradition, representation and the past. Fried (1998: 217) is also explicit about this and states 'a dialectic of modernism has been at work in the visual arts for more than a century

now'. In my view this transformation was mostly formal and technical. Indeed, many traditional methods can still be found working within geometric compositions, however, serving completely different purposes. Greenberg (1993: 82) stresses 'every "technical" device of abstract painting is already to be found in the realistic painting that preceded it'. For example, both realistic and geometric abstract paintings draw from pregiven models and follow static representational frameworks. Both compose works from fixed points of view and erase haptic properties of paint for the construction of extremely flat surfaces. In other words, they conceal pictorial methods and materials to construct principally optical surfaces.

Nonetheless, a main difference between modern painters and old masters is the latter treated the 'limitations that constitute the medium of painting […] as negative factors that could be acknowledged only implicitly or indirectly' (Greenberg 1965: 6), whereas the former saw these limitations as something positive. Modern painters not only embraced these boundaries, but also even based their works on exploiting their very limits. Consequently, instead of a break with tradition, I see the development of pictorial abstraction as a territorial expansion of the discipline. As developed in chapter I, this could be defined as a pictorial deterritorialisation. Such expansion was a result of processes initiated by Impressionist painters characterised by a sort of dismantling of traditional representational strategies. According to Krauss (1979: 52) it was through 'that great chain of reactions by which modernism was born out of the efforts of the nineteenth century'. The overall process led painters 'to disable, a certain kind of aesthetic discourse' (O'Sullivan 2001: 126) deeply entrenched in tradition.

The pictorial plane in mimetic or illusionistic paintings holds the contradiction of being a materially flat space, which is used to represent depth. Minturn argues it is a real paradox that painting is 'an art which simultaneously seeks to "embrace" and "nullify" its planar surface' (in Damisch 2010: 301). Greenberg (1960: 6) observes that traditionally preserving the 'integrity of the picture plane [was an imperative] to signify the enduring presence of flatness under the most vivid illusion of three-dimensional space'. As discussed, maintaining the flatness of their surfaces was also a main goal of painters using geometry in their works. Nonetheless, as explained later in both cases, erasing the artist's hand from the works had completely different aims. At the end of the nineteenth century, the contradiction between 'Western illusionism' (Meyertholen 2013: 405) and the plane's flatness was put in the spotlight. This raised fundamental questions regarding the medium's material nature. Crowther (2012: 67) describes how this further opened up a context 'for new semantic and syntactic structures which offer[ed] a radical progression beyond the last vestiges of mathematical perspective and legacy'.

For example, Cézanne dismantled linear perspective and revealed to viewers the very constructive strategies of perspective itself. Singerman describes how 'Cézanne's epistemological rupture inverted the terms of traditional painting, foregrounding its pictorial systems and cracking its perspectival and naturalist codes' (in Harland and Manghani 2016: 309). Bernstein also signals Cézanne as principal precedent of abstract painting and sees abstract works as outcomes of a reduction of visible properties of objects and space. Bernstein (1996: 10) proposes that abstract painting after Cézanne 'would then be understood as operating […] by reducing the visible conditions of visibility — above all color and space'. Sturgis describes such reduction

as a 'continual process of refinement' (in Clark et al. 2011: 7). Cézanne's work, for instance, was fundamental for the development of cubism, which later influenced the development of works based exclusively on geometry and subsequent variations of emergent geometric styles.

A main difference between academic and early modern styles is, while the former uses the medium to address things external to it — such as 'imitating nature and achieving illusion through concealing the pictorial medium' (Morley 2013: 198) — the latter uses it to analyse the medium itself. Benjamin (1996: 11) discusses how the 'reduction [of painting] to the literal' blocked the development of painting towards a more direct engagement with the medium. Greenberg (1986: 29) supports this view and observes that the methods of academic painting interfere with the very nature of the medium and are even a 'denial of' it. That is because mimetic images aim at appearing 'to be something you imagine rather than you see' (ibid.). Modern painters reacted to that by redirecting their questions towards a 'close attention to the medium' (Benjamin 1996: 12). As a result, the medium's material and technical aspects became the main subjects of the discipline.

I support Greenberg's view that the 'essence of Modernism lies […] in the use of characteristic methods of a discipline to criticize the discipline itself' (1965: 5). This self-critical pictorial approach is characterised by a direct engagement with the medium's material nature. Nonetheless, Greenberg has being widely criticised for his reductionist approach to art. In particular, his idea of pure art forms, which proposed a particular 'area of competence of each art [that] coincided with all that was unique to the nature of its medium' (Greenberg 1965: 5) has been invalidated. In the so-called

art of the 'post-medium age' (Krauss 1999: 20) that has emerged since the late 1960s, ideas of pure, essential and autonomous mediums 'disengaged from everything outside their frames' (ibid. 11) are obsolete. Indeed, geometry, automatism, expression, references to industrialisation or religion are all external elements to painting.

Many of the painters working with geometry sought to mechanise and impersonalise their works searching for an *'essentialist reduction of painting to "flatness"'* (Buchloh in Krauss 1999: 6). The hybrid aspect of their works, 'between technological and hand craft' (Key 2009: 558), reveals the processes used during their executions. Ideal structures were composed and 'applied, by hand or machine, beyond the studio's confines' (ibid.) and industrial tools were used to erase the hands' traces, or haptic properties from surfaces. Painting's 'haptic visuality' (Harland 2009a: 37) is the optic transmission of tactile sensations through textures. I agree with Bolt who sees these textures as signs revealing 'the body of labour engaged in the material practice of making' (2004: 6).

For Greenberg (1965: 6) modern painters reversed the paradoxical nature of the pictorial plane since viewers are 'made aware of the flatness of their pictures before, instead of after, being made aware of what the flatness contains'. He also suggests the erasure of haptic elements in geometric painting might have been influenced by impressionism when he observes that impressionist painters intended to describe a 'purely optical experience as against [an] optical experience modified or revised by tactile associations' (ibid. 7). It seems that flatness was the inevitable end for many of the strands of modern painting. For instance, first Cézanne and later cubists reacted to

pure optical impressionist works by going back to modelling volumes and space. However, Greenberg (ibid.) emphasises even the 'Cubist counter-revolution eventuated in a kind of painting flatter than anything Western art had seen since before', namely, purely abstract works based on geometry.

Modernism was a period of self-critical and active pictorial experimentation, 'becoming at once more radically simple and more radically complex' (Key 2009: 561). In the end, what appears to be the fundamental break introduced by modern painting is the discontinuation of using the medium to conceal the labour of painting. This was replaced by an overt exposure of materials and techniques and the aim 'to exhibit them more clearly as norms' (Greenberg 1965: 7). Lawson (in Harland and Manghani 2016: 209) observes that 'Vanguard art became a practice concerned only with itself, its own rules and procedures. The most startling result was the liberation of the technique'.

A main criticism to geometric abstract works and later strands such as op-art (1960s) is they cut their ties with mimetic illusion only to create new forms of it [figure 17]. Damisch uses Albers' (1888-1976) *Homage to the Square* (series initiated in 1949) [figures 18-21] as an example to emphasise that modern works of geometry 'have broken with the representation only to amuse itself with illusionistic games' (Damisch in Auerbach 2011: 3). Agreeing with the view that geometric paintings are non-objectual constructions, he further states 'despite the fact they [Albers' geometric paintings] have no objects' (ibid. 7) we still accept them as pictures. Moszynska (1990: 194) agrees with Damisch and highlights the illusions Albers' works create,

writing 'Albers exploited the static balance of the square with interacting colour to create an illusion of movement and depth'.
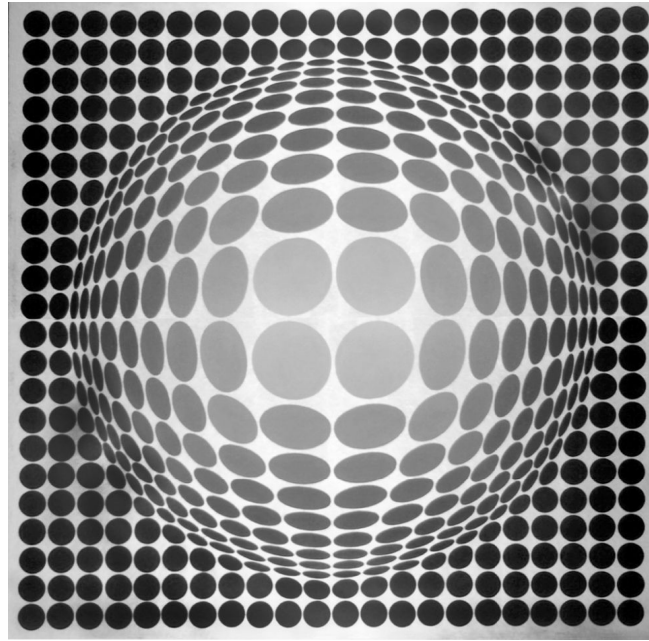
17. *Vega Argent* (1969) - Victor Vasarely - Acrylic on board - 49x49 cm.

In contrast, Auerbach argues that giving mere ludic interpretations to geometric works only reflects ignorance about the huge implications brought about by these works to different areas of art studies. In fact, Auerbach (2011: 3) stresses there is no other discourse, 'except perhaps that of psychoanalysis, [which] has lent more prestige to the discipline of art theory and interpretation [… than] the discourse of geometry'. Damisch supports Auerbach's view and stresses that the adoption of geometry as a vehicle to address objectivity and universal values in the end was shown 'to be ambiguous' (Damisch in ibid. 10). The reason is geometric works raised fundamental

questions about the actual 'objectivity [… of these] universal figures' (ibid.) in relation to the subjectivity of human perception.
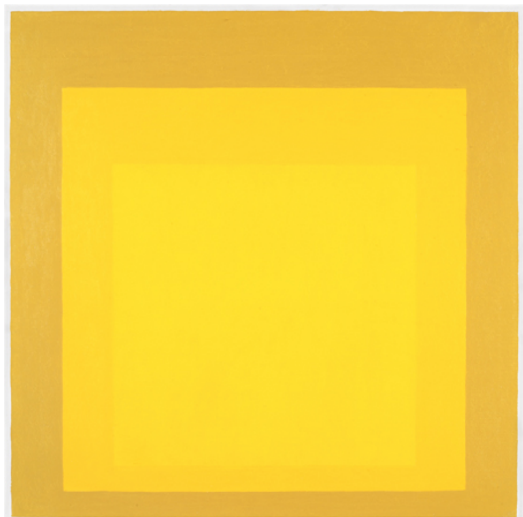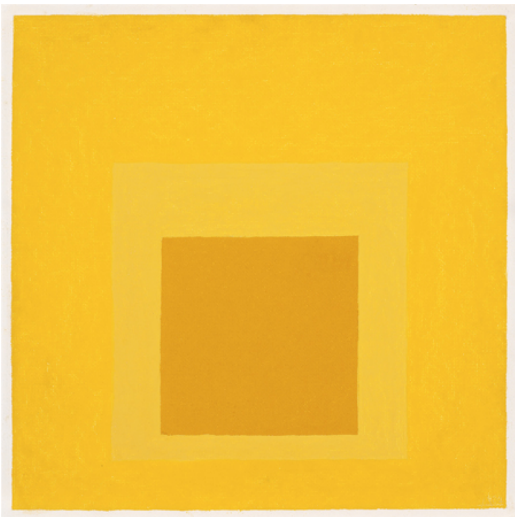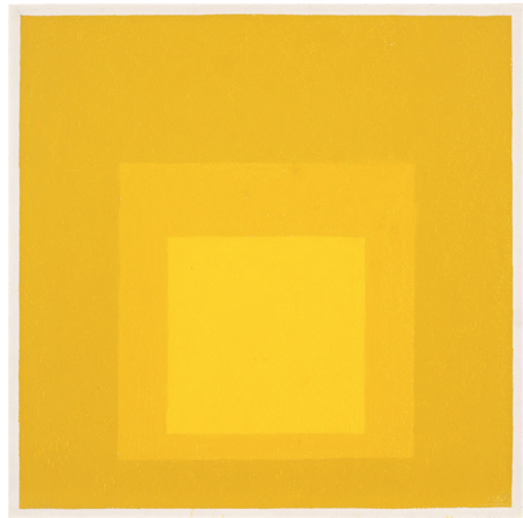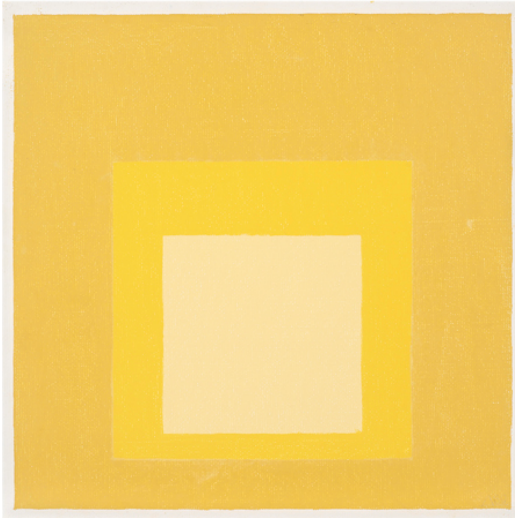
18. (top left) *Homage to the Square* (1969) / 19. (top right) *Study for Homage to the Square (Autumn Scent / Smell)* (1966) / 20. (bottom left) *Homage to the Square* (1964) - Josef Albers - oil on masonite - 40.6×40.6 cm.

21. (bottom right) *Homage to the Square* (1965) - Josef Albers - oil on masonite - 81.3×81.3 cm.

The paintings I produced as part of this research partly draw on visual elements belonging to op-art works, represented by painters such as Victor Vasarely (1908-1997) [figures 17, 22-24] and Bridget Riley (b.1931) in Europe, and Carlos Cruz-Diez (b.1923), Matilde Pérez (1916-2014) and Julio Le Parc (b.1928) in Latin America. The visual effects produced by these works are very interesting in relation to stasis. The objectivity of geometry is clearly at stake in these paintings, however, the experience is revealed to subjects as uncertain. Optical illusions created by these, apparently, static works make viewers see them literally moving. Nonetheless, viewers are inserted within a sort of ceaseless and hypnotic repetition of a flux. Hence, these paintings not only produce movement, but also fixate it in continuous loops and it is perceived as always the same. As a result, these paintings create static dynamism and provide static experiences of movement where viewers are absorbed.
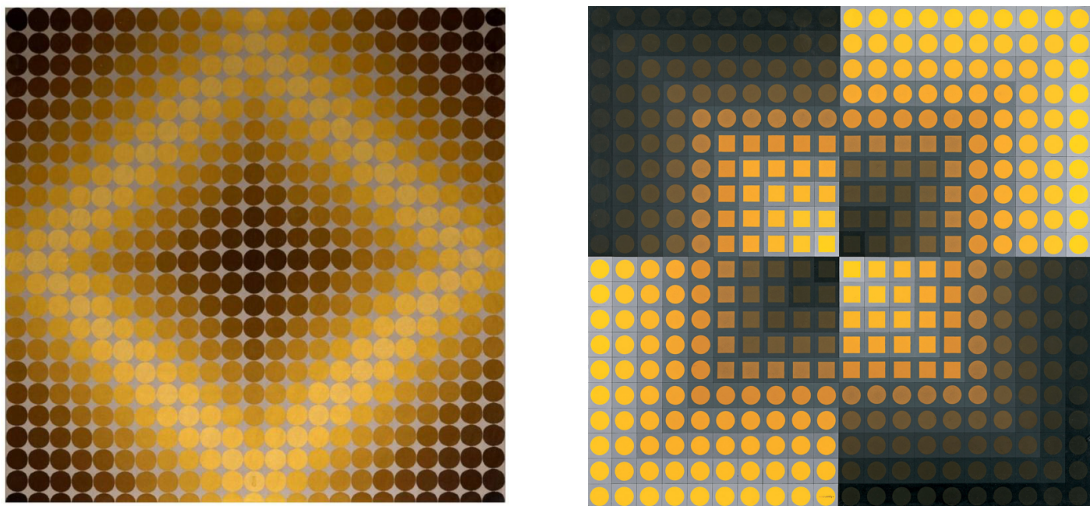
22. (left) *Dia-or* (1967) - Victor Vasarely - 260x250x1 cm - Hand-Woven Wool. / 23. (right) *Toll (from the Permutations Series (1965)* - Victor Vasarely - 80x80 cm - Tempera on board. Photography by R.H. Hensleigh. – Copyright © 2001 Artists Rights Society (ARS), New York/ADAGP, Paris.
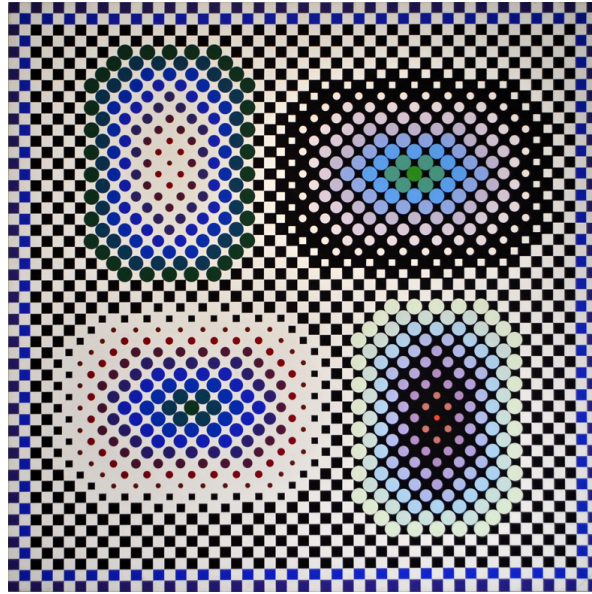
24. *Micron (1984)* - Victor Vasarely - acrylic on canvas - 180x180 cm.

In addition, in order to see these optical illusions, spectators need to adopt a static position in front of the canvases, at the right distance, allowing them to see the whole piece at once and wait until their vision gets saturated. Only under those conditions, is it possible to see movement in these works. This further contributes to depriving the viewer of their agency, they also become static and even more, immersed in a sort of enchantment.

5.   In-between abstraction and empathy

As mentioned, two principal theoretical approaches geometric paintings were developed: one analytical and one expressive, which correspondingly correlate with Worringer's urges to abstraction and empathy. Apart from differing in theoretical terms, they are also technically very different. Sturgis describes how both are

entwined with 'ideas of progress, freedom, certainty and mastery […] advancement and independence' (in Clark et al. 2011: 7). However, the analytical was 'fully connected with social, technological and political thinking' (ibid.), whereas the expressive 'saw the value of art as being independent of all moral, political or social engagement' (ibid.). A tension between reason and emotions is a clear tendency in art history. This duality is explored in Nietzsche's *The Birth of Tragedy* (1872), where Apollo and Dionysus are counterpoised with humans' duality, as thinking and intuitive beings.

As mentioned, the analytical branch resonates with Worringer's (1908: 4) urge to abstraction as it 'finds its beauty in the life-denying inorganic, in the crystalline'. This strand is, for instance, represented by constructivist painters and further led to highly reduced styles such as minimalism and conceptual art. Lawson suggests minimalist painting represents an extreme and 'significant critique of production' (in Harland and Manghani 2016: 209) since these 'refer to nothing but their own making' (ibid. 210). Lawson stresses these 'artists subverted modernist theory […] simply by taking it literally' (ibid.). Morley (2013: 205) also comments on the minimalist approach by pointing out these artists' exclusive interest in 'the mere objecthood' of painting.

I also correlated the expressive branch with Worringer's (1908: 4) urge to empathy as it 'finds its gratification in the beauty of the organic' and with painters such as Hilma af Klint, Klee and Kandinsky. Latter developments of a more expressive strand of geometric works led to highly expressive and personal pictorial styles such as twentieth-century surrealism, tachisme (1940s and 1950s) and abstract expressionism. Painters of these fully expressive approaches integrated non-pictorial performative

methods, such as automatism, improvisation, 'spontaneous gesture[s] and random mark[s]' in their practices (Moszynska 1990: 110).

While geometry (abstraction) is associated with coldness, 'anonymity and impersonality' (ibid. 174), expression (empathy) is linked to the passions of the individual. The former refers to inorganic, technology and stasis, whereas the latter to organic, movement and dynamism. Geometry is related to absolute, transcendent and metaphysical realms of eternal perfection, while expression is related to more temporal and immanent matters of impermanence, difference and change. Geometric abstract works are usually criticised for being too intellectually rigorous, lacking imagination and dismissing the connection of painting with the senses. Although abstract expressionist works present intense haptic properties and over expose the sensuous nature of the medium, they have also led to some later manifestations criticised for lacking rigorous intellectual reflection (Harland 2009b).

Hilma af Klint, Klee and Kandinsky's expressive geometric works combine aesthetic elements of abstraction and empathy. These exemplify Worringer's (1908: 66) observation that a 'mature geometric style achieves a miraculous equipoise between the elements of abstraction and empathy [… as if] empathy takes possession of the rigid linear, inert line and imparts to it a movement'. The works of these three painters embody a sort of hybrid '[e]xpressive symbolism [which] gave way to self-expression' (Lawson in Harland and Manghani 2016: 209).

Moszynska considers Jackson Pollock's (1912-1956) abstract expressionist work the first real break in painting's history. I propose his work embodies also a first truly

dynamic and non-representational pictorial approach. His works are radically spontaneous, do not display obvious underlying structures, are mainly action-oriented, and present rich material surfaces with strong haptic properties. Discussing Pollock's work, Moszynska (1990: 151) stresses '[u]nlike earlier abstract work, such painting had no geometric or grid construction […] no biomorphic references […] no premeditated form […] no illusion of spatial recession'. In fact, Pollock's surfaces are 'virtually uniform' (ibid.) and do not create a spatial or structural hierarchy as is common in both early abstract and representational paintings. Indeed, the procedure based on 'all-over, continuously worked surface' (Singerman in Harland and Manghani 2016: 305), 'ensured that no single part dominated the rest' (Moszynska 1990: 202). In comparison to geometric paintings — which strive for balance through hierarchical relations of colours and shapes —all-over paintings are like horizontal, flat and homogenous meshes.

Pollock's works also marked a radical change in the viewer's agency. Large scales of his works deprive viewers from accessing a whole painting from a single viewpoint. Consequently, the audience has to move back and forth, and between the four sides of the canvas to observe every aspect of these paintings. Hence, Pollock's works 'require the [active] participation of the observer' (ibid. 152). Another innovation presented by this painter is a different pictorial method for making and for exhibiting the works, which 'separates making and seeing' (Singerman in Harland and Manghani 2016: 305). During making, canvases were placed horizontally on the ground and painting processes done through dripping painting while walking along and on the surfaces. For exhibitions, canvases are normally mounted on stretchers and hung vertically on walls.

The expansion of the territory of painting from representation towards a disclosure of the kind of labour involved led to some overt performative manifestations. By the late 1950s, methods and physical process of painting became 'the subject of painting itself' (Moszynska 1990: 192). Lawson describes how 'the acting-out of impulse, rather than the reflective discipline of imagination, became the measure of satisfaction and value' (in Harland and Manghani 2016: 209). For example, painters' aim to make evident to the audience the dimension of painting as an act, led to developments of "happenings". Artists such as Allan Kaprow (1927-2006), Claes Oldenburg (b.1929) or Yves Klein (1928-1962) and his controversial performance *Anthropometries of the Blue Epoch* (March 9 1960), used painting combined with performance. Happenings are live events where artists paint works in front of the public. In order to offer interesting shows without many mishaps, painters generally trained and carefully prepared the acts. Moszynska (1990: 135) describes how the 'tension of the enacted moment' was used as a subject to be offered to viewers.

In Pollock's work, the act of painting is 'both subject and content' (ibid. 151), hence, process 'takes pre-eminence over imagery' (ibid.) and becomes the only goal. The lack of recognisable images makes gestures appear for their own sake. Apparently, Pollock performed these gestures with an impressive mastery and control. Because of the particular compositional method (placing canvases without stretcher directly on the floor) Pollock had to be 'literally "in the painting", both physically and psychically' (ibid. 152). Surprisingly, he claimed chance did not play a role in his processes and even emphasised there were no accidents but only choices behind his practice. As contradictory as it sounds, Pollock also considered he had limited control

of his choices and assigned a vigorous agency to painting. He described 'when he was "in" the painting, the work had a life of its own' (ibid.). Bolt (2004: 1) discusses a similar idea saying at some point during practice '[i]n the performativity of imaging, life gets into the image'. In chapter III I discuss pictorial agency in relation to *enaction*.

The importance Pollock gave to performativity in his practice and the urge to maintain spontaneity of gestures brought him huge burdens. His expectations and needs 'to succeed with the initial composition' (Moszynska 1990: 152) made him master his outpouring technique, achieving extraordinary skills and accuracy in controlling movements. For that reason, he considered chance did not take part in his practice. Nevertheless, in my view, the development of such an accurate technique is the result of a learning process involving a control of chance. I discuss in chapter III how processes of making entail a dynamic dialogue between individuals and materials where both equally feed into the process. Consequently, Pollock's work is a case of abstract expressionism involving mastery, planning and extremely rational processes within more impulsive acts of improvisation and overt expression.

Rosenberg (1952: 22) observes that when an artist is working from sketches, the canvas is regarded as 'a place where the mind records its contents' whereas, working directly on canvas, without using preparatory sketches, the canvas is regarded as 'the "mind" through which the painter thinks by changing a surface with paint' (ibid.). Action painting and abstract expressionism are examples of this latter approach. Rosenberg discusses that some of the artists from those styles considered compositional elements using logical thinking such as drawing, forms and colour

balance were auxiliary and not crucial in the painting processes. Some painters even judged thinking as opposed to painting describing this later as a process of revelation and holding that painters do not think but they just know (ibid. 48). Accordingly, Rosenberg describes that American artists from these styles also supported a metaphysical approach to painting. He argues it was believed that since the 'act-painting is of the same metaphysical substance as the artist's existence [… there is no] distinction between art and life' (ibid. 23). For them, 'the revelation contained in the act' (ibid.) was the only thing that mattered and hence, approached the processes as 'living on the canvas' (ibid.). Therefore, canvas was a territory to act and not to represent, and a finished painting 'was not a picture but an event' (ibid. 22). Similar to Pollock and Bolt, these painters maintained the canvas '"talked back" to painters, provoking them to engage in 'a dramatic dialogue' (ibid. 48).

The group CoBrA (1950) aimed to conciliate the analytic and expressive tendencies in painting. This group thought it was in action where intersection between thought and matter is situated. They called for a style of painting where thinking and painting are done and where works are thought throughout their construction. For example, Hans Hofmann (1880-1966) [figure 25] searched for balance between the cold rationalism of geometry and abstract expressionist impulsivity. Hofmann's experimentations aim to disassemble 'the rigidity of the Cubist grid' (Moszynska 1990: 148) by superposing over this structure energetic brushworks and producing 'abstract but painterly surface[s]' (ibid.). Another example is Mary Martin (1907-1969) who searched for unity between organic, natural forms and inorganic, geometric ones by working with the golden section. This latter is a ratio contained in some patterns of natural formation such as the spiral arrangements of snail shells, leaves and other plant parts.

25. *August Light* (1957) - Hans Hofmann - unknown dimensions - Copyright © Hans Hofmann.

6.   The 'at-onceness' of modern painting

Benjamin (1996: 12) observes the abandonment of thematic motives in abstract paintings progressively shaped pictorial abstraction until it became 'almost nothing except the sensuous'. For Greenberg, paintings reduced to pure material traits and exclusively to sensual elements contain 'a single temporality' (ibid.). He sees this absence of temporal complexity in abstract painting related to a further 'absence of mediation' (ibid.) because exclusively material paintings give themselves all at once, in one instant of time. As mentioned above, Greenberg (1993: 81) calls this 'act of sheer presentation' the at-onceness of modern painting. For him everything in a painting is 'there at once' (ibid. 80) and is given all in an instant, in 'a sudden revelation' (ibid.). This 'instantaneous unity' (ibid.) can be re-given and therefore, is repeatable. Consequently, at-onceness poises a 'coextensivity of being and doing'

(Benjamin 1935: 23) of abstract painting. It implies abstract paintings contain and produce nothing more than a unique visual sensation, which is given and re-given to viewers all at once and thus, immediately exhausted. Greenberg (1993: 80) presents a strong transcendent understanding of painting. He even argues 'pictorial art in its highest definition is static'. Despite admitting the spectators' gaze has to move around surfaces, he maintains that, ideally, the unity 'of a picture should be taken in at a glance […] in an indivisible instant of time [... and] be immediately evident' (ibid.).

Benjamin points out that an instant is a singular unit of time, which presupposes a similar reduction of space. Consequently, at-onceness also presupposes a spatial singularity, an indivisibility of space, or an indivisible unit of space. As discussed more later, Greenberg's view does not consider contexts where works are created or shown, nor the possibility of painting holding a narrative, which unfolds throughout time and is progressively revealed to viewers. Key endorses Greenberg's view that modern paintings offer a unique experience, which is essentially given through material means. Key (2009: 560) insists these works' materiality transmit a 'visual sensation [that] it is uniquely formed to give'. Discussing the work of abstract expressionism Bernstein (1996: 11) observes that these works 'are not subsumable under any universal' and hence, firmly remain particulars. In other words, he argues abstract expressionist works defy any interpretation and 'form of identifying mechanism other than the one their sheer [sensuous] presence insinuates' (ibid.). Supporting Greenberg and Key, Bernstein adds that 'sensuous particulars [… can have intrinsic meaning as] hypnotic objects of attention' (ibid.). Bernstein reinforces Greenberg's notion of 'sensuous immediacy' (ibid. 152) of abstract paintings by proposing that the kind of meaning at stake in these works is different to rationality.

Actually, Bernstein mentions the impossibility to abstract from these works nothing more than what their 'sensuous particularity itself might mean, [which] gives them their specific kind of objectivity' (ibid. 151). Accordingly, Bernstein proposes a purely material-sensual interaction between individuals and extremely self-referent objects, where paint's materiality is the only aim. However, his approach is radically different to Greenberg's. While the latter presents a transcendent (static) view of the sensuous, Bernstein presents an immanent (dynamic) one, arguing that sensuous 'does not point to anything beyond the material world, although it does point beyond our [immediate] empirical world' (ibid. 12).

Key (2009: 558) describes how in the modern ideal a work is first 'given by the painter in order to be re-given in a succession of encounters' without differences. This corresponds to a static account of repetition, because these 'given' and 're-given' were thought to be the same. She argues it is not possible to be certain that different instances 'of encounter would be the same' (ibid.), but yet, insists 'abstract painting is a generic site of repetitions, given, and re-given in time, to the viewer' (ibid. 561). In chapter IV, I discuss Deleuze's (1968) dynamic perspective of repetition, which is opposed to static understandings of it, because it is thought to produce differences. A static view of repetition does not consider variables, such as temporal and contextual factors, nor the subjectivity of individuals' experience. Regarding context, Benjamin (1935: 3-4) considers an irreplaceable element of an artwork is its 'presence in time and space, its unique existence at the place where it happens to be'. He emphasises when the experience of a given object is re-given, it will never be the same as it will always contain different temporalities. Even Key (2009: 563) finally acknowledges in the experience of the 'sensuous presence' of abstract paintings 'the sensation of

material will not always be the same: difference will be played out in both material and presence' (ibid.).

Greenberg presented at-onceness as the new source of signification of abstract painting. Nevertheless, I propose it belongs to a representational discourse, because experience is treated as a model that is re-given (re-presented) in successive encounters, always the same. Hence, this is a static account of painting. Benjamin also considers Greenberg's analysis still part of a representational discourse and proposes that, to define a real new source of signification, abstract painting should be liberated from temporal suspensions characteristic of at-onceness and representation. Benjamin (1996: 13) claims a truly new 'economy of abstraction' has to be defined, where representation does not have a central point.

I identify in Benjamin's notion of 'economy' the insinuation of a new possible source of signification of abstract painting outlined in terms of transactions. Instead of being a unidirectional relation, as in representation, it proposes a bi-directional reciprocal one. Benjamin (1996: 13) proposes a new source can be found in the relation between 'being and doing' of abstract painting. However, instead of 'coextensivity' as in at-onceness, I propose reciprocity between being and doing. This relation can be between painting as object (being) and what it provokes in subjects (doing), or can be thought of as how haptic properties of a work (being) can point to actions that made them (doing). Benjamin proposes that the pictorial plane is the 'site of activity [… a] worked surface' (ibid. 42). Paintings are territories where transactions between being and doing are embodied in textures of paint and transmitted by materials' haptic properties. Within pictorial planes, labour is inscribed and movement is exposed

through sensuous properties of paint. To put it simply, haptic visuality points back, to actions performed during that work's production, and also forth, as it provides conditions for viewers' sensory-motor activation.

Consequently, as described in more depth in chapter III, I endorse a temporal and contextual conception of repetition, where what is given is always re-given as different. Therefore, I propose the exhaustion of a work is impossible and the idea of viewers' experiences of paintings containing, or being contained in, a single temporality is highly problematic. Haptic properties of paintings activate a 'temporal complexity' (ibid. 12) in these objects and show 'what is at work' (ibid. 49) in them. Crowther supports this observing:

> the impact of *painted* colour sensations on the human sensorium is never some direct appeal to the nervous system. Such sensations are always mediated by conceptual awareness. They are perceptions […] embodied in a complex cognitive *reciprocity* between subject and object. (Crowther 2012: 48-49)

In addition, contextual and temporal factors intensely affect viewers' experiences of paintings. Also, specific material arrangements suggest specific practices of doing. For instance, abstract expressionist paintings invite viewers to follow with their eyes textures that are traces of overt and expressive movements. Hence, these marks point back to those actions and also further activate viewers' imagination. Geometric abstract paintings invite viewers to make associations with more static *acts,* such as

stillness, subtle and minimal movements, rational structuring and division of space, or search for precision, proportion and balance. Such actions are carefully planned, require geometric tools and control of highly refined motor skills. In chapter III, I explore in detail how haptic visuality in paintings links objects with actions, and conditions and activates specific responses in viewers. I propose this reciprocity between being and doing is the true economy of abstract painting.

To summarise, this chapter discussed the relation between Western pictorial abstraction and representation using as a main example abstract works based on geometry. I argued that, despite being created as a non-representational approach to painting, these works can also be considered representational. I proposed to think about representation as a relation of individuals with the world, in which the world is seen as transcendent, and hence, pre-given existing independently of subjects of experience.

I supported Greenberg's view of modern abstraction as not correspondent to a true break with pictorial tradition, since both share representational compositional strategies such as dependences on models aiming to capture and fixate them, and constructions of works from fixed points of view. Also, technically, abstract and academic works display common features such as erasures of paint's haptic properties, and creations of highly flat and illusionistic surfaces.

I associated representation in painting to a static ontological perspective. Also, endorsing Worringer's work on abstraction and empathy, I contrasted static models presented in geometric works to more dynamic worldviews. These latter were

exemplified in expressive and performative pictorial approaches such as abstract expressionism and action painting.

I discussed self-critical approaches to the medium introduced by modern painters – whose aim was to explore the medium's potentialities – in relation to haptic visuality. Since haptic properties in paintings are traces left by specific movements, I proposed that these refer to pictorial performativity. Finally, as an alternative to representational approaches, this chapter introduced a non-representational and dynamic model of abstract painting based on reciprocity between being and doing. The next chapter elaborates this non-representational model of painting using principally Deleuzoguattarian and *enactive* theories.

III -   Non-representation: enaction, performativity and painting

This chapter outlines the non-representational model of abstract painting proposed in this practice-based research project. This model is based on a temporal view of painting and endorses immanent and dynamic worldviews such as Deleuzoguattarian (1984, 1988, 1994) philosophy of *becoming* and the *enactive* model of cognition. The chapter explores concepts, such as fractal geometry (Mandelbrot 1983); the Deleuzoguattatian plane of immanence; tacit knowledge (Polanyi 1958); *affordances* (Gibson 1986) and enaction, to elaborate a view of this practice as an assemblage in *becoming* of objects, individuals and *actions* (mobile and immobile), that together create meaning through unfolding interactions.

Ideas discussed here inform my own practice of painting, which I call *GM*. Hence, throughout the chapter I connect theory and practical matters using my work and also other painters' practices as examples. As introduced in chapter I, *GM* is a performative practice consisting of a repetitive performance of a singular pictorial gesture. I place marks produced through this brushwork inside squared spaces of a grid dividing the pictorial planes. These strokes are regularly distributed covering all of the planes' surfaces. As a result, from far my paintings' images look like continuous textured surfaces. However, close up the individuality of each stroke gains presence and the aggregate nature of compositions is evidenced.

To begin outlining the dynamic non-representational pictorial model, section 1 introduces fractal geometry, which is a principal referent of my paintings. I use

fractals in my work because, unlike classical approaches, they embody a non-exact approach to geometry. They also endorse relative, relational, non-hierarchical and multiple perspectives, opposed to absolute ones. I compare the model of fractals to Euclidean geometry that informs geometric paintings, to discuss the dynamic characteristic of the former adopted in my practice. I then discuss the intersection of fractals with the Deleuzoguattarian (1988) model, in particular its concepts of multiplicities and smooth space.

Section 2 discusses Deleuze and Guattari's immanent framework in more detail by contrasting it to transcendent views discussed in chapter II. For example, I contrast transcendent concepts such as essence, identity and being to Deleuzoguattarian multiplicity, singularity and *becoming*. Then, I present the idea of morphogenetic processes (DeLanda 2002; Ingold 2013; Kirk 2014) to introduce an approach to the analysis of phenomena that focuses on processes involved in the *formation* of objects. This approach is exemplified in fractals and is another main idea informing the non-representational model of this project. I then describe in more detail Deleuzoguattarian smooth and striated spaces, in relation to virtual, intensive and actual 'spheres of reality' (Delanda in Buchanan and Lambert 2005: 86) to discuss their roles in *GM*.

Section 3 presents the Deleuzoguattarian (1994) 'compound of sensations' — which is a block of percepts and affects — to outline a definition of artmaking as intensive processes and a medium for actualisation of virtual affects. I also discuss pictorial abstraction in relation to this, and analyse the abstract approach to perception of fractals that I use in my paintings.

In order to continue developing the dynamic model of painting elaborated throughout this project, section 4 explores notions of temporality in painting in relation to *reciprocity* between the being and doing (Benjamin 1996) of abstract painting introduced in chapter II. As mentioned, reciprocity is a key notion that gives way to a new source of signification of abstract painting that is different to representation. Notions such as tacit knowledge, *affordances* (Gibson1986) and co-responsibility (Bolt 2007) are concepts in line with reciprocity. This leads to the presentation of enacted aspects of making, which unfold within and throughout processes of reciprocal interaction between individuals and media.

Section 5 explores some aspect of the *enactive* model of cognition, which proposes a non-representational understanding of it. I contrast it to static models introduced in chapter II, to present a dynamic relation between individuals and the world defined by enaction. I propose that using enaction in combination with painting enables a non-representational perspective of this practice. At this point, painting is presented as performative processes of embodied thinking where the pictorial medium functions as artefact for 'extended cognition' (Clark 2011). Crucially, this *enactive* approach enables an emergence of painting as a means to act directly upon the world (Crowther 2012). Consequently, instead of only being considered as a medium for representation, I propose painting can also create new worlds.

Section 6 brings into discussion dynamic aspects of my practice. I first introduce systemic compositional approaches of painters such as Vasarely and Pérez (see chapter II), and The British Systems Group (1970). I then present the systemic

compositional method I use, which is based on a fractal percept. After that, I analyse in detail repetitive aspects of my practice of *GM* —informed in fractals, weaving techniques, digital media and meditative practices — in relation to overt and imperceptible *actions* to explain its particular approach to pictorial performativity. This section finishes with a description of bodily sensations and affective states that a sustained practice of *GM* can produce in practitioners.

Section 7 analyses the brushwork from an *enactive* perspective to describe it as an intellectual non-representational pictorial agent (Macleod and Holdridge 2005). I discuss relations between pictorial gesture and haptic visuality to elaborate an approach to the brushwork as actualisations and traces of manual labour (Key 2009). I then analyse representational views of indexicality of pictorial marks (Graw in Geimer et al. 2012; Powers 2013) and further compare them to non-representational approaches endorsed in this thesis (Message 2010; Morley 2016). This section closes by discussing the bond between optic and haptic visualities in painting, and proposes this affiliation crucially mediates the pictorial specificity.

Finally, section 8 analyses works of painters such as Lee Ufan (b.1936), Simon Hantai (1922-2008), Eva Hesse (1936-1970) and Agnes Martin (1912-2004) using an *enactive* model. I support my ideas with ideas of scholars, such as Morley (2013) and Crowther (2012), to describe similitudes of *GM* to those works. I also analyse the painter's work and viewer's experiences as active agents that contribute to the creation of knowledge. I conclude by analysing contemporary artists Rob and Nick Carter's *Pixelated Paintings* (2013) to present an extreme case of highly contextual and temporal works that acquire meaning only after an enacted interpretation.

1.   Fractal geometry: A smooth space

Fractal geometry is a principal referent of the non-representational pictorial model presented in this project. Fractals inform the distributions of colours in my works and, together with pixel-based digital images, also the fragmentations of squared pictorial planes into smaller squares. They also inform the use of a 'bottom-up' compositional method based on aggregates of a same unit (Johnson 2001: 18). Fractal geometry was formalised in 1975 by Mandelbrot. It extended classical Euclidean geometry, which dominated Western scientific and philosophical thinking for centuries. Mandelbrot (1983) describes a fractal as a coarse and fragmented geometric form that can be broken into smaller parts, each of them being, at least approximately, a decreased copy of the whole shape [figure 26]. The fractal mirrors distinctive features of natural formations, which are rough, broken or irregular. It is a self–similar, iterated and detailed mathematical construct that presents a singular interrelation between the wholes and parts composing it. Every unit in a fractal can equally correspond to a whole and to a part of a bigger whole simultaneously.

26. *Fractal: Sierpinski Triangle.*

This fractal relation within forms has been largely represented throughout painting's history. Katsushika Hokusai's (1760-1849) *The Great Wave off Kanagawa* (1829-

1832) [figure 27] is a well-known example. In this painting huge waves are formed by similar smaller waves, which are also composed by smaller waves and so on. This relation can also be found in rose windows of cathedrals or in geometric patterns of Islamic art. Nevertheless, despite being a known relational model, it was not until the arrival of computers that fractal geometry was transformed into a science. The reason is the fractal function is an iterative and recursive formula hence, computers' extraordinary capacity was needed in order to exploit its full potential.

27. *The Great Wave off Kanagawa (1829–1832)* Katsushika Hokusai's - Ink - 26x38 cm.

A crucial difference between classical geometry and fractals is, while the former is defined in exact quantitative terms, the latter is defined as a relation, namely, in qualitative terms. This is because neither parts nor whole defines a fractal, but the essential reciprocal interrelation between them. In addition, the fractal is a non-representational model because its relation is non-hierarchical and self-referential, which is different to the 'biunivocal' relation, which is described by Deleuze and

Guattari (1988: 431) as characteristic of representational models. Biunivocal is a term borrowed from mathematical set theory, which defines two elements linked together in a power-relation: while one dominates, the other is subjugated. This power-relation is a condition in representational systems because the subject that represents always determines represented objects.

Another difference between both branches of geometry is, while Euclidean measurements are concerned with length, depth and thickness, fractal measurement concerns *dimension*. Mandelbrot expanded this latter notion by introducing 'fractal dimensions' (in Gleick 1987: 98). 'Fractals are aggregates whose number of dimensions is fractal rather than whole' (Deleuze and Guattari 1988: 565). In theory, fractals can be eternally broken down into smaller and smaller pieces. Thus, they are not indivisible and closed geometrical entities — namely, point, line, plane or volume — but actually exist in between whole dimensions.

Gleick (1987: 94) explains how classical geometric shapes 'represent a powerful abstraction of reality, and they inspired a powerful philosophy of Platonic harmony'. Nonetheless, Euclidean shapes are probed to be a 'wrong kind of abstraction' (ibid.) for understanding nature's complexity. In contrast, fractal geometry successfully 'mirrors a universe that is rough, not rounded, scabrous, not smooth' (ibid.). Mandelbrot's model endorses the fact that irregularity in nature is not simply a random phenomenon, as irregular patterns actually contain distinct order. More specifically, the degree of irregularity in natural forms remains constant at different scales and composes a sort of 'regular irregularity' (Gleick 1987: 98). The fractal model allows the measurement of qualities of natural formations 'that otherwise have

no clear definition: the degree of roughness or brokenness or irregularity in an object'
(ibid.).

Relations of pattern inside pattern repeated across scales are properties of self-similarity. According to Coveney and Highfield (1995: 172) 'regardless of how much a fractal object is magnified, it contains essentially the entire structure of an object'. Accordingly, while finer details can always be found at smaller scales, new emergent (Capra 1996; Johnson 2001) phenomena appear at bigger ones. Emergent properties are those new features arising after new structures are formed by simpler components. Morley (2015: 475) describes an emergent structure as 'not just the sum of the elements derived from the input', but one that actually contains 'additional components' (ibid.) belonging to the structure as a whole. For instance, optical illusions produced by op-art paintings are emergent properties of specific geometric compositions. The illusions are perceived only when the whole is observed, and most likely disappear when viewers approach the works and look at the details.

Iterative fragmentation in fractals produces a sort of disintegration from within forms and ultimately shapes them as atomic structures or networks. In this atomic dissolution of shapes every unit can be perceived as separate. Yet, due to the network of relations between those units, shapes still remain. Hence, in fractals a dual phenomenology takes place in-between fragmentation and emergence, or between evanescence and permanence of forms. For that reason, a fractal can be described as a 'zone of the indiscernible that lies between two other zones, one that no longer exists and one that is "not yet" [there]' (Burrows in Zepke and O'Sullivan 2010: 161). Consequently, fractals can be analysed from two perspectives: a 'top-down'

deconstructive approach — wholes fragmented into self-similar parts — or a constructive 'bottom-up' — accumulations of similar parts building emergent larger wholes (Johnson 2001: 18).

As discussed in chapter II, classical geometric shapes are transcendent, static, closed and individual figures. On the contrary, since fractals can be endlessly broken down into smaller pieces, these are not closed and singular entities (a one) but collective formations. Moreover, as these forms are simultaneously accountable as wholes and parts, fractals change depending on the perspective from which they are considered. Consequently, these figures endorse relative and multiple perspectives, and are opposed to absolute ones. I explain in more depth later, the intersection between fractals and the Deleuzoguattarian model. For example, because fractals are collective formations organised in networks of relations, they can be described as rhizomatic multiplicities, also, Deleuze and Guattari (1988: 565) define fractals as the 'mathematical definition of a smooth space'.

Informed by fractals, the planes of my paintings are composed by multiplicities of marks containing various visual networks functioning at different levels of magnifications, or distances from viewers. For example, every brushstroke in my later paintings of this project is an independent unit with a form, dimensions and colour [figure 28]. When the paintings are observed from longer distances, new 'plane[s] of consistency' (ibid. 8) emerge and relations between marks begin to appear [figure 29]. In further planes, the individuality of each stroke is lost for the construction of collective formations emerging as tonal degradations [figure 30]. Finally, when many paintings are perceived as a whole, a new plane of relations between works is

foregrounded [figure 31]. All these different scales of association, within and between paintings, form different Deleuzoguattarian 'rhizomatic' structures of meaning (ibid. 7). Consequently, these surfaces contain different pictorial planes of consistency at different scales that recede or advance depending on the point of view.
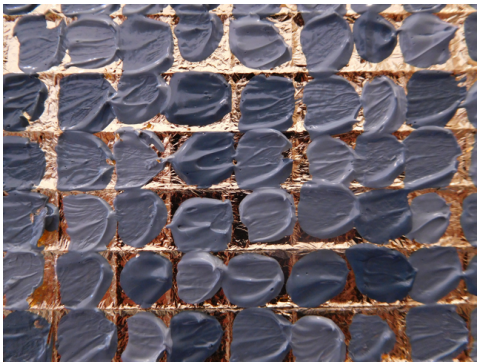
28(left) and 29(right). *Atoms: Waves* (details) - Macarena Rioseco

cotton threads, gilding (copper and zinc alloy) and oil on canvas.
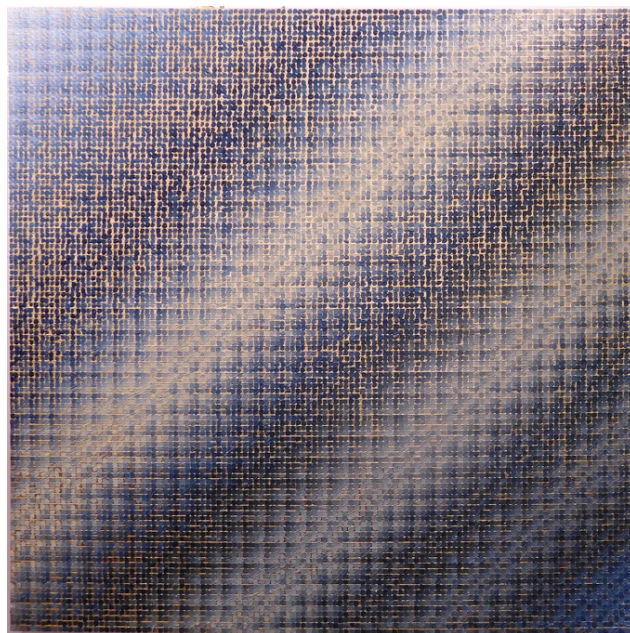
30. Atoms: Waves (one of three) (2016) - Macarena Rioseco

cotton threads, gilding (copper and zinc alloy) and oil on canvas - 117x117 cm.
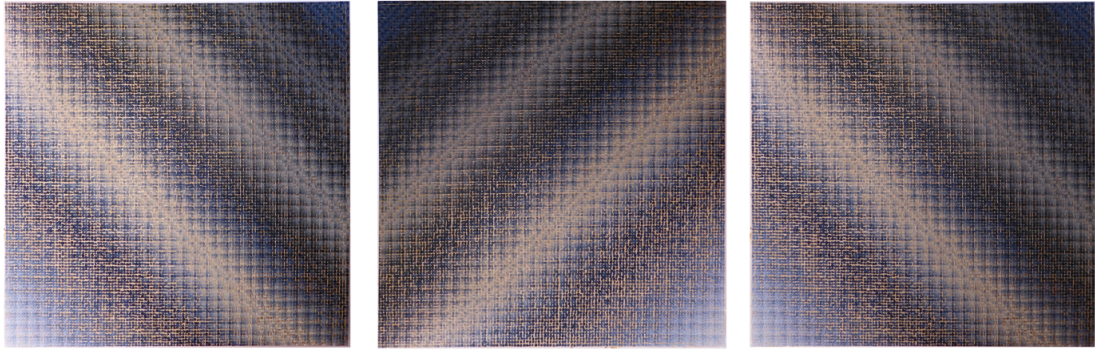
31. *Atoms: Waves (triptych)* (2016) - Macarena Rioseco

cotton threads, gilding (copper and zinc alloy) and oil on canvas - 117x117 cm (each).

2.   Deleuzoguattarian plane of immanence

Deleuze and Guattari (1988: 16) explore differences between transcendent (static) and immanent (dynamic) worldviews by defining and counterpoising two models: 'arborescent' and 'rhizome' (ibid. 7). The arborescent model is a representational hierarchical system whose image draws from trees and roots' shapes. It is biunivocal because it 'proceeds by dichotomy' (ibid. 4) through reflecting and doubling an initial perspective. Hence, like all representational models, arborescent ones are grounded in the dissemination of similarities and 'the elision of difference' (Bolt 2004: 40). The rhizome is a non-representational and non-hierarchical model inspired in botanical structures typical of bulbs and tubers. These structures are composed of horizontal networks of interconnected elements building overall meaningful planes of consistency. Instead of building up from doubles and reflections, this model embraces creations of the new through establishing different connections between already existing elements. Hence, the rhizome praises difference and proposes itself as a

constructive and creative tool defying ' the classificatory tree-like structure that grounds and fixes thinking'(Bolt 2004: 39).

Unlike arborescent, transcendent and representational models introduced in chapter II — such as Plato's *Theory of Forms* that geometric works mirror — Deleuze and Guattari's rhizome endorses a non-representational, dynamic and immanent ontological perspective. This model focuses on processes, transformations and *becoming*, instead of ideating 'a timeless, transcendental realm of "essences" or "absolute being"' (Morley 2015: 485). For Deleuze and Guattari (1988: 421) *becoming* is 'opposed to the stable, the eternal, the identical, [and] the constant'.

As discussed in chapter II, Plato's transcendent thought established the foundations that set forth a philosophical structure whose core is 'the critical distinction between the Idea (the model) and the copy' (Bolt 2004: 38). In Plato, Ideas or *forms* are viewed as static, timeless entities and models instantiated by the physical world. Humans have access to these models exclusively through their representations. Malevich's *Black Square* (1915) [figure 7] is a clear example of a finite representation of an infinite Idea. All representations of a given *form* are imperfect, therefore, the *copy* is categorised in its 'relation of greater or lesser resemblance' to the *model* (DeLanda 2002: 19).

Conversely, in Deleuzoguattarian's perspective, Ideas are not eternal but originate through interactions between people and the material world. Accordingly, thinking has a 'dynamic genesis' (Smith and Protevi 2015) as it emerges from sensuous experiences of individuals. Sauvagnargues (2013: 9) describes Ideas as 'complexes of

sensation […] that stimulate thought'. Deleuze stresses Ideas are immanent, contextual and in constant transformation because they depend on every individual's thoughts and experiences.

According to Deleuze (1968: 40) 'to think non-representationally involves thinking difference in itself' because representation is built on transcendent models whose principles are 'resemblances between things' (Bolt 2004: 38), and difference is overlooked. Deleuze (1968: 265) further argues difference in transcendent models is wrongly subordinated 'to instances of the Same, the Similar, the Analogous and the Opposed'. Another strategy proposed by Deleuze to disrupt representational models is to articulate new concepts that describe 'processes, conducive to fluidity and movement' (Bolt 2004: 37). The aim would be to acknowledge and disseminate the idea of a constantly changing world and also that knowledge can be found within material processes and transformation of phenomena.

Endorsing this, DeLanda (2002: 2) proposes instead of comparing appearances of things, a special attention should be given to '*morphogenetic process*' taking place within specific *becomings*. Ingold (2013: 22) supports this proposing to see making 'as a confluence of forces and materials [… and as a] form-generating — or *morphogenetic* — process'. Capra (1996: 37) also approves this view arguing a shift 'from objects to relationships' enables a perspective where 'every structure is seen as the manifestation of underlying processes' (ibid. 42). A consequence of this perspective brings is that forms can be seen as sorts of documents of processes involved during their formation. Hence, analysing objects as traces of those processes can lead to new information about the material world.

I describe in more detail later, that instead of considering 'matter as receptacle of forms' (Delanda 2002: 19), this view proposes an agency to matter within processes of form generation. This perspective even enables a view of individuals or 'makers' (Ingold 2013: 21) only as one participant more 'amongst a world of active materials' (ibid.). Ingold suggests artefacts and organisms are of a same kind because both are made and grow. The only difference between them is the latter lacks human mediation. He even claims making processes are interventions 'in worldly processes that are already going on, and which give rise to the forms of the living world' (ibid.).

Deleuze and Guattari developed the concept of 'multiplicity' (1988: 7) and introduced it as an alternative to the notion of essence. According to DeLanda (2002: 19) multiplicity 'implies an identity which is not given all at once [unlike essence] but it is defined progressively'. Multiplicities are composed by sets of specimens that do not necessarily share physical resemblances but are shaped by similar processes or 'tendencies in a process' (ibid.). Deleuze and Guattari (1988: 7) call these recurrent elements 'singularities'. Accordingly, multiplicities replace 'eternal archetypes […] which assume that matter is a passive receptacle' (DeLanda 2002: 19) for a conception of forms as 'immanent to material processes' (ibid.). Forms are proposed as results of specific morphogenetic (physical, chemical and biological) processes occurring within and between materials. For example, the fractal model is an abstraction of distinct features of natural (organic and inorganic) formations that do not share concrete formal resemblances, but point to a very particular *process of formation*. The peculiar iterative inner-fragmentation and self-similar relations between units and across scales in fractal structures implies a bottom-up constructive

process based on repetition, accumulation and growth. This recurrent process of formation is the *singularity* of fractals, which is materially documented in every structure it produces; and all fractal specimens together compose the fractal multiplicity.

Singularities and multiplicities are leading concepts of the non-representational model of this project. For example, as expanded in chapter IV, the repetitive performance of the same pictorial gesture is a *singularity* that structures my practice. This singularity is enacted in every gesture performed and is also documented by the multiplicity of marks it produces on pictorial planes. According to DeLanda, Deleuze thought all singularities '*meshed* together into a *continuum*' (2002: 14) to create a plane of immanence. This is a virtual realm, a 'nonformal' and non-representational territory (Deleuze and Guattari 1988: 554). Deleuze (1990: 123) describes it as a pre-formal space not 'of the form, but neither is it that of the formless: it is rather of the pure unformed'; a smooth 'plane of matter' (Deleuze and Guattari 1984: 61) that is also 'prior to subjects and objects' (Adams St. Pierre 2016: 10) where matter has not yet become material for something.

Furthermore, in the Deleuzoguattarian framework the *actual* world emerges from this immanent undifferentiated material space, which is *virtual*. DeLanda (2002: 18) paraphrases how the 'metric space we inhabit emerges from a nonmetric continuum' through processes of differentiation. These *actual* metric and *virtual* nonmetric spaces are 'two different *types* of multiplicity' (ibid. 40) or 'striated' and 'smooth' spaces (Deleuze and Guattari 1988) [as can be seen in figures 32a and 32b]. In chapter IV, I

describe differences between these two spaces and the central roles they have in my paintings.
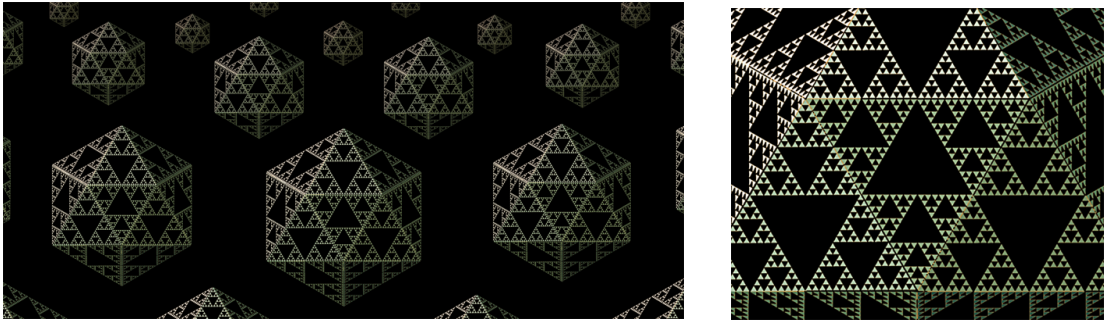
32a (left). Striated space and 32b (right). Smooth space - Macarena Rioseco - digital.

DeLanda (in Buchanan and Lambert 2005: 86) further explains how smooth and striated spaces are 'connected via intermediate spaces which [… are] mostly *intensive*'. The *virtual* (smooth), *intensive* and *actual* (striated) are Deleuze's 'three spheres of reality' (ibid.) or 'ontological dimensions' (ibid. 55). We can only access the *virtual* through analysing the *actual* and describing in detail the *intensive processes* that 'generate actual forms' (DeLanda 2002: 83). Notably, *virtual* and *actual* exist in processes of *becoming* and reciprocally produce and modify one another.

Chapter IV also explains in detail equivalences of three elements of *GM* to Deleuze's three spheres of reality. As an introduction, *virtual* is equivalent to the Idea of a singular gesture. This gesture constraints, guides and 'leaves behind traces of itself in the intensive processes it animates' (ibid. 35). Then, *intensive* processes are concrete gestures I perform during practice. Finally, multiple heterogeneous individual marks

produced, correlate with the *actual*. These marks are 'specific actual entities' (ibid. 86) creating a multiplicity of formless coloured brushstrokes of paint and all together form a hybrid — continuous and fragmented — pictorial space.

3. Virtual affects and the compound of sensations

In this project I endorse O'Sullivan's (2001: 129) proposition to understand the virtual 'as the realm of affects'. He implies artmaking is an *intensive* process, when he describes that affects cannot be represented but only *actualised*, and mentions art practices as a medium for that. He also claims art is 'situated on the borderline between the actual and the virtual' (ibid.).

O'Sullivan contrasts *actualisation* to *representation* and exemplifies this duality using mathematics. He explains abstract equations of pure mathematics can be understood 'as a way of actualising events and processes which cannot be represented' (ibid.). I develop a detailed discussion of artmaking as an intensive process in relation to my practice, in chapter IV. Referring to Bataille's (1962) work on art and rite, O'Sullivan (2001: 127) emphasises if art is performed as a ritual it 'is precisely a mechanism for accessing a kind of *immanent beyond* to everyday experience […] out of mundane consciousness'. I will also come back to this idea in chapter IV to discuss it in relation to Deleuzoguattarian 'micropercepts' (1988: 249).

Considering artmaking as intensive processes and a medium for actualisation of affects, Deleuze and Guattari (1994: 196) introduce the 'compound of sensations'.

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They describe a 'block of sensations' as a compound of 'percepts and 'affects' (ibid.) actively at play during making processes. These notions refer to particular atmospheres contextualising artworks constructions, which are actualised and later transmitted by the artworks. This environment develops during practice, through interactions of individuals with materials and is composed by materials' properties together with individuals' inner state and *actions*.

According to Deleuze and Guattari 'the aim of art is [...] to extract a bloc of sensations, a pure being of sensations' (ibid. 167) from the actual world to later actualise it again. Extracting this block implies raising particular 'lived perceptions to the percept […and] lived affections to the affect' (ibid. 170). Nonetheless, artists should not only work with sensations but should also create sensations. The transformation of individual experiences into more abstract compounds is a highly relevant practice when making artworks. By detaching those experiences from the particular and local they can be taken to more universal territories and be shared by many. Accordingly, extracting pure beings of sensations might allow individuals to get closer to a virtual immanent space and eventually share it with others through actualisations that can resonate with many.

Affects are undifferentiated bodily sensations that Deleuze and Guattari describe as highly abstract phenomena. They specify every human being experiences the affect but it 'is not the passage from one lived state to another but man's nonhuman becoming' (ibid. 173). This means the affect is not a concrete phenomenon, but a 'zone of indetermination' (ibid.) that can only be specified as a sensation. Therefore, despite being shared by all humans, there is no certainty that experiences of the affect

are the same. Because affects are virtual, their differentiation would necessarily be a result of their intensification. Deleuze (1968: 262) claims 'the nature of the virtual is such that, for it, to be actualised is to be differenciated'. A process of intensification would imply an actualisation of the affect and hence, its transformation into an emotion.

Emotions are also abstract but have more concrete expressions. For example, they have names, are evidenced by clear signals in the body and face, and are even expressed through specific actions. Such expressions give emotions the possibility to be communicated between individuals. In light of O'Sullivan's view of affects as *virtual* then, through bodily *intensive* processes (emotions) affects can be *actualised* through concrete expressions. In other words, affects are *virtual* multiplicities whose *singularities* produce sets of bodily intensive processes which can be actualised as emotions and appear physically in the world. Deleuze and Guattari (1994: 173) explain this by stating affects 'endlessly reach that point that immediately precedes their natural differentiation'. O'Sullivan (2001: 131) paraphrases affects as pre-semiotic, that is, 'of a different and prior order' than language. Affects 'occur on a different, asignifying register' (ibid. 126) than knowledge and hence, they cannot be "read" or communicated, but only experienced.

According to Deleuze and Guattari (1994: 170) extracting percepts and affects from perceptions and affections 'is like a passage from the finite to the infinite, but also from territory to deterritorialization'. To "wrest" a block of sensations from the world is a process that 'extends the territory' (Deleuze and Guattari 1988: 434) from the concrete towards the abstract. For example, discussing Matisse's efforts to make an

abstraction of a tree, — which the painter describes as drawing something that looks like a tree (a sign) — Damisch (2009: 143) describes his *action* as 'shift[ing] from a concrete singular to a collection of individuals that would present the same general character'. Hence, in this case, drifting away from the local, Matisse can create an abstract sign of a tree that contains every single tree that has ever existed and will ever exist. As a result, the model (sign) in Matisse's case is also the *copy* of a multiplicity of trees.

As mentioned, the paintings I produced as part of this research are partly based on fractal geometry. This is a mathematical abstraction taken from a singular and recurrent natural formation. Hence, fractal geometry is a perception wrested from nature. In my paintings I use an abstract approach to fractal geometry. To be more precise, I extract a fractal relation from this geometric model and implement it spatially and chromatically in my paintings. Then, considering fractal geometry as a perception more abstract than a fractal phenomenon but more concrete than the fractal relation, I propose this latter is a percept.

Following Deleuze and Guattari, artmaking emerges as iterative practices that wrest percepts and affects from the world, to bring those blocks of sensations back again to the material. Such processes imply percepts and affects are transformed again into new perceptions and affections, yet, with a higher level of abstraction. As discussed in chapter II, Bernstein (1996: 9) considers that to abstract 'from sensuous givenness' is a 'sacrifice of sensuous particular to the universal' (ibid.). Nevertheless, if this is done within art practices, then those universals can be brought back again into sensuous particulars. Consequently, artmaking allows universals to be brought back to the

sensuous through constructions of artworks. As discussed in chapter II, Worringer also endorses this idea, claiming art gives humans possibilities 'of creating an ideal theatre for our inner experience, in which the forces of our organic vitality, transferred onto the work of art by means of empathy, are able to live themselves out uninhibitedly' (1908: 132) .

4.   Material thinking

As discussed at the end of chapter II, the non-representational model presented in this project is based on reciprocity between the being and doing of abstract painting. Also, painting's work is proposed as materialisations of blocks of sensations, actualised through making processes. Such processes involve interactions of individuals with materials, through the former's *actions* and the latter's reactions. *Action* is used in this text to not only refer to overt movements but also to immobile acts, such as abstracting, 'thinking, calculating, imagining, or deciding' (Engel et al. 2015: 4). Also, the traces of these making processes left on the surfaces further activate viewers and provoke responses or *actions* in them.

Also, as discussed in chapter I, iterative reciprocal relations between different elements, or actors, participating in art practices determine processes and outcomes of practice-based research projects. Hence, the creation of knowledge in these projects is a result of practice and, simultaneously, as practice is also informed by ideas, it is also the result of knowledge. Tacit knowledge contemplates this ongoing reciprocal relation between practice and knowledge. Tacit knowledge 'refers to embodied

knowledge or "skill" developed and applied in practice and apprehended intuitively'
during practice (Barrett in Barrett and Bolt 2007: 4). Bourdieu (1990) observes that
the logic and strategies of practice cannot be predisposed and actually emerge as the
practice develops. The impossibility to predetermine strategies of practice is because
these 'operate according to specific demands of action' (Barrett in Barrett and Bolt
2007: 4) arising in the interaction between individual and media. For example, Bolt
(2004: 1) describes tacit knowledge emerging within her practice, writing 'in the heat
of practice […] painting takes on a life of its own'.

Kirk (2014) supports the idea of an emergent practice of painting unfolding within
processes, using Gibson's (1986) notions of 'ecological cognition' and *affordances* to
describe her experience. Gibson explains '[t]he *affordances* of the environment are
what it *offers* the animal' (ibid. 119) or what the animal perceives from it. *Affordance*
proposes humans perceive things as objects that 'afford opportunities for action' (Kirk
2014: 121) and not just as objects alone. Notably, *affordance* corresponds to a non-
representational worldview as it 'implies the complementarity of the animal and the
environment' (Gibson 1986: 119) instead of considering one passive and the other
active. Similarly, Crowther (2012: 59) proposes a non-representational 'ontological
reciprocity', where subject and 'world are directly correlated' and reciprocally
constructed. He claims 'the relation of subject and object in experience is […] one of
[constant] *reciprocal* interaction and modification' (ibid.) not of reflection.

Concerning artmaking, as mentioned, Sampson calls the interaction between subjects
and objects during practice 'acting ensemble' and signals both as responsible for
emerging outputs. Similar to Gibson's *affordances,* Sampson suggests objects provide

material conditions and a context where individuals can *act*. In response, individuals shape those materials through *actions*. What emerges from the interactions belongs to the whole acting ensemble and not to any agent in particular. In terms of practice, this is relevant because it presents a view of artmaking where a hybrid level of organisation, between subjects and objects, come together to create knowledge. It presents a shared agency between individuals and objects in the creation of a world. Also, reciprocity presents a view where not only subjects construct objects, but also objects help to shape subjectivities. I come back to this idea later in this chapter and in chapter IV.

Bolt (2007: 3) also proposes a non-representational model based on 'material practice', where subjects and objects 'are co-responsible' (ibid. 9) of meaning generation. Concretely, instead of aiming to understand 'our abstract thinking about the world' (ibid. 13), she proposes 'notions of handling and handlability' (ibid. 9) to explore concrete ways individuals interact with the physical world. According to Bolt, handling implies trading and 'not a relation where the world is set before us (knowing subjects) as an object' (ibid. 52). For her, tools are important because they 'are co-responsible [...] for bringing forth something into appearance' (ibid.). She sees objects as social actors with agency, a view introduced by scholars of material semiotics through models such as Actor Network Theory (Callon 1986; Latour 1999, 2005, 2013; Law 1986, Law and Hassard 1999, Law and Urry 2004; Haraway 1991). Bolt (2007: 3) highlights the dynamic side of material practices stating 'every new situation brings' different conditions and opportunities leading to new outcomes. Overall, she proposes an approach to artmaking 'conceived of as a performance in which linkages are constantly being made and remade' (ibid. 3).

My view of reciprocity and co-responsibility between individuals and objects is similar to Bolt's. However, the agency she gives to tools and objects reaches levels of subjectivity, and a sort of animated quality of pictorial medium is implied, to which I do not ascribe. For example, as mentioned above, Bolt describes that within practice, at some point *painting takes on a life of its own*. Also, as discussed in chapter II, Pollock makes a similar remark about painting having a life of its own. As explained in detail later, the approach I endorse in this project is different to Bolt's and Pollock's. Within the making process, I see the role of objects as bonded to individuals' cognitive processes. Conscious or subconscious processes, such as tacit knowledge, serendipity, mechanical reactions, automatism, intuitive handling or improvisation, are all cognitive processes. Hence, instead of painting suddenly getting animated, what happens during moments of inattention still involves a degree of decision from individuals. Actually, I propose in chapter IV, those are moments where individuals can access personal Deleuzoguattarian psychological smooth spaces and their singularities are revealed.

For instance, painting as a medium *affords* paint, a material that can be liquid or hold different densities but when dry becomes solid. It also offers colours, varnishes, mediums, traditional and non-conventional surfaces, tools and techniques, etc. Nonetheless, as Gibson (1986: 120) puts is, *afforded* properties are always '*relative to the animal'* and her or his behaviour. For example, I described in the introduction of this thesis that in this project I have drawn from knitting methods, for painting. This association between knitting and painting is explained by the fact that I have knitted and woven throughout my whole life for much longer than I have painted. For that

reason, the way I have approached pictorial techniques in this project is clearly influenced by my experience in constructing knitted and woven pieces. The relevance of hand-knitting techniques in my practice is significant and I come back to discuss further influences in my work later in this chapter and also in chapter IV.

Drawing on *affordance* to describe art practice as processes of 'material thinking' (Carter 2004) and of 'co-respondence' (Ingold 2013) between individuals and actions offered by materials and tools, Kirk claims that:

> As I paint, my imagination is exercised in an entwinement with the emerging image, material responses and the movements of my body. In this connection between sensory stimulus, rhythmic movement, imagination and immersion in the forming image, I explore the emerging object. (Kirk 2014: 121)

Crowther (2012: 60) outlines a similar idea, describing how 'the structure of thought and of the objective world is correlated in a mutually defining dynamic'. This reciprocal relation between thought and the world described by Crowther is also endorsed by the aforementioned *enactive* model of cognition, which is an important framework informing the non-representational pictorial model of this project.

5. Enaction

To resume, representation is viewed here as a static model founded on transcendent thinking, based on assumptions such as the world existing before and independently of

individuals, and 'the mind [as] a mirror of nature' (Varela et al. 1991: 9). In this model, humans are passive spectators without agency that merely perceive and reflect a pre-given world. 'Enaction' (ibid.) or the *enactive* model of cognition, on the contrary, proposes a dynamic view of the relationship between individuals and the world, where individuals' roles 'consists in the enactment or bringing forth of a world' (ibid. 205). Varela et al. stress that: 'cognition is not the representation of a pre-given world by a pre-given mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs' (ibid. 9).

The view of cognition endorsed by this model was first developed by thinkers such as Bergson at the end of the nineteenth century. In this perspective, cognition is viewed not only as mental processes but also as embodied actions. It proposes individuals have crucial roles in the creation of meaning and the world, and presents knowledge as processes where mind and body are coupled in the task of making sense of the world. This model holds the belief that humans produce meaning and constantly transform the world around them. As a result, the world depends and changes based on individuals' experiences, as well as, individuals depend and change based on their experiences of the world. For instance, Varela et al. explain the phenomenology of correspondence between 'mental intention and bodily act' (ibid. 29) as developing together and within practice until 'a specific kind of mind-body unity' (ibid.) is achieved. At first, we can have an idea of how to physically perform an activity, but we are not capable of actually performing it. The link between intentions and *actions* tightens as we practice, until we do not feel their differences anymore.

Scholars such as Merleau-Ponty and Morin endorsed the thesis of co-dependence between subjects and the world proposed by enaction. For instance, Merleau-Ponty (1945: xi-xii) observes the world 'is the natural setting of, and field for, all my thoughts and all my explicit perceptions'. He claims the senses are the only access people have to the world and hence, the idea of objects existing independently of subjects is artificial. He further argues a specific subject is a product of a specific world, which actually is a projection of that subject. Similarly, Morin (2008: 24) claims there can be no objects 'except in relation to a subject' as well as no subjects without an environment whose objects allow them to exist. Consequently, in Morin and Merleau-Ponty's views, the world and individuals are essentially inseparable.

Ingold highlights the temporal dimension of enaction and counterpoises it to static models. He argues enactment endorses a dynamic model, where things develop as they happen moving 'forward in real time' (Ingold 2013: 7). Instead of reflecting an expected world, enaction implies 'open[ing] up our perception to what is going on there so that we, in turn, can respond to it' (ibid.). An interesting way to phrase the difference between representation and enaction is that the former defines 'independent, static mental *structures',* whereas the latter defines, 'interdependent, fluid mental *processes'* (Varela et al. 1991: 109). Harrison (in Harland and Manghani 2016: 190) also distinguishes 'between enactment and illustration' or between enactment of an idea through actions and material means, and representation of an idea though mimesis of forms. Following the same idea, Harrison further proposes to explore 'the distinction between the represented and the means of representing' (ibid. 191).

Macleod and Holdridge (2005: 205) define creative practices as 'the enactment of thinking'. They stress the philosophical dimension of thinking but also propose that when produced in accordance 'to the logics of a practice' (ibid.), thinking is an activity performed in combination with 'invention and intuition' (ibid.). Hence, thinking within practice is 'thinking which is acted through' (ibid. 206). Endorsing Ingold's (2013) idea of 'correspondence', Kirk (2014: 119) also claims artmaking 'is a corporeal and material process of *thinking* […] involving a "correspondence" between artist and materials'. For instance, if painting is seen in terms of enaction the 'creative gesture becomes a reaction that is released from [exclusively] conceptual ways of thinking' (Barret 2002: 114) and also the trace of what has been enacted by a person. Artmaking then is understood here 'as a cognitive operation' (Barrett in Barrett and Bolt 2007: 4) enacted by individuals in combination with materials, objects and knowledge, leading to the emergence of new ideas and practices.

Creative practices are enacted processes that allow a bringing forth of new worlds. Bolt (2004: 10) stresses 'the work of art produces ontological effects', the artwork nurtures itself from the outside world and then 'casts its effects back into the world' (ibid.). O'Sullivan (2001: 130) also accentuates the constructive quality of creative practices by proposing an '*immanent* aesthetic, as function'. He stresses the purpose of art should not be to make sense of the world, but to be 'involved in exploring the possibilities of being, of becoming, in the world […] in actualising the possibilities of life' (ibid.).

Accordingly, painting is proposed here as processes enacted by multiple agents and where individuals are 'no longer outside of the assemblage directing the proceedings'

(Bolt 2004: 83) but are involved in 'complex conversation' (ibid.) occupying equal roles to all other non-human actors engaged. Ingold (2013: 6) claims the practitioner '*thinks through making*', as the direction of 'thought goes along with, and continually answers to, the fluxes and flows of the materials' (ibid.). Artmaking is proposed as explorations 'of prising an opening and following' (ibid. 7). It is a dynamic relation of '*correspondence*' (ibid.) between heterogeneous actors conforming to a 'cognitive apparatus' (Kirk 2014: 120). Painting is an enacted performance of giving shape through *actions* 'in terms of co-emergence rather than mastery' (Bolt 2004: 78). I want to highlight the idea of 'co-emergence', as in my view it is not only the work, but also the artist, who is given shape during practice. The complete oeuvre produced by a painter composes its identity. Hence, this identity is an ongoing process of construction, changing and evolving with every new work that the painter composes. This identity is also affected by new interpretations of its oeuvre, by new works composed by other painters and the changes it's extended network experiences. Accordingly, I propose the identity of a painter is an artificial character in eternal *becoming*.

In essence, using enaction in combination with painting here aims to challenge representation by accentuating that, in painting, mind and body are brought together in-*action* to produce meaning while *acting* in the world. In Kirk's words, my aim is to 'make sense of painting as a cognitive process' (2014: 115) and an artefact for 'extended cognition' (Clark 2011) where 'the "thinking" happens on the canvas' (Kirk 2014: 120). Sullivan (2004: 135) emphasises 'artists think in a medium and particular disposition and habits of mind help individuals give form to meaning during the process of making'. Concretely, painting is a 'tool for extended cognition' (Kirk 2014:

125) mediating afforded possibilities for thinking and playing a crucial role in shaping knowledge. Kirk claims painting practice is much more than just making a painting. It is about making sense through 'sensory immersion in process' (ibid. 120) where also imagination is physically enacted.

The *enactive* view of painting supports Deleuzoguattarian (1988: 164) view that art 'does not function to represent […] but rather constructs a real'. This view also endorses Crowther's (2012: 67) argument of 'art itself as *an idiom which comprehends the real in distinctive and unique terms through acting upon it in a direct way'*. Consequently, the non-representational pictorial approach I endorse in this practice-based research project looks at paintings (objects) as traces of cognitive actions that act upon the world and construct a reality. In chapter IV, I analyse my work from an *enactive* perspective. I endorse a view of painting as a productive activity and a 'dialectical process' (Singerman in Harland and Manghani 2016: 310) between individuals, materials, objects and knowledge. I also focus intensely on paint as material, looking to understand how its 'formations' can be seen as traces of specific morphogenetic processes and *actions*.

6.   Method as a model

I work using an extremely rational approach to compositions, leaving almost no space for improvisation. I use pictorial planes as spaces for planning, calculating, designing and thinking and also use a methodological and non-representational approach to fractals. As a reminder, the fractal model is informed by structures whose growth is

based on accumulations of simple units organised in iterative patterns. I translate this originally formal relation to a numerical system that is more abstract and which I can map to other variables, such as space or colours. I expand on this in chapter IV; however, mentioning it now is to describe that instead of working with images as models, the images of my paintings are 'the product of a coherent [fractal] system' (Viallat in Harland and Manghani 2016: 308) that emerges as the system develops.

The systemic approach to composition presented by Vasarely [figures 20 – 23] and Pérez [figure 24] (see chapter II) strongly influence my practice. A logical and controlled system of construction clearly underlies the distribution of colours and shapes in their works. The British Systems Group (1970) founded by Malcolm Hughes (1920-1997) and Jeffrey Steele (b.1931) is another example of artists producing works composed through systemic methods. The geometric works of this group are organised in pre-determined and often mathematical systems. Also, the distinctive mastery and fine precision of these paintings point to a process of making involving clarity of mind and rationality. Mary Martin (1907-1969) is another painter whose methodology is based on 'systemic procedures involving numerical permutations' (Moszynska 1990: 174). However, a radical difference between my practice and her work is that she sought to represent essential truths and beauty through these systems.

I use pictorial planes in my practice as spaces in which to plan fractal distributions of number progressions starting from 1 [figures 33a and 33b]. I first divide the planes in grids, then number each space and finally paint them (in the later paintings with only one gesture) following the number progressions forth and never going back. Now I

only describe a performative side of the fractal method I developed and in chapter IV I continue analysing it in relation to colour. In performative terms, pictorial planes are spaces where I plan choreographies of pictorial gestures. While painting, the fractal system of number distribution I use in this project, makes my movements follow a sort of fractal choreography, whose rhythm is based on iterations of patterns of a minimal movement. It begins at one corner of the canvases, following the number progressions, facing constant breaks of spatial regression in between that interrupt the continuity of the main movement. Consequently, the movement goes forth and back, resembling wave-like dynamism.

33a. (left) Fractal system mapped to a degradation between white and black – acrylic on panel - 20x15 cm.

33b. (right) Fractal system of number relations - digital.

In this project I worked with two compositional methods for my paintings. The first starts at all four corners of a squared canvas and advances, occupying the spaces diagonally from these corners towards the centre [figure 34a]. The second method starts at the top left corner of a squared canvas and moves forward diagonally towards

the bottom right corner [figure 34b]. In the former method, I begin with a fairly active pattern of movement as I constantly move around all four corners. As the painting progresses and completion approaches, the area of movement is gradually and progressively reduced until I finish working only at the centre of the canvas. On the second approach, the pattern of movement goes from top left to the bottom right corner and the movement's quality remains constant throughout the practice. I normally begin the painting standing up working at the left side of the canvas and finish sitting down working at the right. Visually, these two compositional methods give different results. The first produces centred images that have centrifugal or centripetal dynamics, while the second produces images with diagonal visual rhythms from the top left to the bottom right of the image.
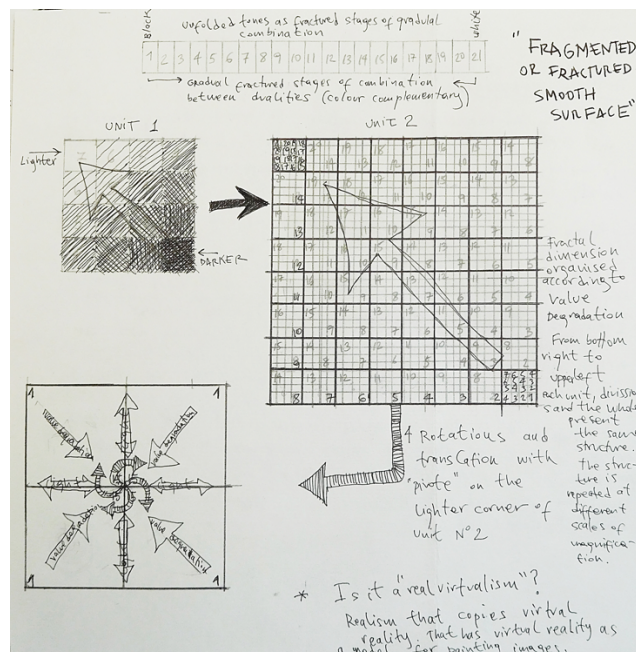
34a. (left down) Diagram composition from corners to centre.

34b. (left up and right) Diagrams for planning top left to bottom right compositions

(*these sketches show a first approach to making the images, from the bottom right to the top left corners).

Continuing with performativity, these regular squared units give a strong sense of temporality to my paintings. This division of pictorial spaces into smaller units, resonates with fragmentation of time in smaller units such as seconds. Consequently, periodic distributions of marks invading the spaces suggest a marking of regular pulses (of seconds) and a constant pace of time passing by. The relation between marks and seconds in my paintings creates an atmosphere of rhythmical monotony, which *actualises* temporal elements of the processes that made them. Morley (2016: 53) describes a similar idea when addressing Agnes Martin's (1912-2004) work arguing her 'paintings remind us that the visual is temporal'.

After a long time of immersion practicing *GM* it can provoke clear embodied effects in the practitioner. In my case it generates a 'meditative effect' (Moszynska 1990: 175) and a sharpness of sensory perception. The meditative feeling the practice of *GM* triggers is a goal that I determinedly pursued while shaping this method. I describe in detail in chapter IV, my intention was to use my practice as a medium for meditation for exploring states where '[y]ou become all attention' (Greenberg 1993: 81). My aim is, ideally, that works I produce through this repetitive meditative practice can generate similar effects on viewers through contemplation. In order to replicate elements of meditation I purposely mark and accompany every gesture I perform with my breath. Also, the recursive fractal method is perfectly aligned with and helpful for this particular aim.

According to Morley (2013: 205) 'the notion of art as a meditative process and a tactile engagement with materials' are East Asian traditional beliefs. The exposure to East Asian cultures, philosophies and practices, has made meditation a source of

inspiration for Western painters since 1950s. Examples are practices such as using 'the calligraphic gesture' (Westgeest 1996: 224) or the search for models that extremely distant from the material world and the ego. The Zen Group (1949) from Germany for example 'frequently used automatic, calligraphic techniques in their work as a means [...] to induce meditation' (Moszynska 1990: 137). Mark Tobey (1890-1976) is another artist whose work is strongly influenced by meditation. In opposition to action painting and happenings, he thought painting should be inspired by introspective practices instead of overt expressions and actions.

7.   Brushwork as a non-representational agent

Using an *enactive* perspective, in this research, I look at the brushwork as a non-representational 'gesture that is intellectual in nature' (Macleod and Holdridge 2005: 206). Traces of this gesture are embodied in textures of paint and conveyed to viewers through haptic visuality. As discussed in chapter II, a haptic sense is interpreted here as signalling a transaction between being and doing. The 'sensuous presence' (Key 2009: 562) (being) of painting presenting itself as an object through haptic visuality (doing), is the 'immanence of abstract painterly form[s]' (ibid. 563). Consequently, by means of visual 'material resonance' (ibid.), these paintings work by encouraging viewers to re-enact their 'phenomenology of being and doing' (ibid.).

Graw claims painting specificity is located in the pictorial gesture. She defines painting as 'a form of production of signs that is experienced as highly personalized' (in Geimer et al. 2012: 45). She argues a painting is an object in which labour as

process is transformed into 'objectified labor' (ibid. 56), meaning that painting is an object in which '[t]he process of labor is not hidden but seemingly exposed' (ibid.). Graw's approach focuses on action, but still reflects traces of representational models. She stresses pictorial marks are embodiments of a '*semiotic* activity' (ibid. 45) performed by an individual, and calls this the 'indexicality' of painting, alluding to these marks as signs representing the absent person who inscribed them. For Graw, painting is a 'quasi person' (ibid. 54), an indexical sign that not only points, but almost replaces the painter's figure. Accordingly, her view endorses 'the model of artistic authorship that relies on artistic intentionality' (Kirk 2014: 120). This model proposes such original intention can be traced back by analysing the work.

Powers also has a representational view of the brushwork. He endorses Fry (1909) and Binyon's (1911) works to claim 'an artist's brushstroke […] is a direct record of his character' (2013: 320). Fry formulates a theoretical system in which gesture and expression are condensed into one. He claims '[t]he drawn line is the record of a gesture, and that gesture is modified by the artist's feelings which are thus communicated to us directly' (Fry 1909: 185-186). Binyon also supports the fusion of gesture and emotions and claims this assemblage can be identified in a painting's "rhythm". Powers (2013: 320) stresses that rhythm reveals 'the expressive power of brushstrokes capable of conveying the personal thoughts and emotions of the artist'.

All these representational approaches endorse a highly individualised view of the brushwork. Powers for instance, states that the 'expressive mark […] its content is the artist's interior state' (ibid. 324). Similar to Graw, he believes the painter is the final

goal of a work and states the artist 'is both the subject and the primary referent of the expressive mark' (ibid.).

MacColl is a special case, as he presents a radically rational and physical view of the brushwork, claiming that the trace left by a gesture 'represents nothing; it is merely the graphic trace of a point moving under the laws of balance' (1919: 255). My perspective is located somewhere in between both extremes. As argued in relation to Deleuzoguattarian's work, I identify a power of the trace for actualising compounds of sensations, which include physical, cognitive and affective *actions*. Also, in my perspective the marks' expressivity is not personalised but elevated to the abstract and universal, through making.

In contrast to Graw, in my view the brushwork is not a sign and does not have a *'physical connection'* with an individual (in Geimer et al. 2012: 50); I see painters' identity as hybrid assemblages integrating individuals and paintings (subjects and objects). Also, I do not see it as a fixed identity but a *becoming,* that is, an ongoing construction in a permanent 'state of process' (Message 2010: 280) continuously evolving with every new work produced. I even propose that the painter is not a fixed identity, which can be absent or represented by pictorial marks. Rather, marks are outcomes of singular *activities* performed by assemblages composed by 'the producing person' (Graw in Geimer et al. 2012: 50) and pictorial medium in dialogue with the world.

Crowther (2012: 46) calls a painter's style the *'distinctive style* in which they embody paint marks', which reflects a personal way of viewing and experiencing the world.

The style can be seen in 'hapticity operating within' (ibid. 45) a painting and in Crowther's view, is what carries aesthetic meaning. He claims style is vehicle or 'bearer of aesthetic meaning' (ibid. 1), hence, it is a dual entity embodying both form and content of a work. Blume (2001: 18) agrees, arguing images in a painting emerge from the hand and hence, 'are channelled by both body and mind and not only by intellect'.

Morley also uses the concept of indexicality while analysing Agnes Martin's work. However, he uses it in a different way to Graw and in a similar way to the *enactive* account I present in this thesis:

> the traces of graphite or lead are uneven and slightly wobbly […] the repetitiveness of the grid or horizontal lines, and the persistent straightness of the lines, suggests concentrated and rhythmic effort, or focused action over time, thus serving as an indexical sign leading us to an awareness of the active bodily engagement of the artist. (Morley 2016: 49)

Key (2009: 559) also endorses a non-representational account of the brushwork in relation to labour and 'the work of the painter'. She signals the haptic and optic relation as meditating painting specificity and argues that in pictorial surfaces they are closely tied, determining each other. Key stresses 'the trace of the skilled hand in painting's surface is bound up in the visual experience' (ibid. 557). As ambiguous as it sounds, Key's emphasis on opticality of painting actually aims to analyse the medium to understand its 'sensuous material presence' (ibid.), which paradoxically operates through visual transmission. She also suggests a 'liberating aspect of abstract

painting is vested in handiwork rather than in optical experience' (ibid. 560).
Similarly, I propose the enchantment of painting is principally located in viewers'
awareness of its materiality that, by resonating with its generating process, evokes
imaginative *actions* in them.

8.   Pictorial Enaction: Painter, painting and viewer

The paintings of the aforementioned South Korean movement, Dansaekhwa (1970s),
are interesting examples in relation to brushwork. Similar to Western painters from
the late nineteenth century, Dansaekhwa artists engaged in a 'movement towards
abstraction […] staged as a rejection of […] figurative imagery' (Morley 2013: 192).
In the case of Korean artists, the transition towards abstraction was based on
movement and not on form as it was in the West (see chapter II). As discussed, unlike
the Western representational tradition based on mimesis and illusion, the Korean
tradition of representation is based on mastery of gestures, whose spontaneity are
believed should capture nature's essence (Powers 2013). Dansaekhwa works are based
on 'simple, flat and repetitive motifs made with reductive gestures'(Morley 2013:
192). Hence, I see these abstractions as outcomes of processes where gestures
belonging to Korean traditional techniques were reduced to essential traits.

Morley's analysis of Dansaekhwa's paintings is antagonistic to Greenberg's static
conception of at-onceness discussed in chapter II. Morley argues these images cannot
be 'taken in all at once' (ibid. 277) as they need to be contextually and temporally
observed. He claims the works of Dansaekhwa encourage viewers to participate in 'a

flux-like and evanescent reality […] signalled by the energy of the brush, ink and colours' (ibid. 200) and highlights how this engagement increases observers' awareness about the impermanence of the world. Concerning temporality and painting, Crowther (2012: 60) argues '[t]ime is not just a necessary condition of experience, but *also* profoundly implicated in relation to questions of its meaning'. This is because viewers' participation is crucial to enable 'a "deictic" [relational] mode' (ibid. 277). This mode unfolds through time, in Bryson's (1983: 94) words, 'within the durée of process'. The viewer's 'carnal, corporeal body, with its gestures and physical presence' (ibid. 95) *acting* through time performs painting and context integration, and leads to the emergence of meaning.

For instance, *GM* has similar elements to Dansaekhwa painter Lee Ufan's (b.1936) practice. The 'strong sense of *process'* (Morley 2013: 201) conveyed is central in Ufan's and my work. However, the approaches to labour we present are radically different to Western performative approaches of the 1950s. Morley observes that Ufan's performative approach to making is 'more properly […] located within a deep indigenous tradition that valued the artwork as in an intimately indexical relationship with the maker' (ibid.). Similarly, as discussed in chapter I, my practice draws heavily from South American indigenous textile traditions and practices. The distinctive 'repetitive process-based approach' (ibid.) of Ufan and my work alludes to processes of making that are deeply 'grounded in physicality, by the use of the hand' (ibid. 202). Hence, haptic properties in both works convey a warm sense of embodiment. Morley describes haptic as 'a sense of *tactility'* (ibid.) which, according to Jin-Sup (2012: 30) gives Ufan's paintings a quality that is 'quite different from the cold and rigorous formal aspect of minimalism'.
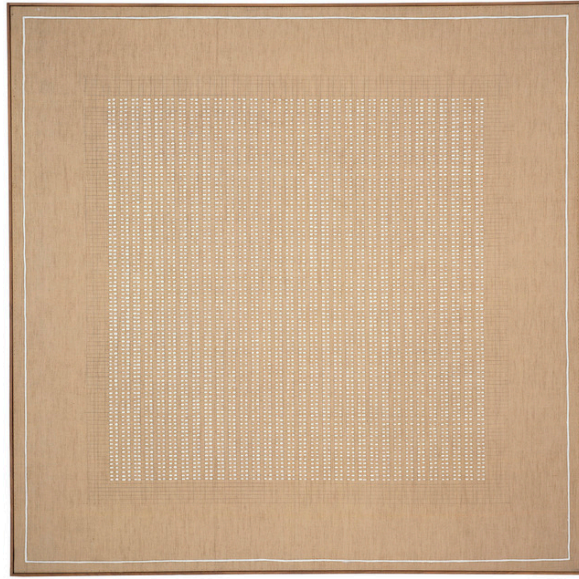
35. *The Islands* (1961) - Agnes Martin - oil and graphite on canvas – 183x183 cm.

Private collection. Copyright © 2018 Estate of Agnes Martin / Artists Rights Society (ARS), New York.
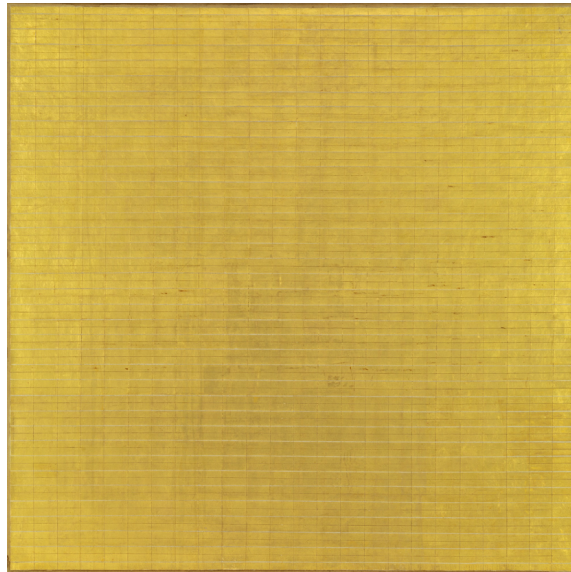
36. *Friendship* (1963) - Agnes Martin - Gold leaf and oil on canvas - 190.5x190.5 cm

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Apart from being technically relevant in my practice, Lee Ufan's work is also a conceptual reference. He states that he does not define his work nor does his work

define him, but that something new grows when he and his work interact (Fisher 1996). Also, regarding viewers, Ufan's paintings offer a bodily experience and 'convey a more subjective, empathetic and elusive kind of cognition' (Morley 2013: 203). This is certainly a reflection of East Asian traditional philosophy and culture's conception of the body as a medium for experiencing a transient world.

GM also shares methodological elements with Simon Hantai's work (1922-2008). For Singerman (in Harland and Manghani 2016: 306) his paintings suggest a spatiotemporal atmosphere marked by 'the embodied and indexical time of making — of behaviour enacted and repeated, rather than meaning'. In the same way as in my work, the repetitive processes of making are central in Hantai's practice. His paintings are made through serialised and systematised processes structured around 'the regularised gesture of folding and tying' (ibid.). Thus, surfaces emerge as territories that provide physical spaces for performing acts, which through repetition become 'regularised behaviour[s]' (ibid.).

Eva Hesse's (1936-1970) series of drawings on graph paper made from 1966 is another referent in my work. The characteristic rhythmic and repetitive mark making in these drawings highly resembles the making process of *GM*. Both works use repetition as methodological resources and are composed through highly mechanised and seemingly reductive methods. Concretely, shapes and sizes are reduced to a single one. This reduction hands over the attention of observers to relations between units established when accumulated. Hesse composed these drawing by drawing circles inside the grid of graph paper. Similar to *GM,* regular accumulations of circles inside squares in these drawings compose collective images that from afar appear as textured

continuous surfaces. When these drawings are looked at from close up, the individuality of each unit gains presence and the aggregate nature of these images becomes evident. The resulted textured surfaces displayed by Hesse's drawings are surprisingly warm and delicate. Also, as in *GM,* these drawing's making processes are based on mechanical repetitions of reduced movement, which nonetheless, yield to extremely sensuous and introspective surfaces.

Agnes Martin (1912-2004) is another important referent of my work as her paintings transmit a strong sense of embodied process. Her work is extremely precise and methodical, and produces paintings dotted with distinctive appearances that evoke a sense of serenity. As in my work and Hesse's drawings, many of Martin's paintings, such as *The Islands* (1961) and *Friendship* (1963) [figures 35 and 36], use the grid as compositional structure for the production of mark making.

Morley uses an *enactive* approach to interpret viewers' reception of Martin's work. He describes during contemplation an *affective* engagement of viewers unfolds through time, which 'involve[s] the viewer in a more elusive kind of seeing. We feel open to, and absorbed into, an ambient field' (Morley 2016: 49). The immersion in this environment further activates responses in viewers and 'imagination is most engaged, memories are stirred and the metaphoric or analogical potential of painting is deployed' (ibid.). Morley stresses this phenomenon of *action* developed through time, 'is enacted as an ongoing perceptual process that unfolds in real time' (ibid. 52).

Similar to my paintings, the visual information offered by Martin's works is dependent on context and, in general, there is no ideal position from where to look at them. In some of my works I intensify elusiveness of perception by using metal leaf in

the backgrounds, which through light reflection, can dramatically affect the perception of colours. In addition, in Martin's work and also in mine, 'haptic interaction is encouraged' (ibid. 50) in viewers. The experience is at times driven 'away from the spatial and optical towards the tactile, temporal and animated' (ibid.). Adding to descriptions of the haptic given in chapter II, Morley states that it 'involves the sense of touch and movement […] and draws attention to stimuli relating to bodily position, posture and equilibrium through making a close link between the eye and the hand' (ibid.). I continue expanding on the haptic, specifically, in relation to my practice in chapter IV.

Accordingly, viewers of Martin's work and mine, have more active roles than for paintings where only a 'static, unmoving position must be adopted' (ibid. 48) in order to see a projected 'virtual space' (ibid.) without distortion. Furthermore, through the intense 'haptic relationship to surface' (ibid. 52) a strong bond between body and paintings is created. Viewers are immersed in elusive affective atmospheres and engaged 'in a more mobile, animated yet contemplative response' (ibid.). Consequently, Morley proposes Martin's paintings generate the conditions allowing individuals to enact 'a less-bounded and more immersive self' (ibid. 53). This self creates the painting and simultaneously changes 'by interacting with it' (ibid.). In other words, painting and viewer reciprocally co-create one another.

As described, along with Morley, I hold the belief that meaning in works is created only when individuals 'correspond with it' (Ingold 2013: 8), respond and hence, intervene in the very process of knowledge formation. Kirk (2014: 115) proposes to think about 'artistic practice as emergent knowledge that is performed by artist,

audience and artefacts'. Hence, meaning emerges in the encounter of works and audience by means of reciprocal dialogues and co-*action* through time.
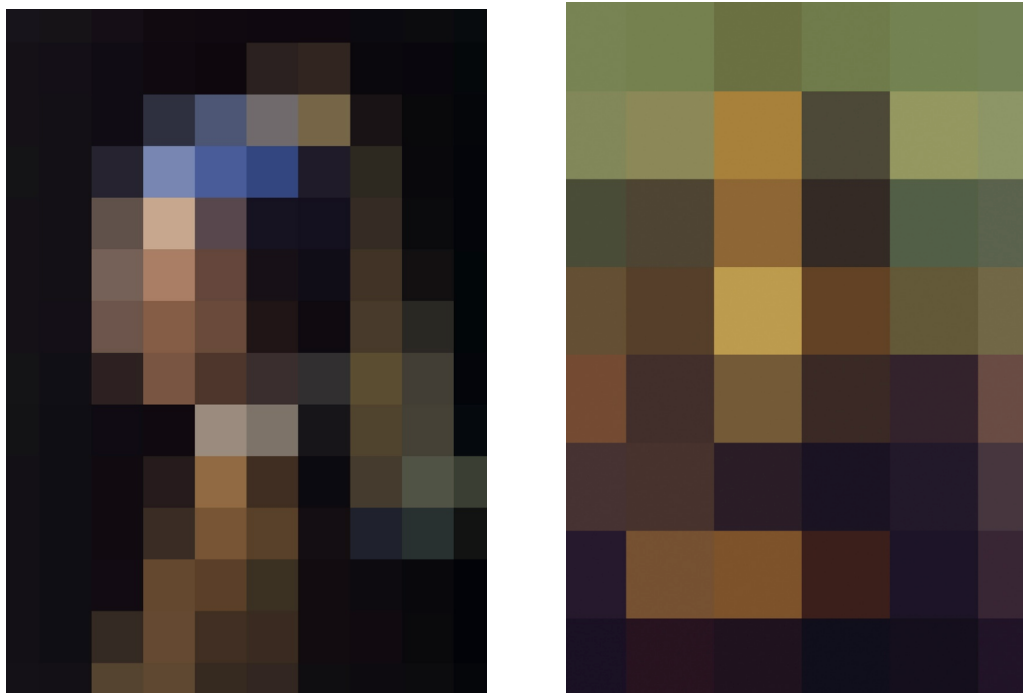
37. (left)*1665, Pixelated Painting after Johannes Vermeer Girl with a Pearl Earring, 1665 (1632-72) (2013) - Rob and Nick Carter* - cibachrome print mounted on aluminium and framed - 56x41 cm edition of 12+2 artists' proofs - 152x109 cm edition of 3 - Copyright © 2018 Rob and Nick Carter.

38. (right) *1503-1519, Pixelated Painting after Leonardo da Vinci (1452-1519) Mona Lisa, 1503-19 (2013)* - Rob and Nick Carter - cibachrome print mounted on aluminium and framed - 56×38 cm edition of 12+2 artists' proofs - 135×114 cm edition of 3 - Copyright © 2018 Rob and Nick Carter.

An interesting example of works acquiring meaning only after an *enactive* interpretation of them are *Pixelated Paintings* (2013) of contemporary artists Rob and Nick Carter. For instance, in the works *1665, Pixelated Painting (2013) — after Johannes Vermeer (1632-72) Girl with a Pearl Earring (1665)* [figure 37] — and

1503-1519, Pixelated Painting (2013) — after Leonardo da Vinci (1452-1519) Mona Lisa (1503-1519) [figure 38], without previous knowledge of the two old masters' paintings, it would be simply impossible to relate these two pixelated images with the female figures in the original paintings. These extremely abstract and representational images work through activating the observers' memory. Therefore, by means of colour and imagination, these digital works evoke already known images. Recalling *Mona Lisa* (1503-1519) and *Girl with a Pearl Earring* (1665) are emergent properties resulting from interactions between viewers and these abstract works. However, the two original portraits are not only outcomes, but also references and the origins of the *Pixelated Paintings*. Hence, remembering these famous portraits also takes the viewer back to the origins and further to the generative processes. In other words, *Mona Lisa* (1503-1519) and *Girl with a Pearl Earring* (1665) are both input and outputs in the processes of abstractions leading to these two *Pixelated Paintings*.

To summarise, this chapter explored non-representational models of fractal geometry, Deleuze and Guattari's immanent space and *enactive* cognitive approach, to describe artmaking as embodied processes of performative and material thinking (Carter 2004). An *enactive* model of painting was outlined throughout the chapter where painting is proposed as *acted* cognitive processes (Macleod and Holdridge 2005) and where materials and tools are conceived as artefacts enabling processes of 'extended cognition' (Clark 2011). This *enactive* model sees painting as a practice involving dialogues between individuals, materials, objects and knowledge, which together create an 'acting ensemble' (Sampson 1999) that develops in time. Also, outcomes produced by these agents are understood as contextual and emergent 'property of the processes by which they [all] interact' (Varela et al. 1991: 119).

Artmaking was defined as *intensive processes* and a medium for *actualisation* of Deleuzoguattarian compounds of sensations. This latter concept led to a discussion of the agency of artmaking as a non-representational device, granted by its capacity to construct a reality and to produce concrete ontological consequences. The brushwork was signalled as a principal pictorial non-representational agent, whose *enactive* properties are visually conveyed through a haptic sense. Furthermore, *GM* and other painters' works were analysed throughout the chapter using an *enactive* view of painting.

I concluded by highlighting that, in relation to knowledge, this *enactive* pictorial model focuses not only on individuals and the medium specificity, but also on how all the different agents in the context are woven together and establish relations for generating — 'both an act and a genesis (a "bringing-forth")' (Kirk 2014: 127) — a piece of work. Furthermore, I explored how viewers' contextual interaction with works lead to subsequent enactments of meaning. Thus, painting is understood here as experiences of bringing-forth 'emergent knowledge [in the world] through an ongoing engagement of artist, audience and artefacts' (ibid.).

The next chapter integrates the discussions presented in chapter II and this chapter through developing a detailed discussion of *GM*. I describe my work as hybrid because it integrates static and dynamic pictorial models through mixes of representational, abstract, performative and enacted elements.

IV -   Hybrids: between static and dynamic models

My practice of painting has a strong focus on movement. I call it *GM* because is based on repetitions of a reduced gesture, which is rhythmically regular and precise. It draws from mechanical movements typical of hand-weaving and hand-knitting techniques and to repetitive natural rhythms such as waves, vibrations and breathing. I experience its practice as a meditation, or mantra, that attunes with my body and triggers soothing affective sensations and peace of mind. The imprinted textures and haptic properties of every mark I leave on the planes of my paintings are evidence of the enacted processes leading to their constructions. More concretely, haptic properties in my paintings can give glimpses of things, such as tools I use, the continuous repetitive minimal movements I perform or the sharp focus I maintain throughout the practice. As mentioned in chapters II and III, visually, my paintings can suggest a variety of associations ranging from op-art paintings such as those by Victor Vasarely or Matilde Pérez, light and water waves, handmade woven textiles and even pixel-based digital images.

Despite the main element of *GM* – that is, the singular gesture – being principally a non-representational element, a hybridity in tension between abstract static elements and dynamic elements of empathy (Worringer 1908) it is also a characteristic of this practice. A main representational element is the *optical* divisions of pictorial planes in grids, which bring transcendent and formal elements of structure and order to my paintings and allude to woven surfaces and digital images. Its non-representational elements are, for instance, multiplicities of amorphous coloured marks composing

Deleuzoguattarian smooth spaces, whose *haptic* properties are actualisations and traces of enacted processes that made them.

Hybrids are composed by groups of disparate elements, connected to form integrated and meaningful wholes. I apply the Deleuzoguattarian idea of 'rhizomatic multiplicities' (see chapter III) to describe the form of hybridity arising in my practice. Similar to rhizomatic structures, the integration of hybrids as meaningful wholes depends on the connections between the different elements and the way they co-function. Morley (2015: 475) observes that hybridity as a concept that highlights the fact that between blended elements there will always be an 'irredeemable difference'. Nonetheless, this does not make hybrids functionally deficient. On the contrary, robust connections within such multiplicities can guarantee harmonic functioning and unity between those elements that is manifested by the emergence of meaning.

In light of that, this chapter presents a detailed description of my practice of *GM* in order to explore how multiple elements composing it function together, or co-function, to evoke meaning. The construction of this method throughout this practice-based research project was not a linear, but an iterative process. For that reason, descriptions in this chapter are organised by topics, such as pictorial plane, grid (Krauss 1979), brushwork, 'compound of sensations' (Deleuze and Guattari 1994), 'emergence' (Johnson 2001) and colour.

This chapter begins in section 1 by discussing in detail Deleuzoguattarian (1988: 551-581) 'smooth' and 'striated' spaces. The aim is to examine 2D and 3D pictorial

compositional approaches in relation to optic and haptic visualities, and to static and dynamic models defined in previous chapters. I then introduce an *enactive* approach to haptic and optic senses using authors such as Bernstein (2002); Gusber (2006); Key (2009); Crowther (2012) and Morley (2016) and describe influences of these ideas in *GM*.

Section 2 explores notions of the grid using works of Worringer (1908); Krauss (1979, in Haskell 1992); Moszynska (1990); Damisch (2009); Cook (2014) and Morley (2016). The grid is a striated element in my work that draws from early abstract paintings based on geometry. I discuss its adoption by modern painters and the impact it has produced in the discipline since then. I describe centrifugal and centripetal readings of the grid in relation to Agnes Martin's works and also the use of both compositions in my works.

Section 3 describes the brushwork's transformation I carried through this project from a representational to an *enactive* approach using Deleuzoguattarian (1988: 425-436) "templates" and "squaring". I define this change as a process of *squaring a brushstroke* and describe it as an assemblage in between theory and practice, leading to a further emergence of *GM*. Concerning the minimal and repetitive nature of *GM*, I discuss the role of repetition in my practice in relation to meditation, to further explore its usefulness for 'accessing a kind of *immanent beyond* to everyday experience' (O'Sullivan 2001: 127).

Section 4 explores relations between *GM* and the Deleuzoguattarian (1994) compound of sensations introduced in chapter III. I analyse my experience of painting as an

intensive process (O'Sullivan 2001) that allows me to actualise an affective register of Deleuzoguattarian *smoothness* resonating with paint's materiality. In light of *affordances* (Gibson 1986), I propose the pictorial medium can facilitate an 'opening into the realm of affect' (O'Sullivan 2006: 19) and give access to a Deleuzoguattarian immanent smooth space. I analyse the contradictory nature of my register of smoothness using Worringer's notions of abstraction and empathy and describe how elements of contradiction are materialised in my paintings.

Section 5 analyses introspective elements emerging from my practice of *GM* from an *enactive* perspective. I then discuss the capacities of introspective practices to facilitate Guattarian (1995: 7) processes of 'resingularisation', and explore their consequences in relation to individuals' enactment of a world. I finally analyse my experience of these processes in relation to my interaction with the pictorial medium, whose modification has further reached other areas of personal behaviour.

Section 6 explores emergence in *GM,* endorsing Deleuze's diagrams (2003) and repetition (1968). I also analyse colour in relation to emergence and provide an *enactive* view of the chromatic spectrum.

Finally, section 7 presents individual analyses of my works based on *GM.* I explore in detail the use of 'broken tones' (Deleuze 2003) and the emerging compositions in relation to what I describe as a percept of *waveness*. I conclude, proposing the paintings of *GM* meditate on enacted events and do not represent forms from the world. This is in line with Deleuze's view of images as 'mode[s] of matter'

(Sauvagnargues 2013: 19), which present their 'own reality' (Deleuze 2007: 215) instead of representing a prior one.

1.   Deleuzoguattarian space: Smooth and striated

Deleuze and Guattari (1988: 551-581) 'smooth' and 'striated' spaces present two views that correspondingly correlated with the dynamic and static models discussed in chapter II and III of this thesis. The smooth and striated can also be seen as two perspectives of the same space, such as micro and macro dimensions, or matter and shape of objects. Jagodzinski (2012: 85) supports this view, proposing these two spaces do not stand in opposition but are related and even 'co-exist within one another'.

The striated is a representational space (Jagodzinski 2012) that Deleuze and Guattari (1988: 562) describe as 'numerical and homogeneous, an optical space [… of] long-distance vision' (ibid. 572). Dewsbery and Thrift (in Buchanan and Lambert 2005: 89) depict it as an empty 'container for action [… and a void] independent of matter' (ibid.) that can be occupied. The striated emerges as a consequence of the relations between figures inside it. Hence, it can only be perceived when it is populated. Examples of this visual space are Euclidean mathematics and linear perspective, which are 'optic and systematic' (Harland 2009b: 79). Geometric paintings can also be seen as examples of the striated because they present a marked 'tendency towards a "pure opticality"' (Harrison in Harland and Manghani 2016: 179).

The smooth is a non-representational space that Deleuze and Guattari (1988: 562) describe as the 'qualitative and fusional, continuous' and heterogeneous space of '"close-range" vision' (ibid. 572). It is a 'haptic and aggregate' (Harland 2009b: 79) space of materials and textures, of reduced tactile contact 'or manual *actions*' (Deleuze and Guattari 1988: 432 - my emphasis). The smooth is an 'unformed' (Deleuze 1990: 123), '*amorphous*, non-formal' (Deleuze and Guattari 1988: 554) or pre-formal space of pure matter. It is exemplified in the atomic dimension, fractal geometry, 'felt or patchwork' (ibid. 567), sounds, colours, the sea, sand, air or flocks of birds.

Pixel-based digital images are useful to analyse the coexistence between smooth and striated spaces. These images are composed by aggregates of pixels that, when organised in collective formations, compose larger and more complex continuous optic spaces. The smooth space of digital images is only perceptible at close-range haptic distances where, on the contrary, optic space cannot be seen. Hence, 'at the level of the pixel, digital space is haptic' aggregate and smooth (Harland 2009a: 41).

As a representational space, the striated is based on a biunivocal power-relation (see chapter III), where attraction between the two linked elements is the law. In contrast, rhythm is the law in the smooth, which Deleuze and Guattari (1988: 432) describe as a 'qualified movement', different from 'measure' (ibid. 424) and form. They propose the sea as the 'archetype of the smooth space' (ibid. 558) where the rhythm of waves is a ceaseless and 'continuous variation, continuous development of form' (ibid. 556). I describe later that water waves are direct references in my triptych *Atoms: Waves* [figures 28-31].

To resume, the striated is a space of optical perceptions, while the smooth is one of haptic sensations. Haptic is an active form of perception, whereas optic is more passive. Bogue (2003: 191) observes 'touch alone only yields information about individual points [… hence … t]o comprehend entire objects, one must combine multiple touches'. For example, in paintings with strong haptic qualities viewers' agency is activated. Haptic exploration of paintings demands an engagement of viewers who all need to go over the surfaces at close-range distance and to focus on details. Also, while the striated follows arborescent and static models, the smooth correlates with rhizomatic and more dynamic ones (see chapter III).

The smooth and striated spaces are useful to analyse the pictorial plane's duality between 2D and 3D, discussed in chapter II. The striated can be related to constructions of illusions of depth and virtual spaces with linear perspective, while the smooth can be related to the medium's flat nature and haptic properties. Mathematical perspective is a representational system that structures 'an order and succession of distinct forms' (Deleuze and Guattari 1988: 556) mimicking depth on flat surfaces. All in this system is defined in relation to a draughtsman's perspective, which is drawn as *horizon lines* and *vanishing points*. Since the draughtsman's eye is the centre of power, this is a biunivocal arborescent system. In addition, to observing scenes depicting linear perspective, viewers are compelled to adopt fixed positions in front of the paintings. Accordingly, there are two levels of biunivocal relations in these works. First, the power of individuals who represent over represented objects, and second, a dominance of painters over viewers. Concerning the smooth, the material dimensions of pictorial planes are qualitative, continuous and heterogeneous smooth planes of

pure matter displaying rich haptic properties. Deleuze and Guattari observe that the haptic 'invites the assumption that the eye itself may fulfil this non optical function' (ibid. 572), where it 'feels rather than sees' (Burrows in Zepke and O'Sullivan 2010: 160). As discussed in chapter III, pictorial hapticity defines a tactile sense 'bound up in the visual experience of painting' (Key 2009: 557), which is inherent to painterly materials. Haptic visuality in painting encompasses a complementarity between matter and sight, where physicality and materiality of objects function and are transmitted visually (ibid.). Morley (2013: 202) agrees, describing how in haptic visuality a 'rigid link is made between the eye and the hand'. Paradoxically, matter in painting 'emphasises the opticality of that surface' (ibid.). Hence, hapticity in paintings corresponds to a second level of visual experience, where a sense of touch and the feeling of materials are visually perceived from extreme proximity to surfaces.

Gubser and Morley compare the advantages and disadvantages of haptic and optic visualities. Gubser argues haptic material sensation offers objectivity, in contrast to a subjectivity veiling optic spatial perception. He stresses haptic visuality is 'a close optical view of objects that de-emphasized depth and space in favor of impenetrable material objectivity' (Gubser 2006: 194). For Gubser the optic is 'a distant, subjectively constituted optical focus that muted tactile objects by combining them into a whole' (ibid.). Morley considers haptic visuality is a more robust form of perception than optic because its relation to touch entails a more direct contact between individuals and the world. He argues the information about the world gathered through haptic sense helps 'to build a stronger and more authentic awareness of a three-dimensional and temporal world than the sense of sight' (Morley 2016: 50).

Bernstein, Gubser and Morley also present an *enactive* account of the haptic. Bernstein (2002: 12) alludes to hybridity entailing such a perceptive mode and describes it as an 'embodied eye'. Similarly, Gubser (2006: 198) describes it as '*embodiment* of vision' to propose a more integrated conception of the human sensory system. He stresses that, in haptic visuality, 'sight, touch, and mind' (ibid. 198) are unified in co-function. Morley (2013: 202) argues the haptic sense introduces a more complex understanding of human perception, since 'tactile "seeing" challenges' […] a purely optical reading of the world', which is extremely reductionist. He observes hapticity proposes a more holistic perspective, which considers the possibility of 'an embodied relationship to space' (ibid.).

Crowther (2012) offers an *enactive* reading of the interplay between haptic and optic senses in relation to painting. He explains viewers can consciously shift between both modes of perception while observing a work. This is a flexible cognitive control performed thought concrete *actions,* such as modifying the distance from the paintings or changing the focus of attention. Such a shift can bring changes to viewers' perception of objects and further activate qualitative transformations of the meaning associated with those objects. For example, Crowther (2012: 47) observes 'once these colour modulations [in a painting] are tracked not just as real marks on a surface but as realizations of a virtual three-dimensional space [or a pictorial object], then their significance is changed, *qualitatively*'. Similarly, Deleuze (2003) calls 'diagrams' to constructions of pictorial collective formations through multiplicities of 'asignifying' marks (ibid.). Hence, the awareness of the overall diagram allows viewers to recognise each of these marks as fragments of larger forms instead of only as bare

traces. In section 6, I discuss diagrams in more detail in relation to emergence and my paintings.
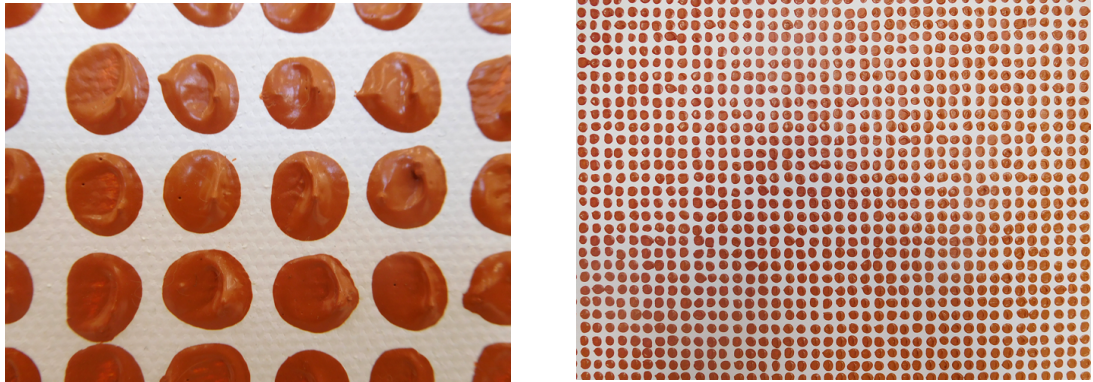
39. (left) Micro (haptic) / 40. (right) Intermediate levels - *Bichrome: Red to Orange* (detail).
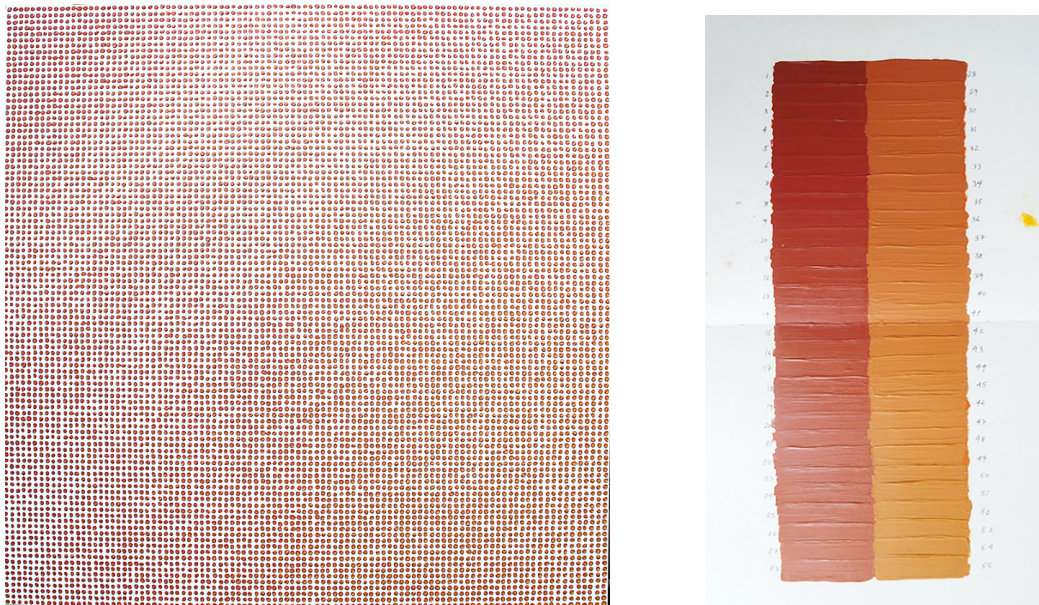
41. (left) Macro (optic) - *Bichrome: Red to Orange* (one of six) - Macarena Rioseco - oil on canvas 100x100 cm. /

42. (right) Colour chart for *Bichrome: Red to Orange* – oil on paper.

The fragmentary nature of my paintings provides a distinct interplay between haptic (micro), intermediate and optic (macro) levels of perception [figures 39-42] in relation to colour and shape. Chromatically, differences between neighbouring tones are less perceptible at micro and intermediate distances, and are more apparent at macro scales. Formally, differences between marks are evident at haptic distances. At intermediate levels, the individuality of each mark remains, but the difference between them are less apparent. Optically, the individuality of the marks disappear and the planes appear as continuous textured surfaces.

The compositions of my works combine a mix of smooth 'non-metric' and striated 'metric' (DeLanda 2002: 15) strategies of spatial occupation. Deleuze and Guattari describe how occupations of space in the smooth are done 'without counting' (1988: 361), like 'the way a liquid does' (DeLanda 2002: 40). Thus, distributions of elements in the smooth are done using non-exact methods, such as approximate calculations or estimates. In contrast, in the striated the 'space is counted in order to be occupied' (Deleuze and Guattari 1988: 361), using mathematical tools for precision and exactitude. Concretely, I first metrically divide the pictorial planes in grids using a ruler. Hence, I begin by approaching pictorial planes as striated spaces. Subsequently, colour mixtures, quantities of paint and position of marks on the grids' spaces are done non-metrically through approximations. Doing this metrically would entail actions such as weighing quantities of paint when mixing the colours and for making each mark.

Accordingly, a coexistence of smooth and striated elements is characteristic in *GM*. My works endorse Buchanan and Lambert's (2005: 5) argument that 'new

configurations of the spatial field' drawn by Deleuze and Guattari do 'not create a rigid dualism or opposition since any composition is always "a mixture" *(melange)* of smooth and striated space' (ibid.). Worringer (1908: 46) uses the notions of abstraction and empathy (see chapter II) to identify a similar prevailing coexistence of dualities observing 'the ideal Greek' is a figure in whom 'sensualism on the one hand is coupled with a fresh rationalism on the other' (ibid.).

The particular imprint of *GM* affords '*haptic* encounters' (Burrows in Zepke and O'Sullivan 2010: 161). Each individual mark in my paintings 'constitutes a smooth space' (Knox-Williams 2012: 98) and all these fragments together compose pure 'plane[s] of matter' (Deleuze 1983: 61). At the same time, rigorous and metric divisions of the canvases in a grid, structure striated spaces. For this, the spaces are 'counted, measured and metered, characteristics that all conform to the definition of the striated' (Knox-Williams 2012: 91). As a result, amorphous clusters of textured paint emerge as 'smooth elements arising from within the [rigid] grid' (ibid. 98). These elements compose visual and continuous planes, but also 'sensuous [and] fragmented surface[s]' (Bernstein 1996: 12). Consequently, the different elements composing my works of *GM* create hybrids 'that move between gridded enclosure and states of enmeshed smoothness' (Knox-Williams 2012: 90).

2.   The grid: In between smooth and striated spaces

As discussed in chapter II, the integration of grids in painting introduced by modern painters aimed to break with tradition and to introduce new sources of meaning in the

discipline. Damisch (2009: 153) agrees, claiming the grid is 'one of the icons of modernity', which helped modernist painters to carry out their goal to cut off the traditional representational 'model of the root-tree' (ibid.) from their practices. He argues the grid is a system 'of another order' (ibid.) and of a different level than the sign. The grid does not signify but rather maps and '"support[s]," an "under-board" […] of the picture' (ibid). Krauss (1979: 50) also explains the grid is 'a structure that has remained emblematic of the modernist ambition' to break with representation, narrative and discourse. She argues its use set the boundaries to draw an exclusively visual territory, which protects painting from 'the intrusion of speech' (ibid.). Even more, Krauss (in Haskell 1992: 155) claims the grid transformed painting's concerns from a perceptual experience of subjects to a territory where 'subjectivity as such [can be …] construed as a logic'.

The grid is a transcendent geometrical structure, a product of rationality and regulation. In my paintings it functions as an underlying ordering system based on regularity, precision and repetition and hence, is an 'expression of a certain mental attitude' (Müller-Brockmann 2008: 7). The grid is also a static and representational element revealing the influence of purely abstract works of geometry on my practice. As discussed, the grid in my work is also related to structures and representational strategies of woven surfaces and digital images. This inorganic structure is a manifestation of Worringer's urge to abstraction, reflecting a fear of change and temporality, and expressing a need for stasis and eternity. Nonetheless, my work accounts for a more ambiguous use of geometry, as the grid is not only a static formal resource but also used for performative purposes. Since it defines a repetitive and

minimalist approach to making, the grid in my work is a source for and a 'mode of repetition' (Krauss 1979: 61).

Moszynska, Damisch, Morley and Cook also discuss non-representational approaches to the grid. Moszynska describes its function as a underlying structure containing and guaranteeing cohesiveness of surfaces, and claims 'the arrested motion of the grid [… holds] the field together like the weft of a rug' (1990: 187). Damisch proposes the grid as an instrument 'to break with the economy' of representation firmly rooted in the sign because it enables a 'semiotic regime of a different order' (2009: 153). Also endorsing a non-representational potential of the grid, Morley (2016: 46) indicates it is a structure that 'suspends figure/ground assignment'. Cook (2014: 13) observes its homogeneity does not provide a particular sense of orientation but is actually 'projected as if seen from no vantage at all'.

Krauss suggests two readings of the grid: one centrifugal and one centripetal. In the centrifugal, this structure 'extends, in all directions, to infinity' (Krauss 1979: 60). Cook (2014: 12) supports this view describing the grid as 'nonhierarchical, infinitely extendable, and non relational'. The centripetal reading is 'a mapping of the space inside the frame into itself' (Krauss 1979: 61). Thus, the grid operates from the borders of the works inwards. According to Krauss, a centripetal view is re-presentational because it separates works from the rest of the world, which in turn, artworks represent. The centrifugal reading sees the grid non-representationally operating from the artwork and continuing infinitely in a space beyond its borders. Hence, the work is viewed 'as a mere fragment, a tiny piece arbitrarily cropped from an infinitely large fabric' (ibid. 60). This latter approach to the grid is exemplified in

Agnes Martin's works, who Krauss considers uses the grid in a 'purely abstract' manner to propose 'explorations of the perceptual field' (ibid. 63).

In the same way as smooth and striated spaces, these two readings of the grid are not exclusive. In fact, Krauss observes how in one work it is possible to relate to both ways simultaneously and argues this explains why the grid has been connected 'to matter on the one hand or spirit on the other' (ibid. 54). My work, for example, can be read from both perspectives. Centrifugally, it explores the chromatic field, painting (as a medium, matter, actions and objects), repetition or meditation; while centripetally, it meditates on waves, vibrations, fractals, woven surfaces or pixel-based images. The two compositional methods I use (see chapter III) are also in line with these two readings of the grid.
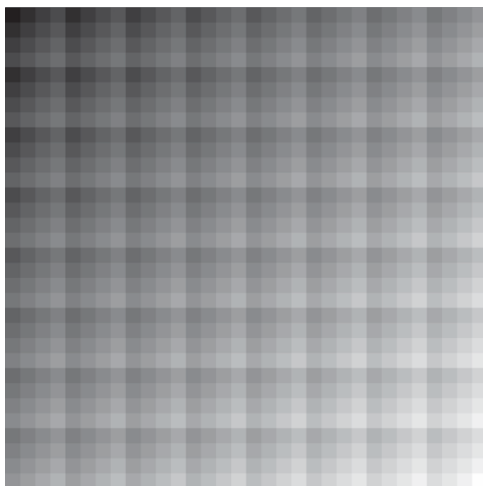
43. (left) Centrifugal compositional method - digital.
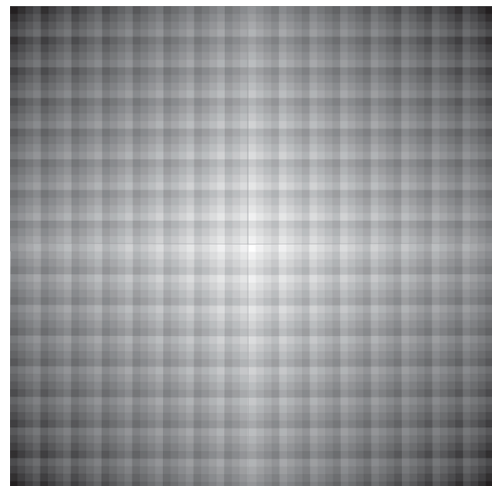
44. (right) Centripetal compositional method based on 4 centrifugal compositions - digital.

As previously mentioned, the centrifugal method begins at the top left corner of a squared canvas and develops diagonally towards the right bottom corner [figures 34 and 43]. The centripetal method begins from all four corners of a squared canvas and develops in four diagonals towards the centre [figures 33 and 44]. These latter centred works contain four squared units of the same centrifugal composition that are assembled, mirroring one another, sharing the same centre and forming an overall bigger square.

Krauss discusses centrifugal and centripetal readings in relation to optic and haptic visualities. Krauss (1979: 63) argues the centripetal reading 'often entail the dematerialization of the surface' because representation prioritises the construction of global scenes over the exploration of materials and describes centrifugal perspectives as 'generally far more materialist in character' (ibid.). She indicates modern paintings mainly use the grid centripetally because pictorial planes in these works are treated as closed and 'internally organized' (ibid.) wholes whose compositions are carefully thought out and perfectly balanced within the boundaries of the canvas. Also, these works generally display flat and non-material surfaces. Furthermore, modern painters adopted the grid in their compositions to meet transcendent and representational goals. In Krauss's (1979: 52) words, the grid was a means for 'talking about Being or Mind or Spirit' and it was viewed as a sort of 'staircase to the Universal' (ibid.).

As mentioned, Agnes Martin's works on grids can be viewed as centrifugal uses of it. Cook (in Cook et al. 2014: 14) uses an *enactive* perspective to discuss Martin's works on patterns made with 'cool grids' contrasted by warm knots 'woven from repeated dashes and dots' (ibid.) [figure 34]. In Cook's view, Martin's delicate patterns show

'[m]inute fluctuations and irregularities in the thickness or density of the pencilled and painted lines and in the steadiness of her hand further animate the surface' (ibid.). This is an *enactive* description, not only because it is based on the painter's *actions* involving interactions between body, mind and material, but also, because these are *actions* Cook imagined while observing Martin's surfaces. Cook's description of an imaginative gentle and precise making process suggests a serene atmosphere emerging from Martin's painting, which further provokes a soothing feeling in me as reader. Apparently, this is Cook's intention as he later emphasises a '[p]rolonged perception of her works often engenders an indeterminate sense of lightness' (ibid. 15).

Apart from centripetal and centrifugal readings, Krauss discusses the spatiotemporal duality of the grid. Spatially, the grid 'maps […] physical qualities of the [pictorial] surface' (Krauss 1979: 52) and exalts its flat nature. Since it is flat, geometric, homogeneous and exact, Krauss argues it is 'antinatural, antimimetic, antireal' (ibid. 50). As discussed in chapter II, these characteristics make the grid a perfect resource aiding painter working with geometric abstraction to break with tradition and to declare the autonomy of art as a 'world apart' (ibid. 52). Temporally, Krauss observes that, apart from being 'an emblem of modernity' (ibid.), the structure of grids 'explicitly reject a narrative or sequential reading' (ibid. 55). For example, Morley (2016: 48) observes Martin's compositions on grids are straightforwardly 'factual, planar and unitary'. Hence, they resist any chronological order and narrative reading. Also, endorsing a centrifugal reading of Martin's work, Morley observes her paintings appear as fragments of 'a greater invisible whole' (ibid.), whose hidden pieces of information obscure her paintings and make their full interpretation impossible. Morley relates this incompleteness of Martin's grids, together with low contrasts and

undifferentiation of lines and colours, to 'the memory of a less-differentiated level of consciousness' (ibid.).

To me it is difficult to separate Martin's work from my awareness of her mental conditions, from her Buddhist practice and her retreat from the world. I see in her work a search for regularity, routine, calmness and peace of mind. Her works pull out my attention, draw me to slow down, to become all attention and to immerse myself in them, dissolving my boundaries, merging us and becoming one with them. They afford me a space to imagine and experience her silence, patience and measured work, her efforts for *being* in the process and also for *becoming* together with her painting's evolution. This caring imagined process erases the grid's characteristic rigidity and coldness from her works and replaces it by a soft and warm feeling. Martin's approach to the grid is almost overwhelmingly emotional, loosening up an absolute rational element with delicate and skilful mastery. For instance, the dazzling atmosphere offered by *Friendship* (1963) [figure 35] emerges through a combination between a fine and fragile grid over a luminous and vigorous gilded background. This work is strong but gentle at the same time. It affords us a space to empty our minds and to stay present in the imposing presence of a shiny golden grid.

I explored four different methods to construct the grids in my paintings. First, in *Grace* [figures 45-47] and *Fragmented and Continuous Woven Surfaces* [figures 48-55], similar to Martin's method, I drew the grid using a pencil and ruler. Since, I then covered the grids with paint, in these works they are not visible.
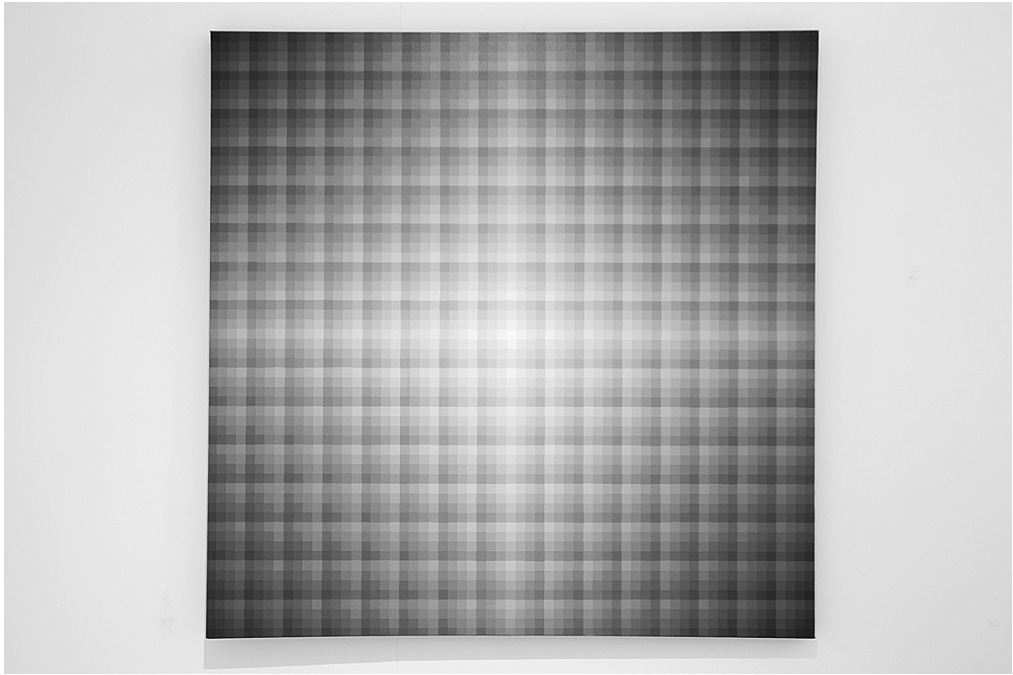
45. *Grace* (2014) - Macarena Rioseco - acrylic on canvas - 100x100 cm.
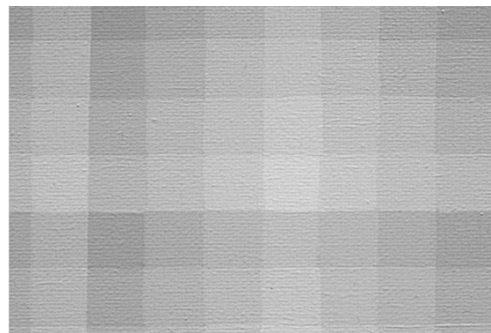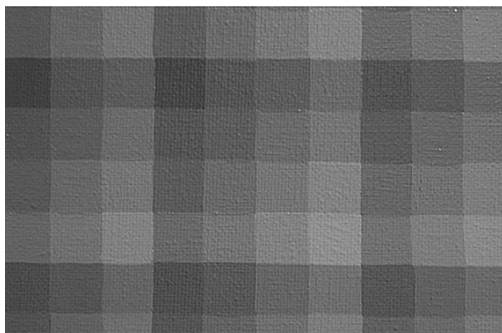
46 and 47. *Grace* (details)
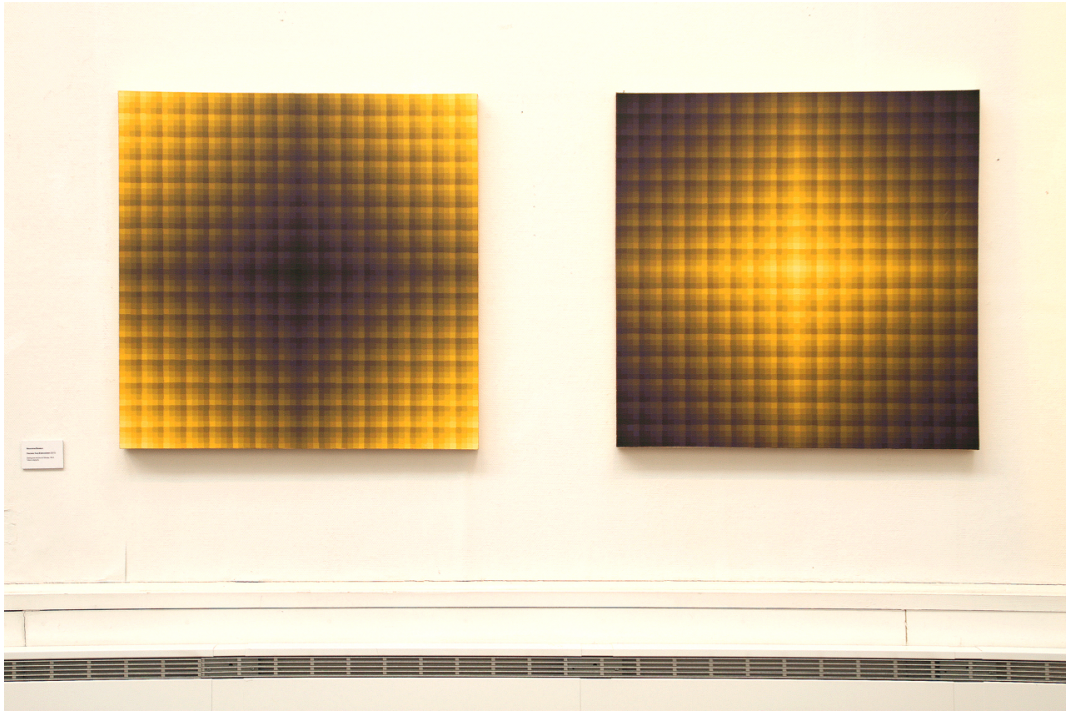
48 and 49. *Fragmented and Continuous Woven Surfaces* (diptych) (2015) - Macarena Rioseco

acrylic and gilding (copper and zinc alloy on the borders) on canvas - 100x100 cm (each).
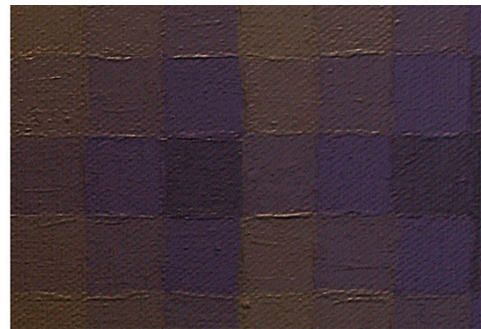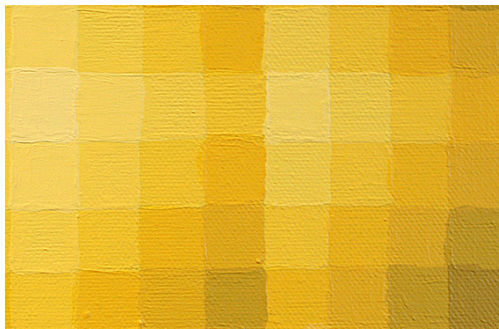
50 and 51. *Fragmented and Continuous Woven Surfaces* (details).
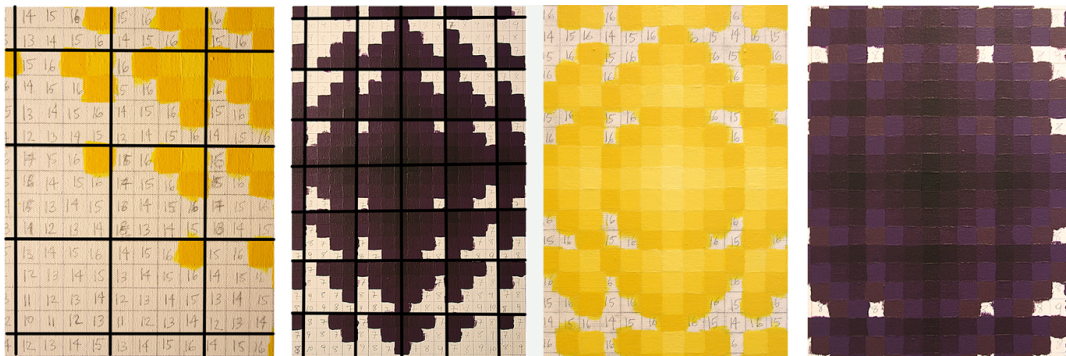
52-55. *Fragmented and Continuous Woven Surfaces* (details in process).

Second, in *Woven Pixelated Brushwork: Sunset* [figures 56-58] and *Atoms* [figures 59-65] I composed them using cotton threads glued to the canvases' borders. The grids in these works are networks of threads resting on top of the surfaces, which are clearly visible between marks of paint. Consequently, paint and threads are haptic elements in these paintings.
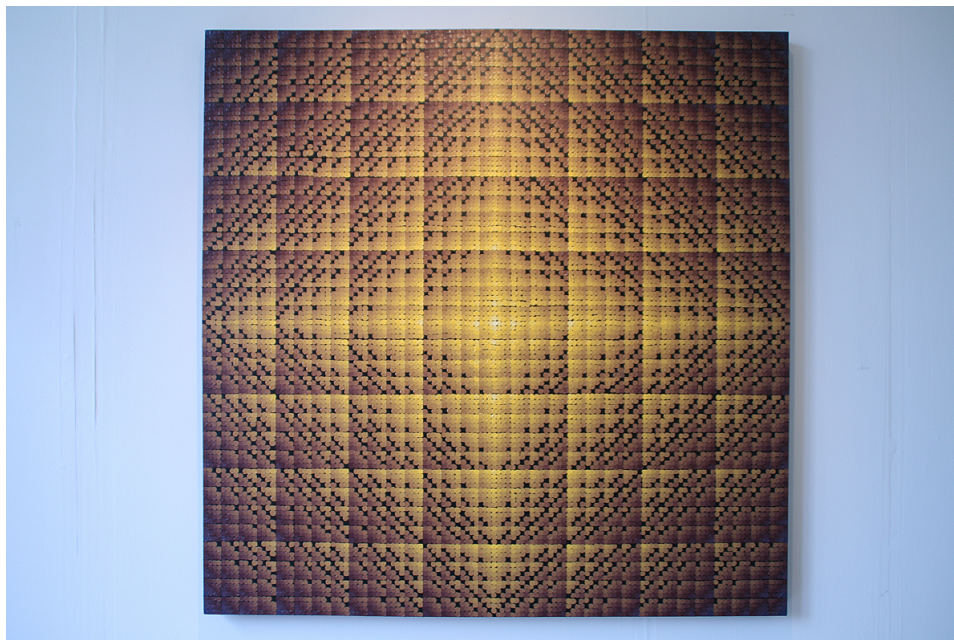
56. *Woven Pixelated Brushwork: Sunset* (2015) - Macarena Rioseco - oil on canvas and cotton threads – 128x128cm.
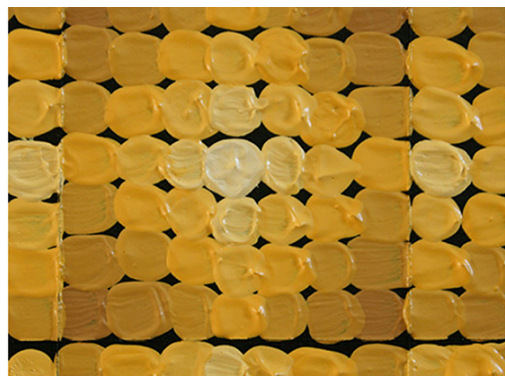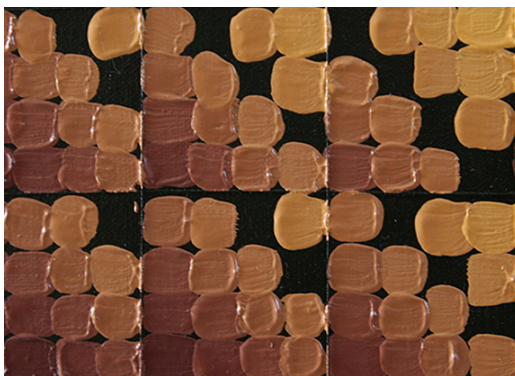
57 and 58. Details of *Woven Pixelated Brushwork: Sunset* (2015).
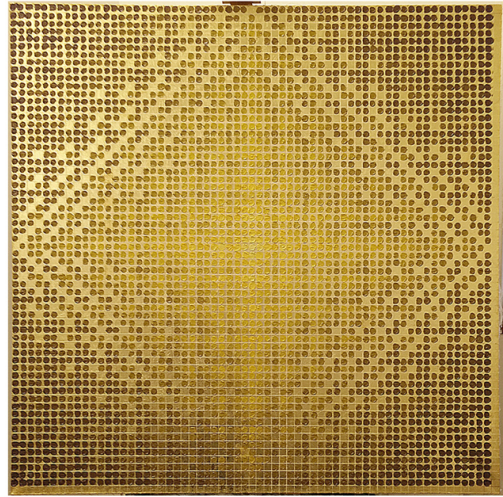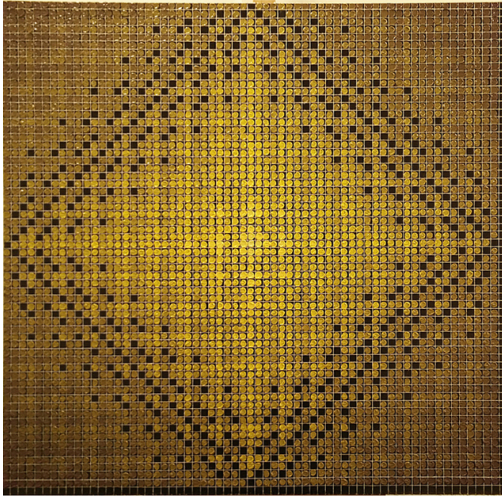
59 and 60. *Atoms* (diptych) (2015) - Macarena Rioseco - oil on canvas and cotton threads

/gilding (copper and zinc alloy) cotton threads and oil on canvas - 96x96 cm (each).
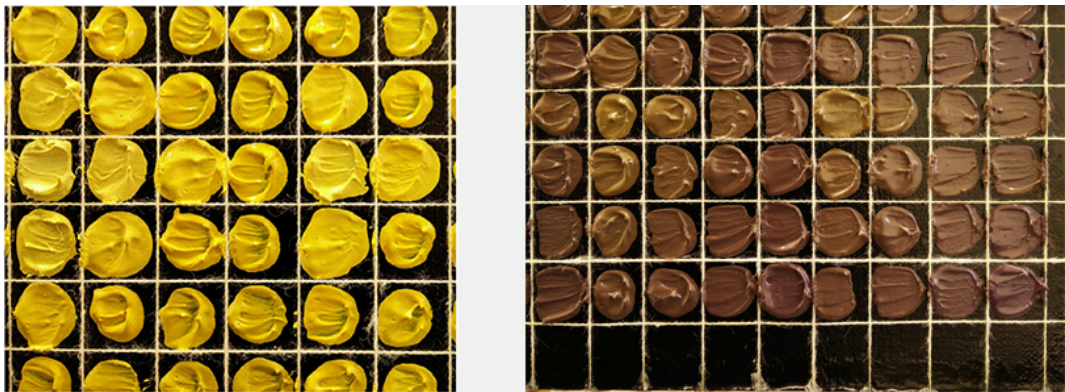
61 and 62. *Atoms* (details).
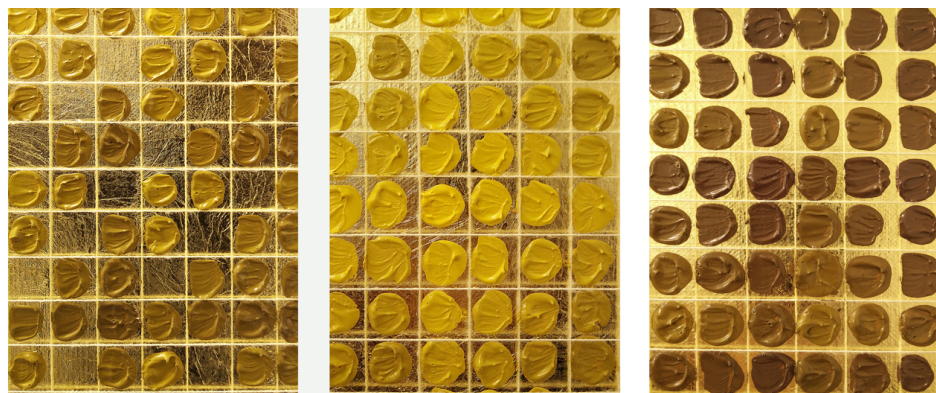
63-65. *Atoms* (details).

Third, in *Atoms: Waves* [figures 66-72] the grids are also networks of threads, but in these paintings, I subsequently covered them with metal leaf. Hence, threads in these works are not visible but instead emerging grids in gilded bas-reliefs, which are new haptic elements of these paintings.
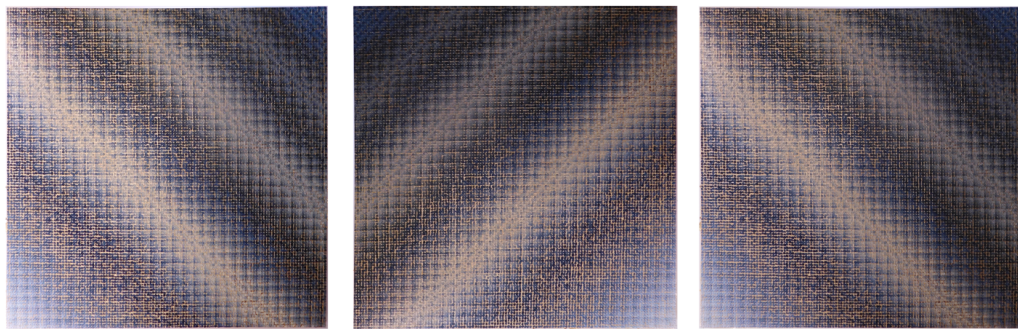
66-68. *Atoms: Waves* (triptych) (2016) - Macarena Rioseco

cotton threads, gilding (copper and zinc alloy) and oil on canvas - 117x117 cm (each).
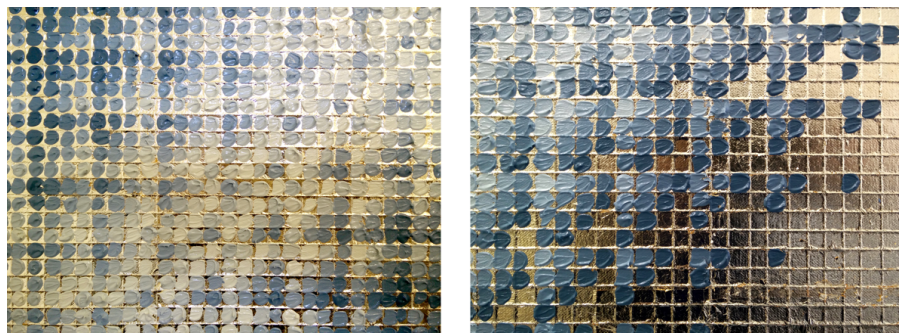
69 and 70. *Atoms: Waves* (details in process).
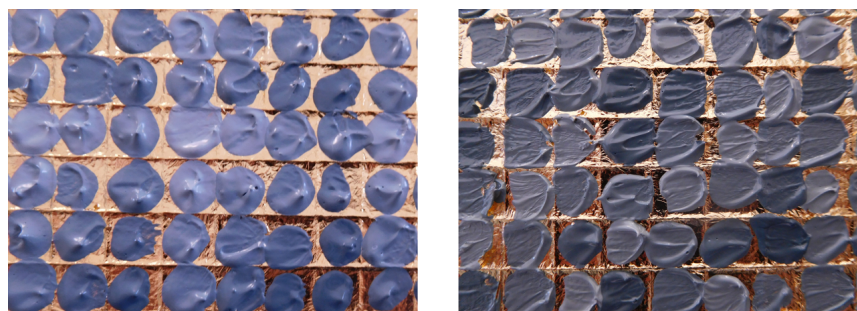
71 and 72. *Atoms: Waves* (details).

Finally, in *Chromatic Continuum* [figures 73-85] the grids were also composed as networks of threads but after I finished painting I removed them. Consequently, in these works the grids are not materially present, but emerge through relations and spaces between extremely regular marks. The amount of white background emerging to the surface in these paintings makes the images have a foggy effect and colours are perceived as duller than they actually are.
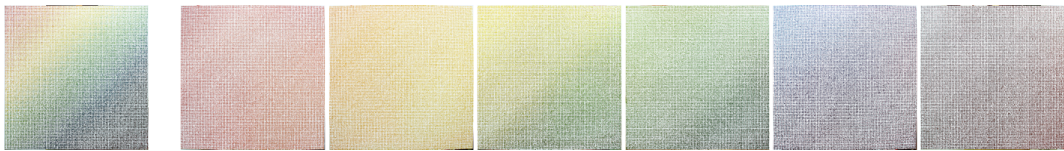
73-79. *Chromatic Continuum* (2016) - Macarena Rioseco - oil on canvas - 100x100 cm (each).
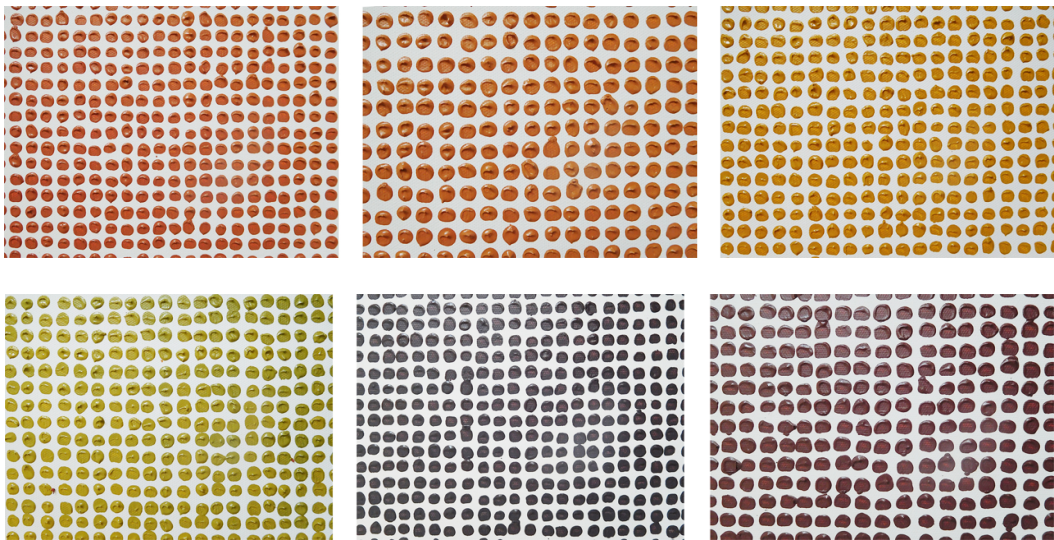
80-85. *Chromatic Continuum* (details).

3.   Squaring a brushstroke

As described in chapter III, this practice-based research project views the brushwork as a non-representational agent. This view of the gesture developed from a representational approach and within the context of this project. In this section I describe the gesture's transformation as a shift from a Deleuzoguattarian representational 'template' to a non-representational 'squaring' (1988: 425). These two concepts refer to two models of production correspondent to striated and smooth spaces.

A template, or pattern, is a representational device used as guide to produce identical copies of a figure. Templates belong to a 'rational order' (ibid. 422) and are products of static frameworks promoting 'the primacy of the fixed model of form' (ibid. 425). In order to produce 'a model for reproduction […] mathematical figures, and measurements' (ibid. 429) are some of the methods used. For examples, a stencil, matrix, cast or mould of a square are templates to produce series of infinite versions of a perfect square. In contrast to squared templates, Deleuze and Guattari introduce 'squaring' (ibid. 425) to describe a similar operation but, without using instruments or aiming to exactly reproduce a model. Squaring then proposes a material approach to production of squares outlined as an operation of 'deformations, transmutations […] metamorphoses, generations and creations' (ibid. 422) that *affect* a material and 'designate an "event"' (ibid.). For example, Deleuze and Guattari stress in this latter model a square is crucially dependent on processes of 'quadrature', a cube of 'cubature' and a straight line of 'rectification' (ibid.). Squaring then, corresponds to operations where squared figures are produced through metamorphoses of materials,

which are transmuted in approximations to characteristics of a square: a flat shape with 4 equal sides and 4 corners of 90º.

For example, brick moulds are templates that when filled with clay produce unlimited identical copies of a brick. Whereas, squaring bricks will entail manually shaping clay according to a brick's properties. Unlike templates, squaring will always produce unique variations of a brick as a result. These two concepts invite us to meditate about differences between mechanical works requiring little engagement from workers, to labour demanding more intense kinds of involvement. Filling a mould will simply involve a mechanical repetition of an action that could even be done absentmindedly. Conversely, squaring will require workers' concentration in order to carefully shape similar amounts of clay into bricks and evaluate their performances, fulfilling a squaring criterion case by case.

Grace and *Fragmented and Continuous Woven Surfaces* [figures 45, 48 and 49] are the first outcomes of this project. These works *actualise* formalist, static and representational models described before. The reason is first, these are painted grids based on woven surfaces and pixel-based images. Second, these images use a square as template [figures 46 and 47] and despite not depicting concrete forms, because they are based on squares, still their approaches are largely formalist. Third, these works were centripetally composed and fourth, their surfaces are rather immaterial. For all these reasons, these works are not truly non-representational paintings. Perhaps, the only non-representational element of them is the approach to fractals they present.

From an *enactive* perspective, when these surfaces are looked at from close up, traces of *actions* I performed while painting them are visible. For instance, the precision, regularity between squares and level of details insinuate *acts,* such as extreme care and effort, acute attentional involvement, reiterative repetition of minimal movements, intense physical engagement and physical closeness to surfaces. Discrete irregularities between squares show shakiness of pulse, difficulty in achieving perfection and hence, unreasonable aims and expectations. Flatness of surfaces can reflect perfectionism, corrections of irregularities, erasure of traces of brushwork and use of liquid paint. Accordingly, it is possible to 'see' a wide range of different kinds of *actions* in specific material features of painterly surfaces. I continue this discussion later in relation to the Deleuzoguattarian compound of sensations.

After these works, my practice evolved away from a formalist approach towards an examination of material dynamics taking place within my practice. Ideas discussed in chapter III strongly *affected* my interaction with the pictorial medium and played major roles in triggering this transformation. For example, the view of forms as traces of processes of formation exemplified by Klee, fractals and the Deleuzoguattarian immanent model, activated my *enactive* understanding of painting. Such models are based on change, difference and *becoming, and* focus on *events* and processes rather than on transcendence, similarities, reproductions and essences. More concretely, a new perspective of painting emerged in this project, in which it is viewed predominantly as a material practice that *affords* individuals a specific context for interaction. Furthermore, a Deleuzoguattarian perspective activated an awareness that the *actual* material dynamics occurring in my work – which are defined by my interaction with the medium – are traces of *intensive processes* guided by personal

affects. This insight led me to identify paint as a medium that can facilitate an individual's access to a personal 'affective register' (O'Sullivan 2001: 126), that is, a Deleuzoguattarian immanent smooth space.

Other ideas that influenced a transformation in my interaction with the medium are Greenberg's at-onceness and Benjamin's discussion on indivisible units of time and space discussed in chapter II. As a reaction to stasis represented by at-onceness, the temporal dimension of painting as practice gained greater significance to me. Consequently, a different perspective of the pictorial plane and the grid was enabled in which, instead of squares, they are units of space to *act*. Accordingly, the spatial constraints imposed by the fragmentation of planes in multiple extremely reduced spaces *afforded* a context to develop the repetitive practice of *GM*.

As discussed in chapter III the meditative feeling produced when practicing *GM* resulted in sharpening my focus of attention and refining my perceptions of the material processes occurring. Trustram (in Kuhn 2013: 192) describes a similar experience of 'an intense sensory awareness of the objects' materiality' emerging with and within practice. In my case, bodily sensations are intensified and 'microperceptions' (Deleuze and Guattari 1988: 249) become accessible. Examples of these are feeling the paint's consistency and weight; the impact when paint, brush and surface meet; the canvas texture through the brush; or hearing the sound produced when the brush touches the surface. Visual 'microperceptions' are, for instance, seeing extremely small differences between colours, noticing different stages of colours' integration when mixing them together or seeing more clearly colour changes depending on light conditions or in relation to other colours.

O'Sullivan endorses Bergson's (1911) notion of attention to describe a state of absorption characterised by a 'suspension of normal motor activity' (O'Sullivan 2001: 127). To attain a real state of attention, all the individual's energy needs to be concentrated only on one target. O'Sullivan explains the interruption of 'normal' operational activities 'allows other "planes" of reality to be perceivable […] beyond utilitarian interests' (ibid.). Hence, an improvement in perceptions of things, such as reduced details, comes together with intense concentration. As previously mentioned, O'Sullivan also uses Bataille's (1962) notion of rite (see chapter III) to recall the practice of art has been commonly understood throughout history precisely as a 'mechanism for accessing a kind of immanent beyond to everyday experience' (ibid.).

Kuhn (2013: 3) describes attention as 'a kind of absentmindedness or reverie - associated with creativity'. Perhaps, in extreme attention there is an absence of mind for normal motor activities. However, in attention there is also a reduction, concentration and enhanced acuteness in the focus of perception, where one can 'become all attention' (Greenberg 1993: 81). Therefore, attention can also be described as an immersion of self within a 'hyper' sensorial experience characterised by an intense presence of mind or present-mindedness. In my experience, the attentive states of present-mindedness attained through painting and meditation are extremely similar.

The enhanced experience of paint's materiality encouraged me to release my practice from some imposed constraints [figures 86 and 87]. For instance, I started welcoming irregularities and imperfections between squares, which at first, I had seen as *errors* of

my work. Embracing these differences between squares activated more textures and haptic properties of my surfaces [figures 88 and 89].
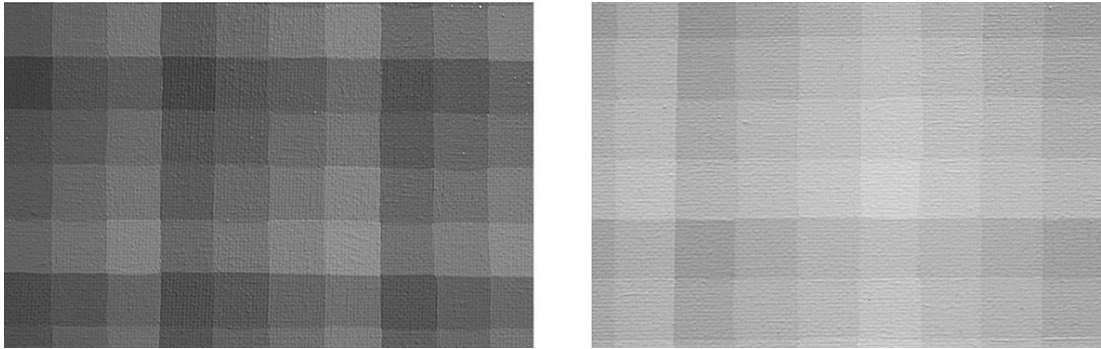
86 and 87. Squared templates: Most constrained pictorial approach.
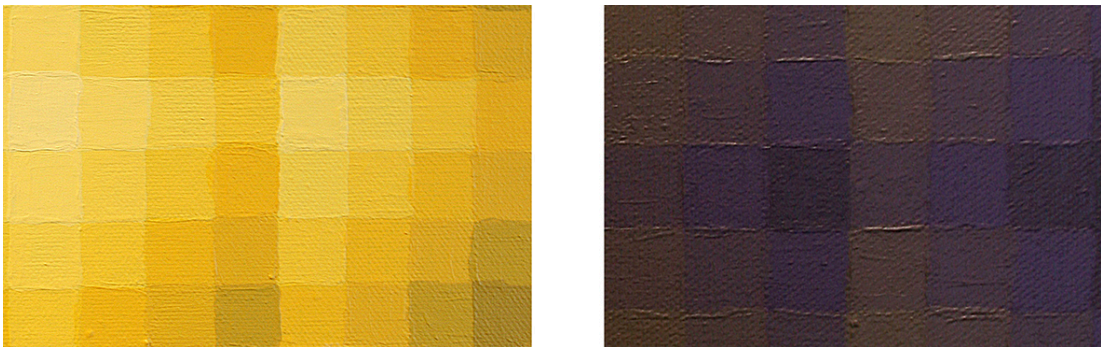
88 and 89. Squared templates: Small irregularities, textures and haptic properties.

I tried different brushes to free the gesture from tools and formal limitations [figures 90-92] and changed the medium from acrylic to oil paint, as this latter allows more density of impastos. I added more paint to each brushstroke and purposely left more obvious irregularities between marks. Finally, instead of painting a form: a square, I began performing a gesture whose traces occupy squared spaces. In other words, I began *squaring a brushstroke* [figures 93 and 94]. This outcome is reflected in *Woven*

Pixelated Brushwork: Sunset [figure 56], which is the first work where elements of a true non-representational pictorial model emerged in my practice.
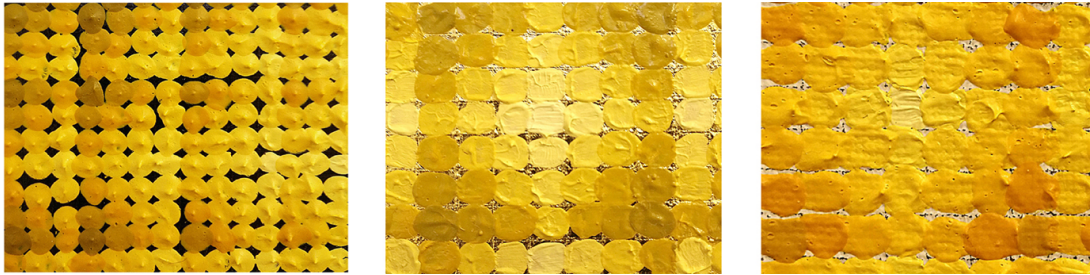
90-92. Testing of different brushworks.
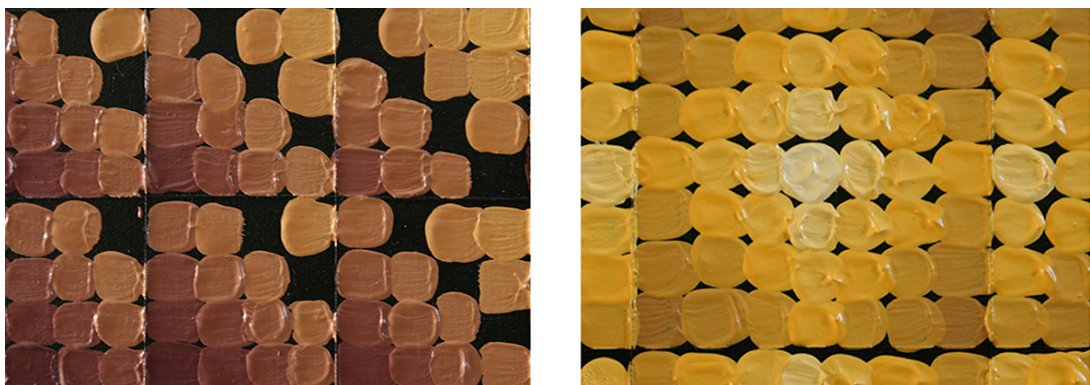
93 and 94. Squaring a Brushstroke.
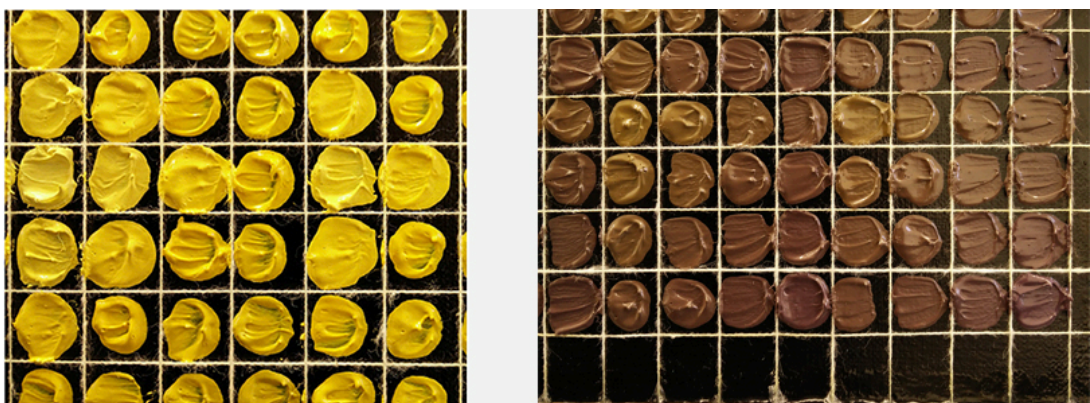
95 and 96. *Gestural minimalism*.

After that, by means of repetition I explored variations of a gesture and the diversity of its traces. Thus, I used repetition as a method to explore change, since, '[i]n the repetitive nature of practice it is never a question of repetition of the same' (Bolt 2004: 37). I finally chose a gesture, which is completely free from formal constraints [figures 95 and 96]. This gesture is the imprint of *GM*, the style introduced in *Atoms* [figures 59 and 60]. Consequently, the *squaring a brushstroke* assemblage developed through repetition and during practice has transformed not only my practice but also *squaring.* This assemblage has produced the 'activation' (Knox-Williams 2012: 90) and expansion of the semantical scopes of *squaring* and of the particular brushwork developed in this practice-based research project.

4.   *Gestural minimalism* and compound of sensations

In this thesis I propose my paintings' surfaces not only convey my particular 'will and intentions' (Bernstein 1996: 14) but also a personal affective register of Deleuzoguattarian *smoothness,* which I 're-enact' (Singerman in Harland and Manghani 2016: 302) when interacting with the medium. I suggest my experience of painting allows me to access and interact with a pre-subjective and pre-verbal psychological and cognitive space.

Bingley uses Winnicott's (1965, 1971) theory of transitional objects to describe that 'non-verbal' levels of experience, which are exclusively sensorial, are gained from being 'literally "in touch" with the world' (Bingley 2003: 330). She highlights such experiences originate at a basic level of the body's cognitive engagement with

perception and are 'essentially a subjective and non-verbal phenomenon of human consciousness' (ibid.). This smooth space can be defined using Crowther's (2017: 5) framework as symbolic levels or forms that 'transcend mere semantics'. He argues these levels originate in the 'body's basic cognitive engagement with the perceptual field' (ibid.), are extremely subjective and different in every individual. He believes in artmaking (he mentions painting and drawing) this basic cognitive engagement is not only present but 'is *constantly reaffirmed* and taken to more complex levels' (ibid.). In other words, individual's non-verbal registers of smoothness are re-enacted and re-actualised within making processes.

Now I discuss how *actions* I perform in response to the context afforded by the medium resonates with my register of *smoothness*. In light of Sampson's (1999) 'acting ensemble', a co-functioning emerges between the pictorial medium and myself. When this ensemble co-functions within an introspective *intensive process* of painting it *actualises* a personal *virtual smooth space*, which cannot be represented or communicated, but only experienced.

Also, since haptic properties of my works' surfaces are traces of their processes of fabrication, when viewers interact with my paintings they are afforded contexts that trigger responses in them. From an *enactive* perspective, imagining paintings' fabrication processes transports viewers into another time and space containing those making processes. However, since those times, spaces and making processes are imaginary, viewers' experiences will be inward immersions into subjective atmospheres saturated with their own perceptual and affective registers. Unlike every day experiences, introspective experiences of art offer individuals possibilities to

accessing intimate immanent spaces that can reveal an 'other side' (O'Sullivan 2001: 128) of themselves. Such experiences of art can grant the maker and viewers an awareness of 'a narrative of subjectivity that we [constantly] re-enact' (Singerman in Harland and Manghani 2016: 302). Similarly, O'Sullivan (2001) proposes art as a practice through which, imagination and actions can facilitate modifications of an individual's affective register.

As described, the meditative rhythm of my practice enables a 'hyper' sensorial experience and a 'microperception' of paint's materiality. I now explore two of these microperceptions, which are also transmitted by haptic properties in surfaces of finished works, in relation to a Deleuzoguattarian compound of sensations. First, an intensified dense and creamy sense of touch afforded in particular by oil paint, which opposes a soft resistance to brush-hand assemblage when encountering the canvas. Second, a hardness at touch, when oil paint had dried out.
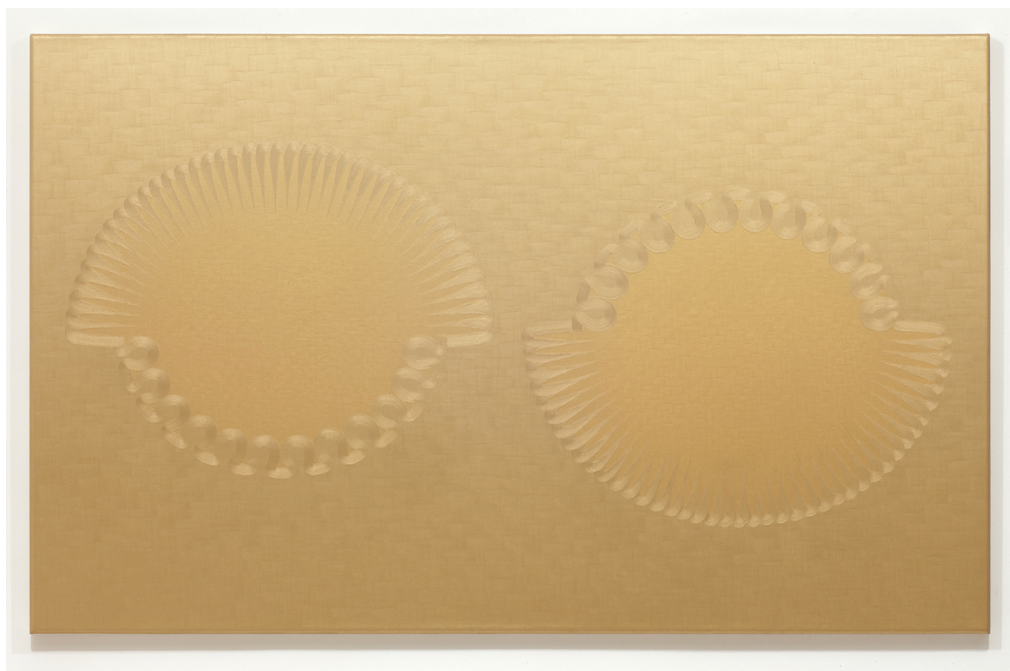
97. Midas Magic (2011) - Jane Harris - oil on canvas - 127x203 cm - Copyright © 2018 Jane Harris.
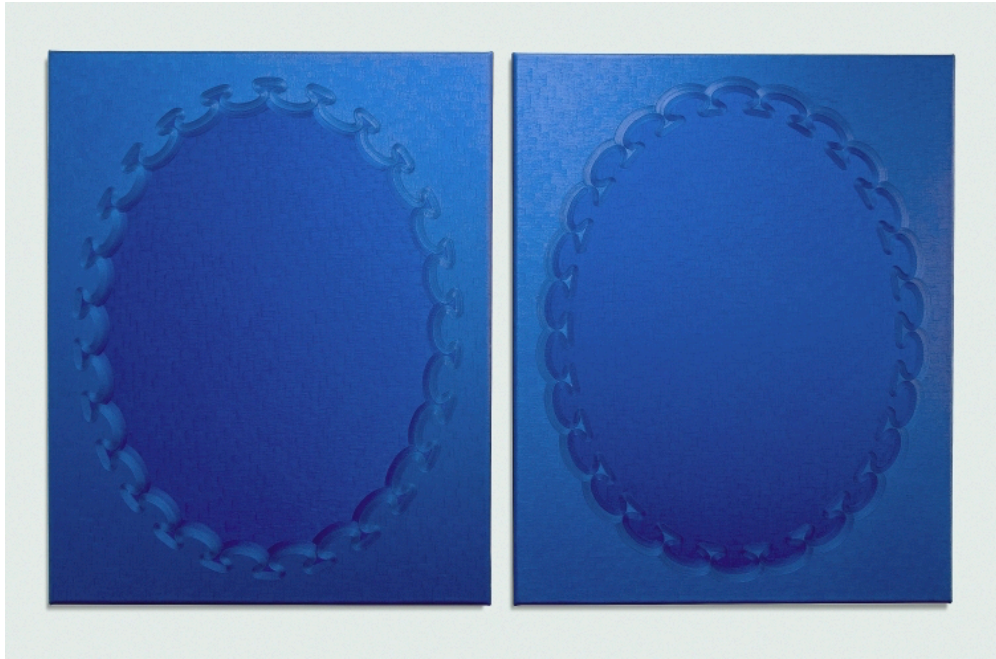
98. *Blue Bleu* (diptych) (2014) - Jane Harris - oil on canvas - 102x164 cm - Copyright © 2018 Jane Harris.
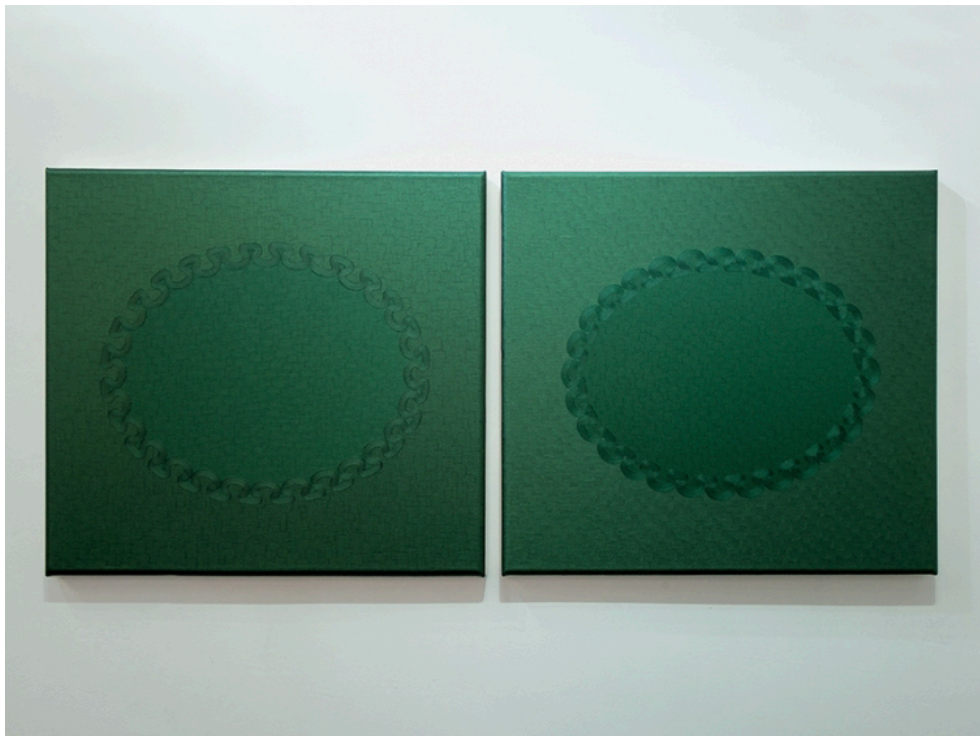
99. *Vers Vert* (diptych) (2014) - Jane Harris - oil on canvas - 61x132 cm - Copyright © 2018 Jane Harris.

Monochrome paintings of British contemporary artist Jane Harris are excellent examples of those two micropercepts. Her oils on canvas, such as *Midas Magic (2011), Blue Bleu (diptych) (2014)* and *Vers Vert (diptych) (2014)* [figures 97-99] visually transmit a velvety sense of touch. Textures on these delicate surfaces are extremely sensitive to light conditions and convey smooth tactile sensations through haptic visuality. Nevertheless, smoothness is only visual, since touching those surfaces would reveal these are actually hard and rough. Colour reduction to the minimum in Harris's paintings boosts the perception of material dynamics. Textures appear as clear traces of brushes Harris used and movements she performed when making them. Those elements further invite viewers to follow a visual rhythm while simultaneously imagining Harris's skilful *actions*.

I interpret my experience of *smoothness* through painting as resonating with the extraction of a pure percept from a concrete perception or touch, which must be related to an early experience of a basic level of cognitive engagement with the perceptual field. Deleuze and Guattari (1994: 178) claim matter does not create sensations but 'is involved in revealing' those previously experienced by subjects. Hence, in light of art practices as intensive processes for actualisations of affects, I experience painting as a bridge that brings to the surface and actualises a personal register of a smooth space. In O'Sullivan's (2006: 19) words, painting has allowed 'an opening into the realm of affect' and given me the possibility to explore and interact with it.

An insight gained from this experience is that my register of *smoothness* is filled with structure and rigidity. I associate this to Worringer's (1908: 35) urge to abstraction,

which is visually related to regular geometrical forms and 'the morphological law of crystalline-inorganic matter'. I also associate it with striated and smooth spaces where the former emerges, through processes of differentiation, from a uniform and undifferentiated smooth space. *Grace* and *Fragmented and Continuous Woven Surfaces* [figures 45, 48 and 49] have material traits insinuating these relations. For example, as explained in detail later, these compositions depict continuous tonal degradations between two colours smoothly waving in the passage between tones. But, since these degradations are composed of aggregates of monochrome squares and in fragmented stages, they are also visually broken.

Affectively, these paintings are results of processes involving extreme self-control, discipline and devotion. These *actions* can be seen from two contrary perspectives. They can be products of patience and care, and *actions* of a harmonious mind or they can be outcomes of a compulsive, obsessive and rigid mind, and the results of absolute lack of self-control. Morley (2015: 477) identifies a similar paradox in Martin's paintings when he describes the reflection of an 'obsessive formal reductiveness and reiterative seriality'. Consequently, *Grace* and *Fragmented and Continuous Woven Surfaces* can be interpreted as conveying a precarious affective balance between order and chaos. Hence, when encountering viewers, the dual affects conveyed by these paintings can be actualised again into a variety of differentiated positive, negative or neutral emotions. The responses will depend on each individual who interacts with the works and will be conditioned by their own affective registers.

5.   Enacted *gestural minimalism*

References to meditation in *GM* endows it with a character of being a 'practice of patience' (O'Sullivan 2001: 128), which facilitates a moving from beyond mundane perception into a smooth space. Morley (2015: 485) explains how East Asian cultures practice maintenance of 'ambiguous states of mind' aiming to enable a grasping of the new, unknown and uncertain. Similarly, through my practice I aim to enter into 'a kind of meditative state' (ibid. 128) of mind, which is less known to me than common operative states. As discussed, my intention to guide my practice as a process of introspection aims to embrace unknown sides of myself, while responding to the conditions afforded by the pictorial medium. In light of *attention*, a meditative state can be described as a sort of cognitive opening, an extreme present-mindedness, that enables an individual to access 'extreme subjective states' (ibid. 478) of mind and to have a direct experience of affects. Similar to meditation, art can be an 'experiential situation of openness' (ibid. 485). Art can *afford* contexts that facilitate breakages of habitual patterns, which are 'conditioned by the past and [… can] be primed for creative, spontaneous processes outside conscious awareness' (ibid.).

Guattari (1995: 7) calls processes of 'resingularisation' *enactive* processes that aim to 'remodel' (Guattari 2009: 180), re-invent and re-configure individuals' singularities, or subjectivities, and their 'relation to […] personal existence' (ibid.). This is relevant because redefining individuals' self-perceptions necessarily provokes further changes in concrete ways they interact with and create a world. For example, as explored in this thesis, the process of constructing *GM* has modified my 'way of seeing and living' (ibid.) my practice. Also, introducing a looser approach to the brushwork in

my work through *Woven Pixelated Brushwork: Sunset* [figures 56, 92 and 93] has been highly significant in relation to re-enactments of affective registers described above. While making this painting I was already aware of my pictorial re-enaction of a personal 'abstract' (Worringer 1908) affective register. In this painting I aimed to loosen up the pictorial gesture, in part, as an *action* of following the qualities of pictorial materials and also, as a metaphorical enactment of smoothing up rigid patterns of my behaviour unveiled through my interaction with the medium. I aimed to modify this personal *abstract* affective register tinted by fear, towards a more joyful and 'empathic' (ibid.) one. The fractal choreography described in chapter III, is one consequence of the move towards *empathy* I enacted in this project. This new quality is reflected in *Woven Pixelated Brushwork: Sunset* and in all the works that came after it. In fact, all these later works suggest more harmonious sensations than the former.

Sweetzer (in Engel et al. 2015: 164) observes we perceive the world through a series of 'delicate patterns of sensorimotor activity' that define individuals' behaviours. If these patterns are modified, some of these behaviours will change accordingly. In Sweetzer's words, an individual's 'behaviour changes as one learns to cope with new conditions and situations' (ibid.). Furthermore, if individuals' actions change, their perception of the world will transform too. Sweetzer stresses '[i]f these changes are dramatic enough […] then a different perceived world will be enacted' (ibid.). For example, the change in my approach to practice from radical *abstraction*, towards a more balanced coexistence between *abstraction* and *empathy*, was reflected in a turn away from representation and a redirection towards enaction. Instead of approaching canvases as spaces for reproducing readymade compositions, now I see planes as

spaces for inter-*acting* with the pictorial medium. As a result, my work has gained some freshness and lost some structure, rigidity and perfectionism.

This qualitative change that smoothed out my practice has also altered other areas of personal patterns of behaviour. These are all rigid habits driven by fear, which conditions Worringer's urge to abstraction. Theoretical research informing this change has been crucial to enable the development of a new perspective of my practice. The meditative aspect of *GM* has also been critical to enable the state of mind that granted access to O'Sullivan's aforementioned term, an 'other side' of myself. Painting, has acted as material means for containment and afforded a context for the re-enaction, revelation and modification of a concealed *abstract* affective register. As a result, this has led to a deterritorialisation (see chapter I) of these *abstract* affects directing them towards more *empathic* territories.

6.   Emergence in *gestural minimalism*

The concept of 'emergence' (Johnson 2001) describes the phenomenon by which larger structures are formed through associations of multiplicities of smaller and simpler components. As wholes, these larger formations exhibit holistic *emergent* properties completely new to all smaller parts. For example, as discussed later, colour is a property emerging from interactions between human visual perception and the light spectrum. Deleuze (2003) discusses emergence in relation to painting using the concept of diagrams. In his view, paintings are diagrams composed by multiplicities of 'asignifying' random marks that together compose images. Crowther (2012: 55)

describes a similar idea by explaining the 'pictorial object [… is]our perception of emergence through gesture and composition [… a] kind of dynamic emergence' made out of coloured marks.

Deleuze observes, due to the material nature of painting, effects of diagrams are principally a power of the hand rather than sight. Therefore, he considers in these emergent compositions haptic visualities should have greater importance than optic ones. Nonetheless, Deleuze also insists diagrams should always suggest new forms emerging from these multiplicities and not simply remain as a group of asignifying marks. Burrows describes that in Deleuze's view emergent forms should also somehow 'disrupt figuration' (in Zepke and O'Sullivan 2010: 160). Accordingly, for Deleuze, pictorial diagrams should always hold active interplays between optic and haptic visualities, but the material nature of the medium has to be the priority. Hence, similar to fractals, diagrams are liminal zones of indetermination in between a zone 'that no longer exists and [an emerging] one that is "not yet"' there (ibid: 161).

As discussed, marks on my canvases' surfaces 'thematise the conditions' (Geimer et al. 2012: 40) of their own processes of generation and are further 'offered [to viewers] as the record of a regularised gesture' (Singerman in Harland and Manghani 2016: 307). This gesture is reduced, subtle and precise. It follows a systematic and repetitive pulse that produces a recursive and calming regular rhythm. Riegl (1893: 169) describes rhythm as a 'sequential repetition of the same appearance'. He observes rhythm composed through repetition creates unification of all these individual appearances into a collective entity of a 'higher unity' (ibid.). Then, rhythm is also an *emergent* multiplicity. Consequently, multiplicities of marks in my paintings signal

the specific rhythmical choreography that generated them. Deleuze (1968: 1) notes 'to repeat is to behave in a certain manner, but in relation to something unique or singular which has no equal or equivalent'. The singular element in my practice is the Idea of a gesture, which I re-enact in every new movement performed.

Concerning Deleuze's three spheres of reality introduced in chapter III, singularities are *virtual*, which are *actualised* by means of *intensive processes* always producing difference. Then, in light of a correspondence between these three spheres of reality and three elements of my work, the Idea of a singular gesture is *virtual*; concrete gestures performed during practice are *intensive;* and multiplicities of marks produced on the planes are *actual*. Since every mark in *GM* is the record of the same singular gesture, all those traces have different forms within a range of extreme similarity. Deleuze (1968) emphasises that *repetition* does not exist in nature and it actually produces *differences*. Jagodzinski (2012: 86) suggests 'a *repetitive* logic' always produces new results different from all previous and future outcomes. In other words, repetition produces *multiplicities*. Deleuze (1968: 2) observes repetition can only 'be "represented"' as similarities between things. However, since similar things are always distinguishable from each other, they are still and will always be 'different in kind' (ibid.). Correspondingly, all marks in my paintings are extremely similar to each other. However, as they are all essentially different, they are Deleuzian 'pure difference' (ibid. xviii). Also, multiple enactments of a *virtual* gesture in *GM* are *intensive processes* that generate 'varieties' (Deleuze and Guattari 1988: 201-218) of an *actual* 'shapeless [pictorial] mass' (Deleuze 1990: 123).

Concerning the relationship between colour and emergence, this work uses a 'scientifically rationalist' (Mottram 2015: 407) approach to colour and also considers 'expressive' (ibid.) qualities of it. As mentioned, colour is an emergent phenomenon resulting from the interaction between the human visual system and light spectrum. In light of Deleuzoguattarian work, this spectrum is a *virtual* realm *actualised* as colour through the human *intensive process* of perception. Nonetheless, as Varela et al. explain, colour is a subjective experience that is cognitive as much as perceptual and as cultural. They argue colours are not objective phenomena independent of humans' 'perceptual and cognitive capacities' (1991: 172), but highly dependent on experience. Varela et al. describe colours as *categories* that 'belong to our shared biological and cultural world' (ibid.). That explains why specific 'intensity and wavelength composition of the light reflected' (ibid. 161) are not the only variables for determining individuals' experiences of colour. In fact, colours are not absolute properties of things we perceive, but are extremely relative.

Colours are perceived as enveloped and immersed in ambiences, interwoven with things such as lights, shadows, objects, forms and materials. They are highly susceptible to change and depend on factors such as movements of objects, changes of light, other colours or any transformation the context experiences. Varela et al. (ibid. 163) observe 'we never see color as an isolated item' but always in context and in relation to other colours. Hence, the individual colour of every element in a scene depends on emergent global states of that scene as a whole. Consequently, they argue that colours are not 'pregiven', nor represented by human beings, 'but rather experiential and enacted' (ibid. 171). For example, Albers (1963: 1) describes colour relativity by stating that 'color evokes innumerable readings'. He studied colour

practically and concluded they 'present themselves in continuous flux, constantly related to changing neighbours and changing conditions' (ibid.). Albers' series *Homage to the Square* (1949) [figures 17-20] analyses the elusive nature of colour through exploring ways they 'alter one another' (Moszynska 1990: 147).

For example, the expressive approach to colour I use in my work has 'associated meanings and references' (Mottram 2005: 407) principally related to perceptual atmospheres and nature. This is opposed to the characteristic colour treatment presented in modern works, which Riley (1995) identifies as related to artificial, industrial and urban colours of things. The atmospheres I compose draw from things such as 'patterns of wave action' (ibid. 204) on water surfaces and of light, and the colour-light spectrum. However, I also use elements that refer to artificial uses of colour such as the allusion to woven surfaces and pixel-based digital images.

In addition, I work with the 'different spatial qualities of colour' (Mottram 2005: 413) – that is, its capacity to suggest depth – to construct images that draw from haptic surfaces such as water, woven pieces and pixel-based digital images. Hence, I exploit the capacity of 'colour depth [… to produce] a different kind of space' (ibid. 410) to 'geometric [optic] depth' (Yass in ibid.). Mottram discusses that contemporary artist Catherine Yass, shortlisted for the 2002 Turner Prize, acknowledges a potential of colour depth 'to open up a psychological space' (ibid. 413), which she describes as a 'semiotic non-linguistic space' (Yass in ibid. 11) of associations. Mottram describes that in Yass view, this colour depth is in conflict with 'the geometric depth of the image' (ibid. 413). In other words, colour has the power to carry 'associations and influences' (ibid.), which are on a different level to optical (striated) images. Mottram

and Yass's discussion about the differences between colour and geometric depth, is extremely similar to the aforementioned Deleuzoguattarian smooth and striated spaces. Correspondingly, this enables me to propose colour depth as a smooth and haptic space. Consequently, the role that colours have in my work, does not only function from an expressive approach referencing perceived natural atmospheres and artificial colours of things, but it is also central to facilitate the exploration of a semiotic non-linguistic smooth space, which I am pursuing with my work. Hence, similar to Yass' work, my paintings can be 'approached from the perspective of visual perception and cognitive association' (ibid. 412).

7.   Meditations on *gestural minimalism*

My paintings based on *GM* use 'the grid and a simple marking system [… as] devices to hold on to an aesthetic property' (Mottram and Davey 2012: 3) – that is, colour. Discussing the work of James Hugonin (b.1950), John Lancaster (b.1930) and Duncan Bullen (b.1962), Mottram and Davey propose that the blending of these two devices 'generates scope for awe and delight precisely when [… colour] is constrained' (ibid.). Also, by removing recognisable forms, my work endorsed 'the ability of colour to speak freely of itself' (ibid.). Accordingly, my works present a 'careful analysis of the inner-relationships between colour and tone' (Moszynska 1990: 103) and display 'delicacy of tonal gradation' (ibid.) of mixes between two colours [figures 100a and 101]. As described, I organise tones in a system of fractal 'rule[s] of combination' (DeLanda 2002: 9) that produces self-similar and iterative wholes composed by multiple smaller parts [figure 100b]. As a result, the relations between

tones within a painting are repeated at different scales of magnification. Meaning that, every squared section displays similar colour relations to the whole painting, as well as to bigger or smaller sections [figure 102].
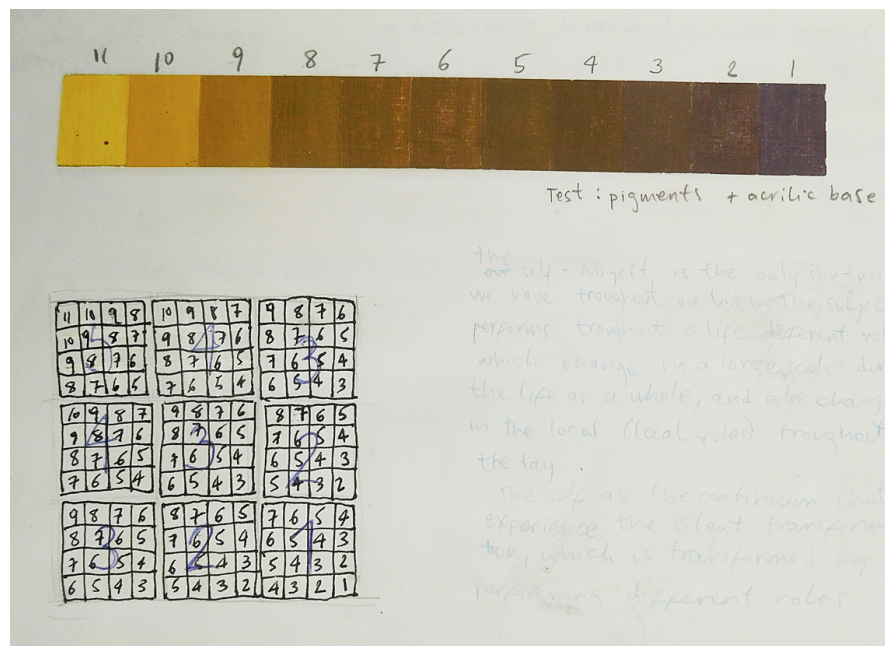
100a. (top) Colour test - pigments and acrylic base on paper / 100b. (bottom) Basic fractal structure.
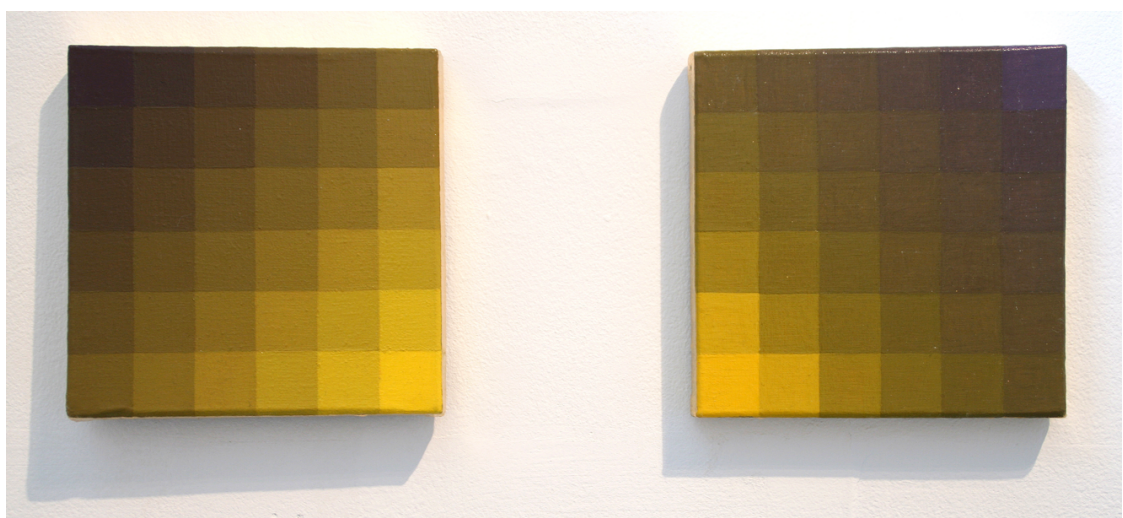
101. Colour and medium tests - acrylic on canvas (left)

/ pigments and acrylic base on canvas (right) – 20x20 cm (each).

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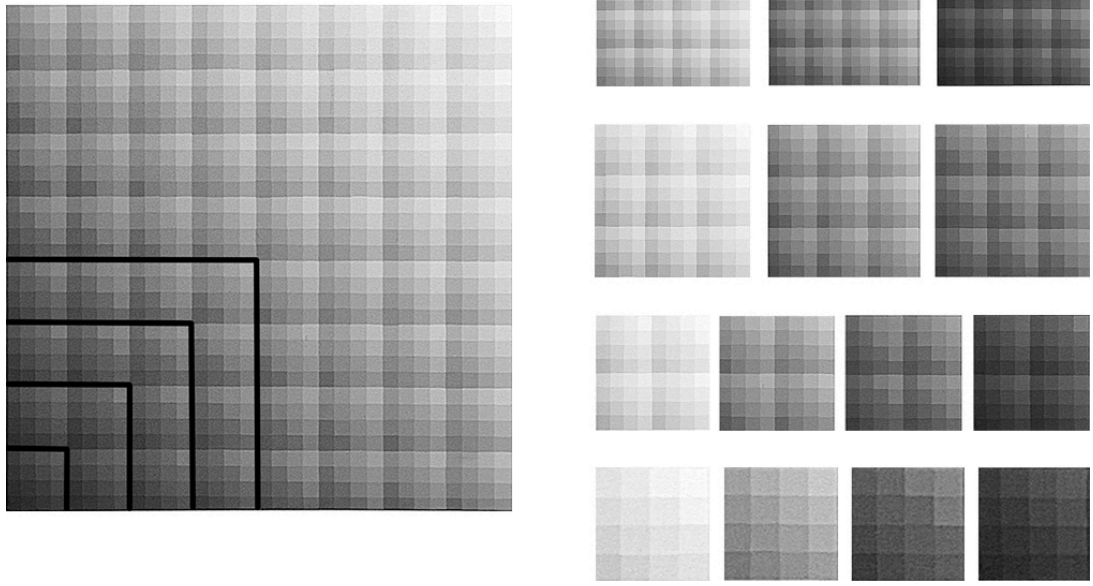
102. *Grace* (details) - Iterative and self-similar relational patterns between tones of greys at different scale - 1/4 (left) - 1/16 (top right) - 1/25 (second from top to bottom right) - 1/64 (third from top to bottom right) - 1/256 (bottom right).

Similar to the "fractal choreography" described in chapter III, chromatic degradations in my paintings progressively advance from one colour to the other. However, regular breaks of regression within the progressions make them smoothly wave in the continuous passages between colours. As a result, vibrating visual rhythms and a kind of "waveness" emerge from these compositions. I propose "waveness" as a percept extracted from the movement of waves (light and water). Davey describes a similar dynamic in Hugonin's work where a combination of a 'grid for holding the coloured patches and a system for the repetition of a set of marks […] sets up a recurring wave pattern across the painted surface' (Mottram and Davey 2012: 3). For example, in *Grace,* and *Fragmented and Continuous Woven Surfaces* [figures 45, 48 and 49] a light source seems to be radiating from the centre to the borders of the surfaces. The allusion to waves was not an objective I originally pursued, but a true emergent

phenomenon of the fractal system designed. However, after these first works, a meditation on "waveness" became a main purpose of my practice.

As discussed, for Deleuze and Guattari (1994: 173) 'becoming' proposes a worldview in a constant state of motion, permanently and endlessly transforming. They describe it as 'something [ceaselessly] passing from one [state] to the other' (ibid.), but never crystallising in one or the other. For that reason, *becoming* is a 'zone of indetermination' (ibid.). In light of *becoming*, my paintings' planes are liminal zones of colour indetermination. On them, two colours are in the process of *becoming* one another and through their mixtures are enabled to connect [figure 103]. For example, the diptychs *Fragmented and Continuous Woven Surfaces* and *Atoms* [figures 48, 49, 59 and 60] are centripetally composed with tonal mixtures between complementary purple and yellow [figures 104-106]. The mix of complementary colours in identical proportions results in a greyish or neutral colour. However, if these colours are mixed unevenly, *'broken tones'* (Deleuze 2003: 89) emerge. Bogue (2003: 151) describes a broken tone as 'a dull, muddy version of the dominant hue' [figures 107 and 108]. Broken tones are undifferentiated colours because, as they are mixtures, they will always be less differentiated than pure dominant hues. For that reason, these are extremely relational colours. Within the continuity of the degradations connecting purple and yellow in these diptychs, it is hard to identify the exact point where mixtures experience a qualitative change and become closer to one colour or the other. Concretely, a tone of purple or yellow can be more or less purple or yellow, depending on the other tone to which it is compared.

Woven Pixelated Brushwork: Sunset [figures 56-58] was also centripetally composed with a tonal progression between three primary colours on a black background. The sky's continuous chromatic degradation at sunset informs the selection of colours [figure 109]. Following a centripetal reading, the degradation begins at the four corners of the canvas with blue, it continues in a diagonal towards red and finishes with yellow at the centre. The degradation also passes through corresponding secondary: purple and orange, whereas green is excluded. This meditation on the continuity of the chromatic spectrum was explored with more depth in *Chromatic Continuum* [figures 120-126].
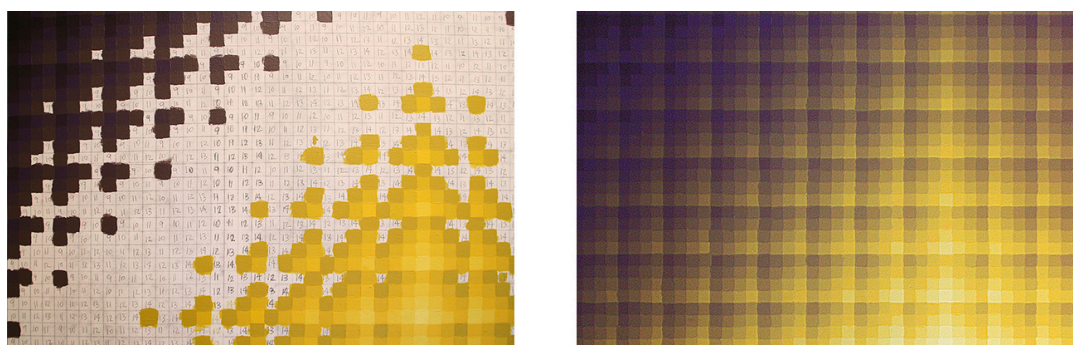
103. *Fragmented and Continuous Woven Surfaces* (details). Connection between purple and yellow.
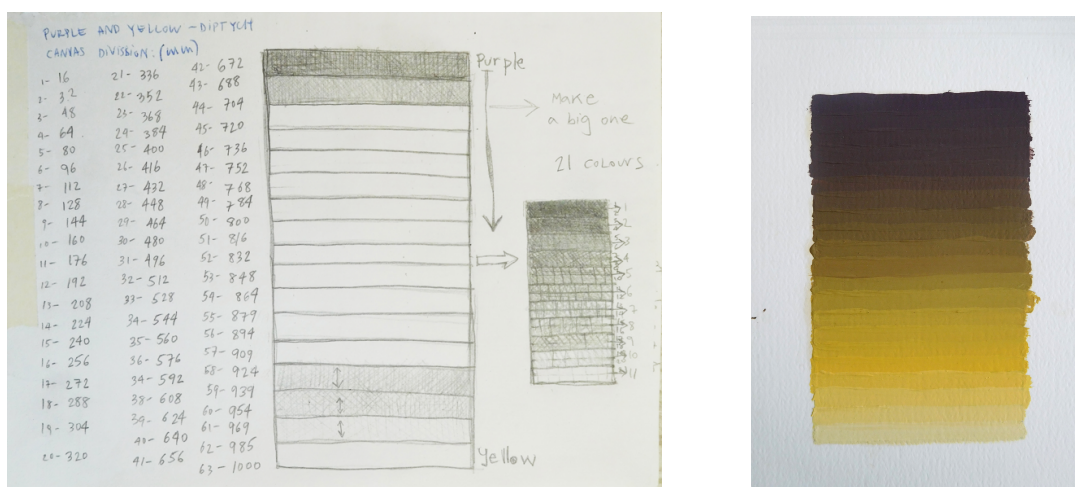
104. (left) Colour plan for *Fragmented and Continuous Woven Surfaces* - pencil on paper.

105. (right) Colour and chart for *Fragmented and Continuous Woven Surfaces* - acrylic on paper.
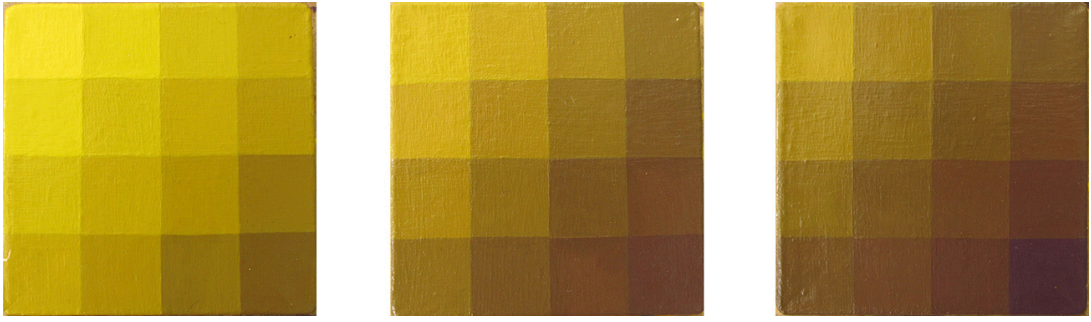
106. Broken tones between yellow and purple – Macarena Rioseco – acrylic on canvas – 10x10 cm (each).

107. *Tone/Hue and Saturation: Modular Paintings* (triptych) (2014) - Macarena Rioseco

acrylic and gilding (copper and zinc alloy) – 30x30 cm (each).

108. (left) Colour charts for *Tone/Hue and Saturation* - acrylic, pen and pencil on paper.

109. (right) Colour chart for *Woven Pixelated Brushwork: Sunset* - oil and pencil on paper.
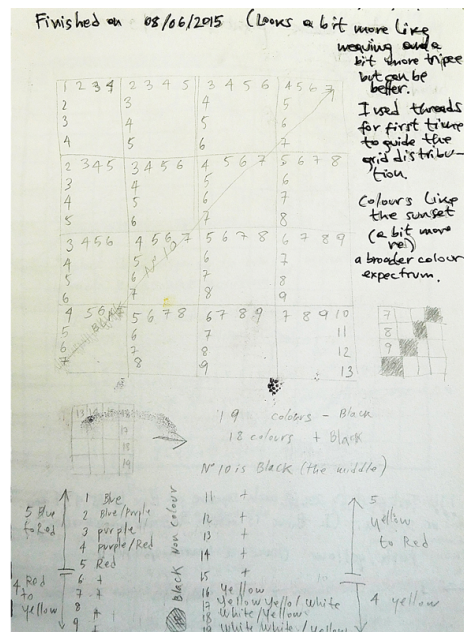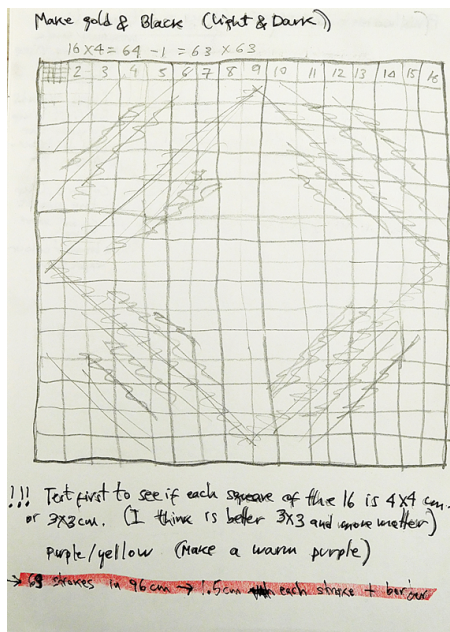
110. (left) Centripetal composition - pencil and pen on paper and (right) Fractal structure - pencil and pen on paper.

In *Woven Pixelated Brushwork: Sunset,* the *squaring a brushstroke* assemblage was activated for the first time in my practice. This new method leaves tiny fragments of black background in between marks regularly raised to the surface, which activates a figure and ground interplay. To enhance the relation between marks and the ground, I left the central stage of the degradation without a tone [figure 110]. In addition, this is the first painting where the grid is constructed with cotton threads. Here, after I finished constructing the grid I painted the background in black. Because of rubbing the brush with paint on the already tensed threads, the grid in this work became irregular. That makes this painting resemble woven surfaces more than any of the other works.
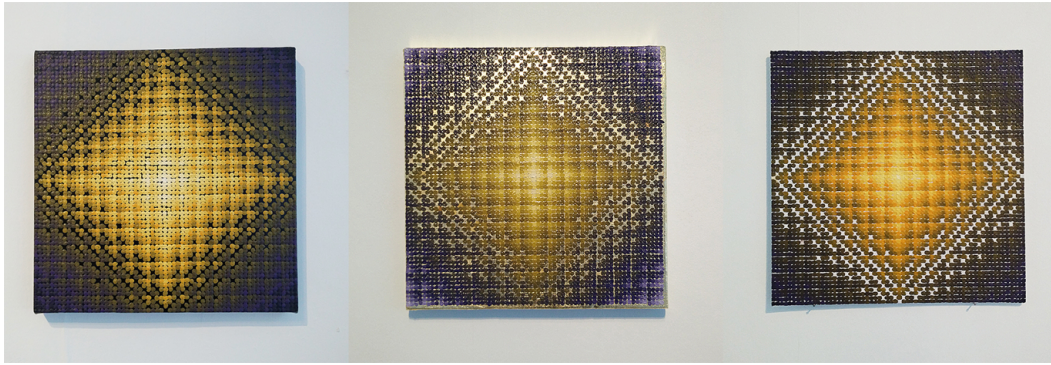
111. Preparatory work for *Atoms* (triptych) (2015) - Macarena Rioseco - acrylic on canvas / gilding (copper and zinc alloy) and oil on canvas / acrylic on board - 30x30 cm (each).
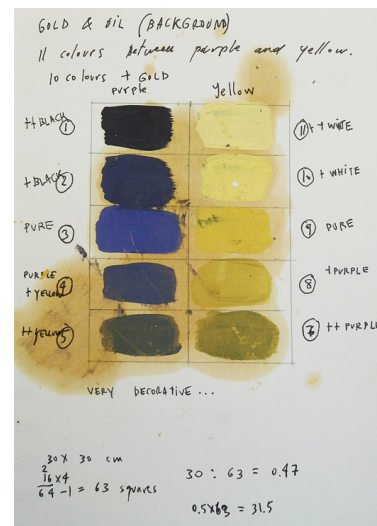
112. (right) Colour test for *Atoms* - pencil, pen and oil on paper.

113. (left) Colour chart for *Atoms* - pencil and oil on paper.

The diptych *Atoms* [figures 50, 60, 111-113] explores, in particular, the elusiveness of colours. For that, both paintings have exactly the same tones in exactly the same places, but their backgrounds are different: one golden (gilded with copper and zinc alloy leaf) [figures 61 and 62] and one black [figures 63-65]. Grids in both works are very regular, composed with white cotton threads and placed on top of already treated

backgrounds. The metal surface reflects light and has a similar tone to the marks, whereas the black absorbs light and is highly contrasting with the marks. Consequently, the gilded work is extremely dependent on light conditions and viewers' perspectives. The multiplicity of brushstrokes seems to appear and disappear because marks and surface sometimes appear merged but other times they more distinctively contrast. Conversely, the high contrast between marks and the black background on the other painting separates them into two very distinct layers. Also, as each stroke is enclosed by black from the background, their tones gain strength and presence. Hence, this overall composition presents sharp edges and a clear fragmented nature. Moreover, the threads forming the grid are also blended with the gilded background. On the contrary, the high contrast with the black background forms a third layer, which from a distance resembles a drawing.

Atoms: Waves (triptych) [figures 66-68] are the first works centrifugally composed. As mentioned, the goal of these paintings was to meditate about water waves. I altered the fractal system to suggest a "waveness", which draws from a percept or a phenomenology of waves. The tones and degradation in all three paintings are exactly the same [figure 114] and to reinforce the allusion, they present different rotations of the same variation. Hence, all these three paintings together establish relations and create wavy visual rhythms. Colour degradation in these works is not a one-directional progression between two colours — as in the previous paintings —, but repeatedly waves between a "broken blue" and white [figure 115], while advancing diagonally through the planes between two corners. I explored variations of the fractal system in preparatory works [figures 116 and 117] and selected one that consists of reducing the very last tone every time I reach an extreme of the degradation. This reduction is

informed by the phenomenology of a wave on the surface of water. It begins with abrupt ups and downs, gets progressively flatter while it advances through the surface until it disappears completely. Similarly, the waving between white (up) and "broken blue" (down) in *Atoms: Waves* gets progressively shorter in length and between tonal extremes until it remains only with central tones (flat).
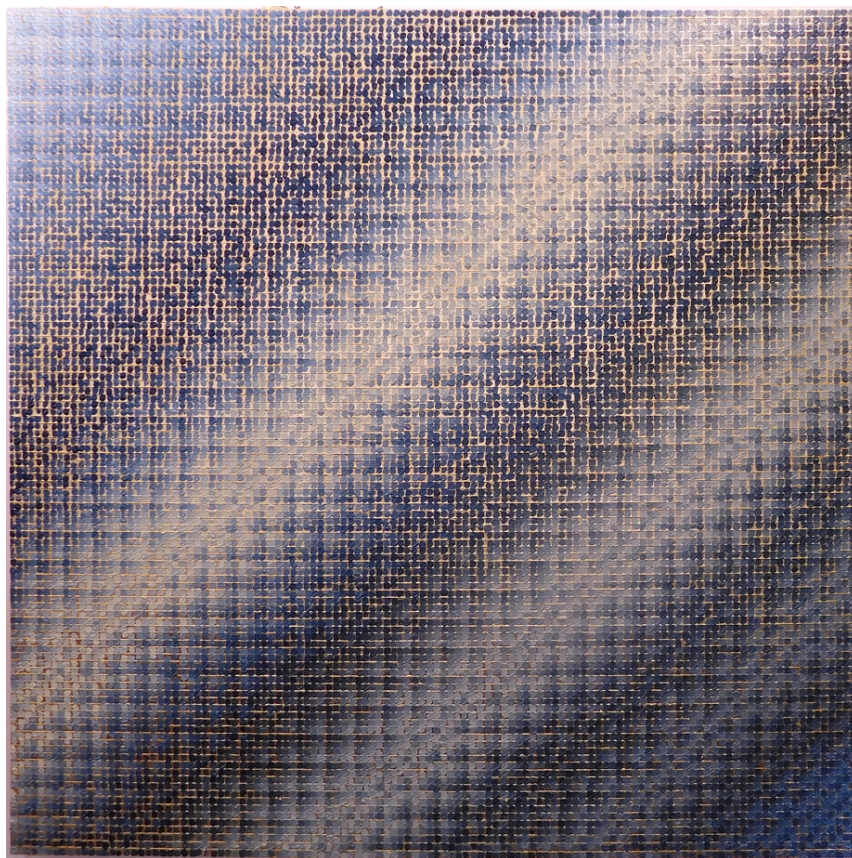
114. *Atoms: Waves (one of three) (2016)* - Macarena Rioseco

cotton threads, gilding (copper and zinc alloy) and oil on canvas - 117x117 cm.
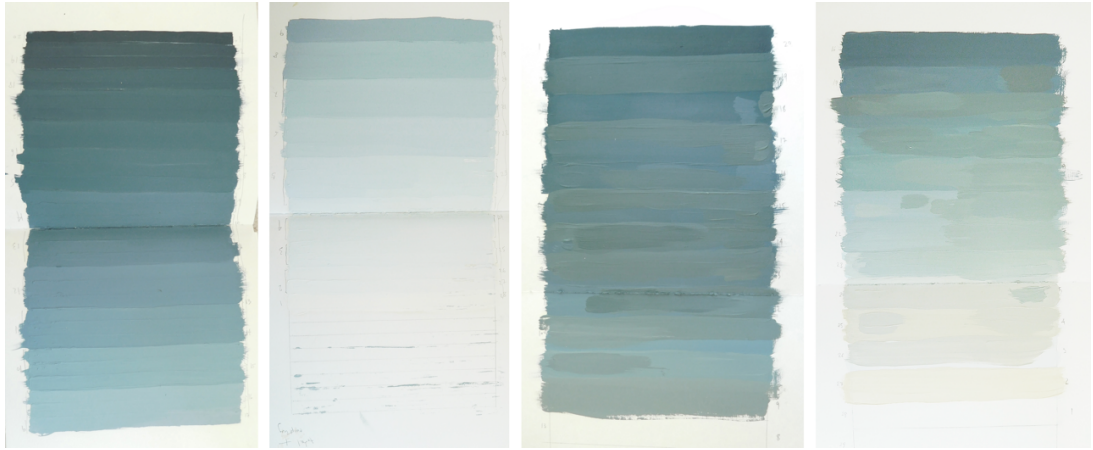
115. (left/centre left) Colour test and (centre right/right) Colour chart for *Atoms: Waves* (broken blue) oil on paper.
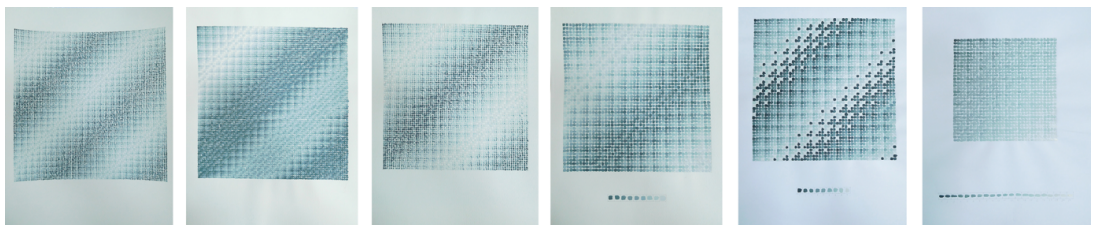
116. Sketches for *Atoms: Waves* (2015)- Macarena Rioseco - gouache on paper - 35x42 cm (each).
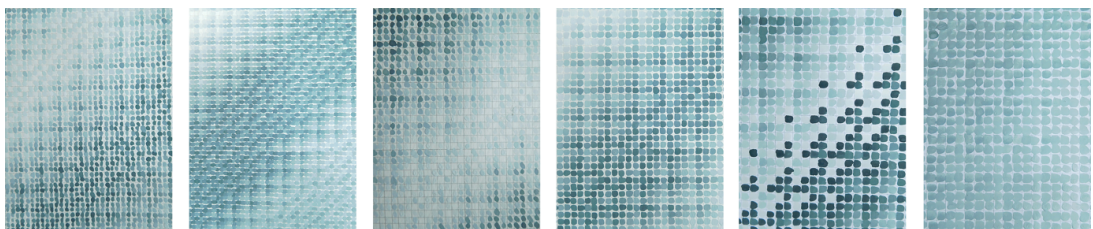
117. (bottom) Sketches for *Atoms: Waves* (details).

Backgrounds on these three paintings are also gilded with leaf of copper and zinc alloy, which aims to allude to light reflection on the surface of water. These golden backgrounds make the "broken blue" appear purer than it is. For that reason, while painting this triptych I adjusted the blue making it more "broken" and closer to grey [figures 115 and 119]. Yet, despite how broken the blue is, even when it is almost neutral, the gilded background makes this dull colour to appear still quite blue. The

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reflection of light produced by the gilded backgrounds make these works extremely elusive. Depending on ambience, light and viewers' perspectives, the reflection of light and perception of colours changes dramatically.
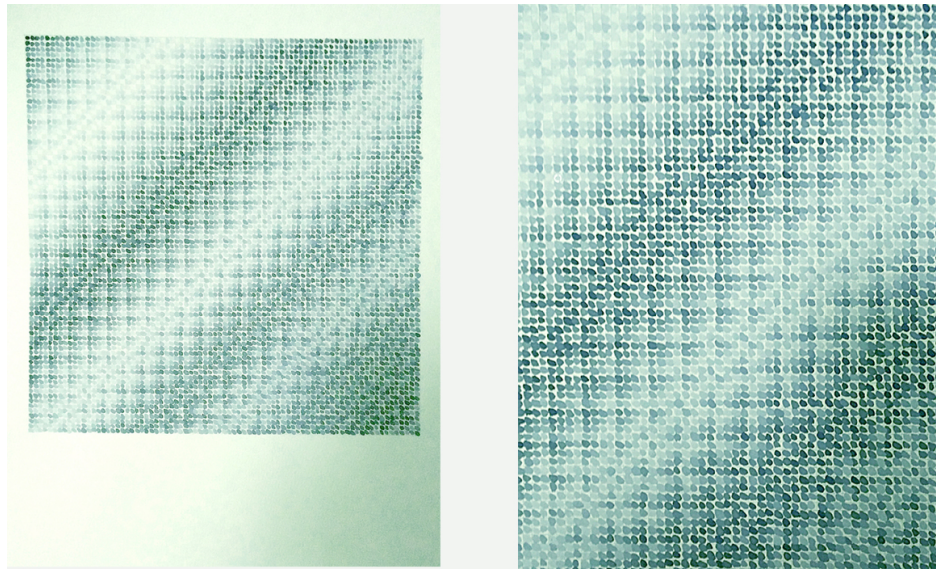
118. *Atoms: Waves* and Detail (2015) - Macarena Rioseco - gouache on paper - 35x42 cm.
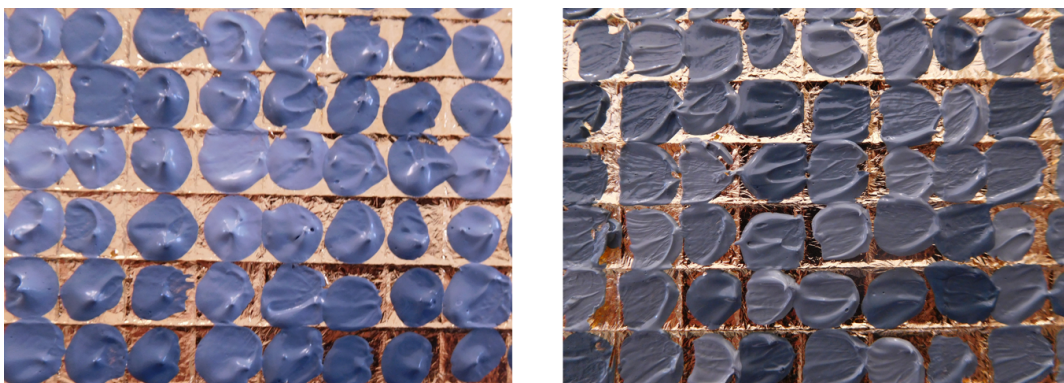
119. *Atoms: Waves* (detail) - differences between broken blue.

Chromatic Continuum [figures 120-133] is the last group of works of this project. It consists of eight paintings all centrifugally composed, whose tones are organised following the original fractal system on white backgrounds. DeLanda's (2002: 72) work on Deleuze's 'virtual continuum' informs these paintings that meditate on the continuity of colour-light spectrum. DeLanda explains how every natural phenomenon forms a continuum of many interconnected differentiated structures, whose borders are merged with one another. Examples of continuum are for instance atmospheric air forms around the universe (Gleick 1987: 108), animals' bodies and plants' structures. Although we perceive limits from a distance and every part of these structures looks differentiated, these are all integrated in continuous wholes where no actual physical limits exist.
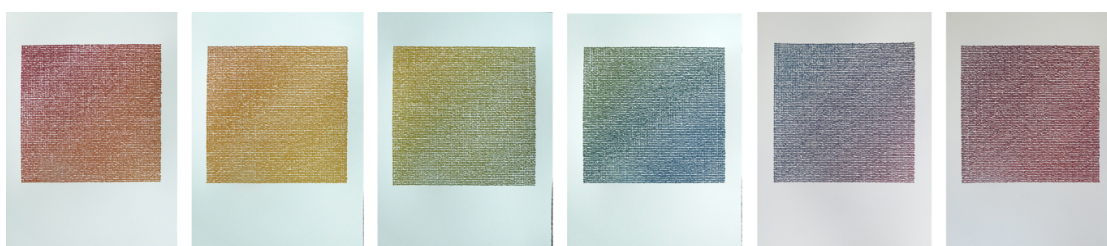
120. Preparatory work for *Chromatic Continuum* (2016) - Macarena Rioseco - gouache on paper - 30x42 cm (each).
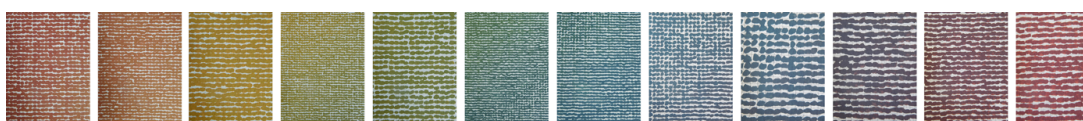
121. Details Preparatory work for *Chromatic Continuum*.

Similarly, the chromatic spectrum forms a continuum than can be differentiated in three primary colours. Accordingly, *Chromatic Continuum* presents meditations on the continuity of colour displaying three scales of magnification of a chromatic

progression between primary colours [figures 122-124]. Each of the three scales deploys full chromatic wheels — primary and secondary colours — at three different levels of detail. Only two of them display a corresponding array of broken tones and the amount used depends on the level of details of each magnification. The distances between marks in these paintings are greater than in previous works, hence, larger areas of white background raise to the surface. Consequently, from a distance, alternations between marks and white background produce a sense of fogginess in these paintings.
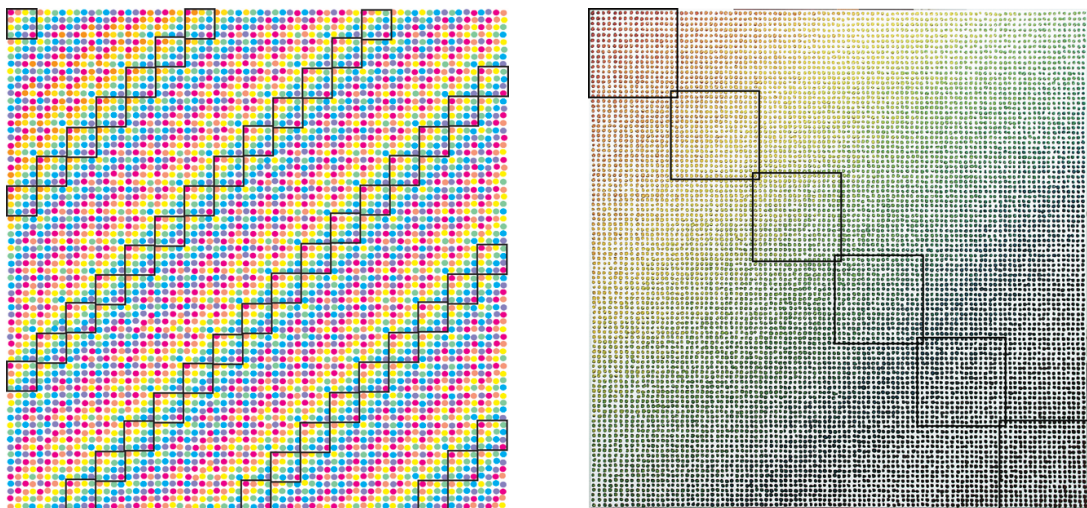
122. (left) Scales diagram - *Hard Edges* (level 1) - digital - each black square has the colour structure of *Rainbow* (level 2)/ 123. (right) Scales diagram - *Rainbow* (level 2) - oil on canvas 100x100 cm - each square has the colour structure of each *Bichromes* (level 3).
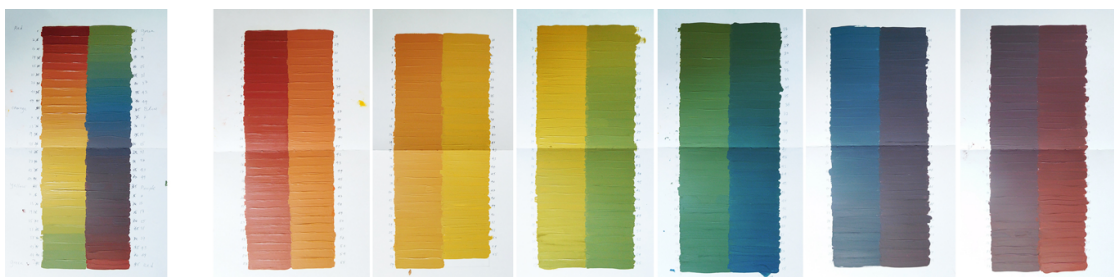
124. Colour charts for *Chromatic Continuum – Rainbow* (left) and *Bichromes* - oil on paper.

DeLanda explains these emergences of differentiated structures in nature as processes defined progressively in accordance with each structure's own development. He describes the *singularities* of a multiplicity as 'not given all at once but [… *progressively* they] unfold following a recurrent sequence' (DeLanda 2002: 8). Similarly, chromatic progressions in *Chromatic Continuum* unfold progressively [figure 124] following a recurrent fractal sequence.

125. *Hard Edges* (2018) - Macarena Rioseco – oil on canvas – 100x100 cm.

126. *Hard Edges* (details) – oil on canvas.

Hard Edges [figures 125 and 126] is composed of a recursive continuum between three primary and three secondary colours. Because differences between colours are

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overt the transition between them is broken and abrupt. *Rainbow* [figures 127 and 128] presents a 1/289 magnification of *Hard Edges*. The recursive continuum in this painting is between three primary, three secondary colours and 48 broken tones. It begins with red and finishes when it reaches red once again. All the transitions between primary and secondary colours are done in 8 stages of broken tones [figure 124]. As a result, the degradation in this painting is still overt but more subtle and continuous than in *Hard Edges*.
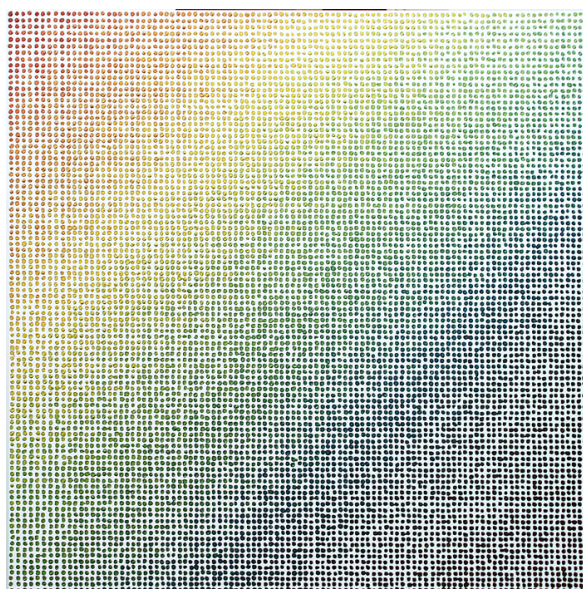
127. *Rainbow* (2016) - Macarena Rioseco - oil on canvas - 100x100 cm.
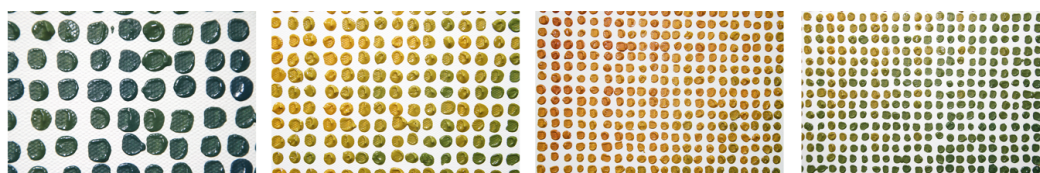
128. *Rainbow* (details) – oil on canvas.

Finally, the six paintings composing *Bichromes* [figures 129-140] show a 1/36 scale of magnification of *Rainbow*. Transitions between one primary and one secondary colour in each of these paintings are done in 54 stages of broken tones [figure 124].

When these works are looked at in detail, tonal differences between neighbouring marks and colour degradations are imperceptible. However, when larger distances are taken, chromatic passages between paintings clearly appear and a chromatic wheel emerges. The different perceptions arising depending on viewpoints invite the viewer to meditate on emergent properties at different levels of magnification in fractals.
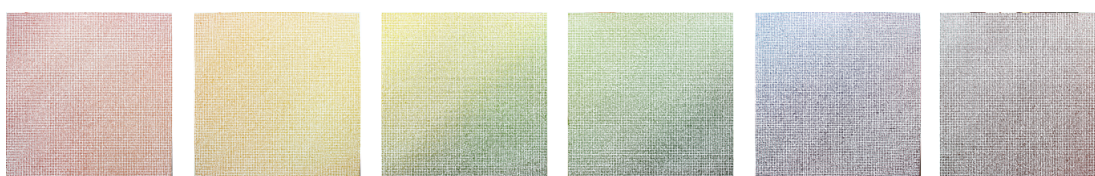
129-134. *Bichromes* (2016) - Macarena Rioseco - oil on canvas - 100x100 cm (each).
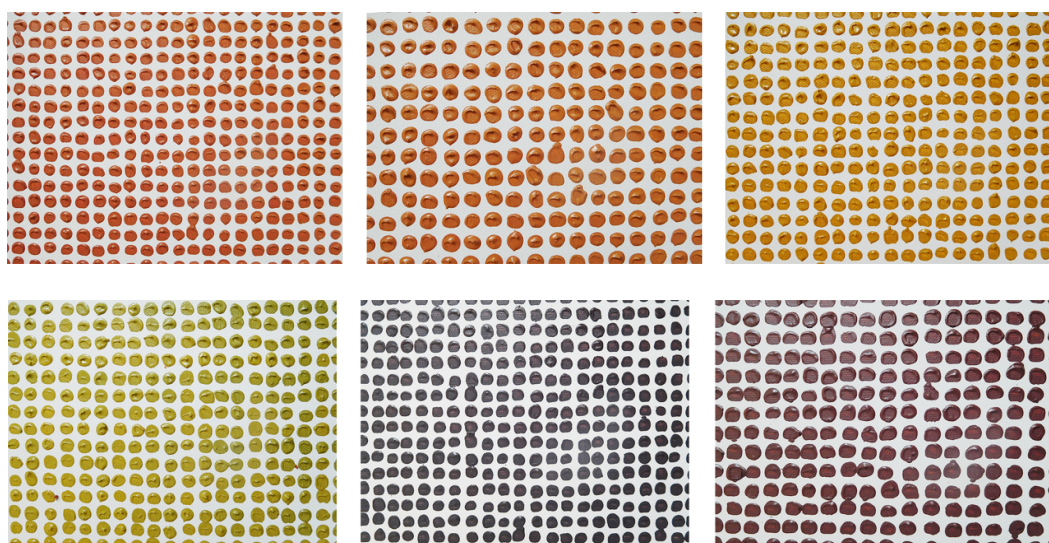
135-140. *Bichrome* (details).

The use of the same tones for finishing one work and beginning with the next one connects all these six paintings and structures in an overall recursive continuum composed by a multiplicity of marks of every single tone in between these three primary colours. Consequently, in Delanda's (2002: 72) words, the polyptych

Bichromes forms a chromatic '*continuum* which yields, through progressive differentiation [of three primary colours], all the discontinuous individuals [secondary colours and broken tones] that populate the actual [chromatic] world'. These painting are 'heterogeneous space[s] made out of a population of *multiplicities* [marks], each of which is a topological space on its own' (ibid.).

In light of Deleuzoguattarian framework, the works produced through *GM* compose hybrid *smooth* and *striated* spaces that embody *pure difference* through *multiplicities* of pictorial traces. These marks structure zones of relations between chromatic *indeterminations* that exist *in-between* two colours. These paintings have rhythmical compositions, with colour dynamics resonating with properties of wave propagation, and light's wave-particle duality. Also, as traces of movements, each of these paintings 'designates an "event" much more than an essence' (Deleuze and Guattari 1988: 422) and enacts a 'qualified [tonal] movement' (ibid.) rather than depicting representations. Finally, the transformation of pictorial approaches in this practice-based research project can be defined as a 'qualitative change: [where] the static relation, form-matter, tends to fade into the background in favour of a dynamic relation, material-forces' (ibid. 424). For that reason, *GM* is aligned with Deleuze's view of the image described by Sauvagnargues as 'not a representation or a double, but a composition of force relations […] at the level of matter itself' (2013: 20).

To conclude, this chapter analysed in detail the hybrid practice of *GM* from an *enactive* perspective. I used Deleuzoguattarian concepts such as *smooth and striated spaces; templates and squaring; compound of sensations; and becoming*, to discuss characteristics of static and dynamic models outlined throughout this thesis in relation

to elements of my practice, such as optic and haptic visualities, or formalist and performative approaches to the brushwork. For example, I defined the use of the grid in all my paintings as a static element and reference to modern geometric paintings. On the other hand, the brushwork's approach in *GM* was described as a dynamic element. Overall, I described the transformation of models in my practice as a move away from representation towards *enactive* and performative accounts of this practice.

The Deleuzoguattarian compound of sensations was used to describe my experience of painting as intensive processes that resonate and actualise a personal affective register, or a Deleuzoguattarian *smoothness*. Also, I described how this experience, together with the meditative nature and the effects produced practicing *GM*, has led me to a Guattarian process of resingularisation. As consequences of this latter process, my interaction with the medium has been modified from an extreme urge to abstraction, to use Worringer's term, towards a more balanced approach with some elements of empathy.

Finally, I presented an individual analysis of all my paintings, describing in detail colour treatments and compositions in relation to *emergence* and a percept of *waveness*. I concluded, proposing the paintings made through *GM* meditate on generations of *enacted events* and do not represent *pregiven* forms. In Sauvagnargues word's, this is in line with Deleuze's view of images as 'mode[s] of matter' (2013: 19), which instead of representing a prior world have their 'own reality' (Deleuze 2007: 215)

V -   Conclusion

This thesis is part of a research project on abstract painting that used a combination of practice-based and action research methodologies, and principally contributes to the field of pictorial non-representation. To develop a non-representational model – with the purpose to integrate it into an extremely representational pictorial practice based on geometric abstraction – this text explored notions of representation, abstraction and performativity in painting from a static and transcendent perspective and also endorsing dynamic and immanent models of thought such as the Deleuzoguattarian philosophy of *becoming* and an *enactive* model of cognition. It was argued that the model developed throughout this thesis is non-representational because it focuses on analysing processes of painting as a material practice, and on roles of materials, tools and individuals within these processes. In addition, it was proposed that instead of only representing an existing world, painting has also the capacity to construct new ones.

The non-representational pictorial model articulated in this project partly informs my own pictorial method that I refer to as *GM*. A performative feature of this hybrid method – in between static and dynamic models – is that based on the repetitive enactment of a reduced, rhythmically regular, and precise gesture, which leaves a multiplicity of traces of paint on pictorial planes. The representational elements this practice draws from are strategies such as metric division of planes in grids, or the use of referents like woven surfaces, pixel-based digital images, light and water waves, and meditation. The influence of the latter makes the practice of *GM* trigger soothing affective sensations in me as the practitioner. It also enables the development of an

acute focus of attention and a state of intense present-mindedness. I propose my overall experience of practicing this method has allowed me to access, interact and modify a personal Deleuzoguattarian immanent smooth space.

The discussion in this thesis began by presenting a view of pictorial representation described as the product of static and transcendent models of thought. These thought systems presuppose the existence of a pre-given world, independent from subjects of experience and claim individuals do not have agency upon it. This view of representation was elaborated in chapter II through analysing the relation of geometric abstract paintings to transcendent ontological models. The use of geometry as a pictorial resource to make purely abstract works was thought to be a first non-representational pictorial approach. Nonetheless, as these paintings are based on Euclidean geometry and hence, represent abstract objects, it was concluded that they can also be considered as representational as mimetic paintings.

Non-representation, on the other hand, was associated with dynamic and immanent worldviews. Models of the kind propose a relation between the world and subjects where both are woven together, and are works-in-progress that reciprocally shape and co-create one another through time. These perspectives are related to performative and expressive abstract pictorial styles such as abstract expressionism or action painting.

I argued that if these two — static and dynamic — frameworks are applied when working on pictorial abstraction they produce extremely different results. Static and transcendent frameworks lead to works that draw from essences of models, endorse formalism and the final goal is the construction of global images. Whereas, dynamic

and immanent ones produce work whose main goal is to analyse performative elements of painting as practice and the implications of material processes involved within these practices' evolution. Accordingly, I proposed if pictorial abstraction is approached from a static perspective, it leads to representational paintings whereas, if abstraction is taken as a dynamic and performative process, it can produce non-representational works.

As mentioned, interwoven with the theoretical elaboration of a non-representational model, I also developed a model of practice called *GM*. In chapter IV, I described in depth how this model emerged from the analysis of my practice and of the contributions made by each participating agent — me, my *actions,* medium and tools. I also explored how all these agents co-function and compose an assemblage that produces theoretical and practical outcomes. I concluded by proposing my work is hybrid because it simultaneously contains static and dynamic elements, such as optical divisions of pictorial planes in grids and clear haptic material relations between multiplicities of amorphous marks.

Regarding this hybridity between representation (transcendence) and non-representation (immanence), in future works I would like to create a greater tension in my painting, between the coexistence of these two levels of reality (Crowther 2017). This can be activated through a stronger interplay between optic (whole) and haptic (parts) visualities. My aim is to compose works that from up close are extremely material and radically non-representational, but from afar, they build virtual images that represent different smooth spaces.

In chapter III, I introduced fractal geometry, which is the mathematical definition of a Deleuzoguattarian immanent smooth space and a main referent in my paintings based on *GM*. What is interesting about fractals is they do not correspond to an absolute and transcendent approach to geometry, as it is Euclidean geometry, but are relational figures that endorse relative and contextual approaches. For example, these structures change depending on the perspective from which they are considered. Also, what defines a fractal is a particular self-similar relation between the whole structure and its parts at different scales of magnification. For that reason, these are non-representational figures. Fractals inform characteristic elements of my paintings such as fragmentation, iterations of patterns at different scales of detail and the composition of overall images (wholes) based on aggregates of simpler units (parts), which contain some levels of self-similarity.

In chapter IV, I discussed how the repetitive character of the practice of *GM* activates a sharp perceptual focus and magnifies my perceptions of the interactions between me, paint, brush and gesture. These sensations resonate with a personal affective register of smoothness. Deleuzoguattarian immanent smooth space is related to non-verbal and purely sensorial experiences of the world. Hence, I proposed my practice of painting is a device that facilitates the access to personal psychological and cognitive smooth spaces. I further proposed that, by granting me access to an affective register, my practice has also allowed me to interact and even to modify it. In other words, I argued that *GM* has aided the access to an ontological subconscious (Crowther 2017) and has allowed me to enact a process of Guattarian resingularisation by means of painting. Concretely, I enacted a transformation of some qualities of

personal "singularities" from an absolute Worringer's urge to abstraction, towards a more balanced combination between abstraction and empathy.

As discussed in chapter II, empathy is understood to be manifested only when individuals are at peace and feel at ease within temporality and the flux of phenomena. Worringer (1908: 45) says 'the urge to empathy can become free only where a certain relationship of confidence between man and the external world has developed'. So, perhaps a transformation of the kind was manifested in myself throughout this project. A question that has arisen with this experience is what other ways can the medium of paint resonate with affective and smooth dimensions of an individual?

In light of this, since *GM* is clearly a constrained approach to movement, I have concluded its minimality and uniformity are crucial expressive features pointing to particular qualities of the psychological and affective smooth space I have accessed. As mentioned, these qualities are related to a sense of inhibition or paralysis driven by an urge to abstraction. The aim of balancing my practice towards enacting more empathic qualities has been a main creative force in this project. For that reason, I aim to continue exploring, in more depth, the integration of elements of empathy in my practice in order to explore other qualities of my personal register of Deleuzoguattarian smoothness.

Another main idea developed in chapter III is that individuals and their pictorial practice are always changing. Therefore, when they interact they reciprocally affect their *becomings*. In addition, endorsing an *enactive* approach to painting, I proposed an account of it as non-verbal, embodied and enacted material thinking. Hence, I

presented a relation between medium and individuals in which the former becomes an extension of cognitive, psychological and affective manifestations of the latter. Consequently, painting and individuals were considered as forming co-emergent assemblages that produce works and knowledge through interactions in real time.

I described in chapter IV some resonances I identified throughout this project between personal cognitive, psychological and affective characteristics and the way I handle the medium. This makes me wonder if I can find other ways in which the pictorial medium can be used as a means to understand *enactive* cognitive processes. For example, as mentioned before, regarding the *becoming* of my pictorial practice, I believe that empowering elements of Worringer's notion of empathy in future works will activate a different creative potential of my work. The reason is, integrating more dynamic elements within my practice will lead to the emergence of new situations and possible directions that I have not imagined yet. Also, new elements will provoke new responses in me and that will possibly tell me other things about my cognitive processes and register of smoothness.

Haptic properties of paintings were the main objects of analysis throughout this project. I investigated these properties in paintings of other artists and also in my works, looking at them as documents containing traces of the enacted processes that constructed them. I also proposed a non-representational view of haptic meaning, which contains hints of singularities belonging to the objects, individuals and *actions* that participated in the very processes of making them. In light of this, I argued that, as every element in a painting is a consequence of manual labour, the particular bond between haptic and optic visualities in painting crucially mediates the specificity of

this discipline. I proposed interpretations of non-representational works, which are based on their own processes of making, are also enacted practices. The reason is, imagining processes of making will necessarily immerse the audience into imaginative processes, which are essentially affected and greatly determined by an individuals' own experiences and personal affective registers. In this thesis I did not particularly address the viewers' responses to the works I produced. The reason is that a principal concern of the practical side of this project was to study my responses as a practitioner in relation to the behaviour of the materials, and within the development of a creative practice itself.

In this thesis I also presented a multiple and dynamic view of the identity of a painter as an enacted assemblage of paintings (objects) and individuals (subjects) that belongs to an extended cultural context and is always changing. Therefore, I proposed "the painter" is a hybrid assemblage in a constant state of process. In other words, I endorsed a view of painters not as fixed *beings*, but as acting assemblages in *becoming* that are affected and change by every new work composed, and by the changes their extended networks undergo. Hence, the *becoming* of painters is equally defined and co-created by every single element of the assemblages. Consequently, the figure of the painter was viewed as an artificially constructed identity in *becoming* with the potential agency to transform singularities and to facilitate the development of new subjectivities.

To conclude, this project contributes to a Deleuzoguattarian non-representational theory, arguing that *becoming* has been enacted throughout this project by means of interweaving painting together with theoretical development. In addition, painting has

been a medium used to access an immanent smooth space of affects, to discover singularities, to deterritorialise them and to enact processes of resingularisation. In other words, this experience has been a highly transformative one.

Regarding my paintings based on *GM*, from a Deleuzoguattarian perspective, pictorial planes of my works are hybrid smooth and striated spaces composed by pictorial traces embodying pure difference. Those traces structure zones of colour relations between tonal indeterminations in-between two colours. My paintings present rhythmical compositions with colour dynamics that resonate with properties of wave propagation, in particular, with the wave-particle duality characteristic of the light spectrum.

Throughout the development of this project I progressively performed a 'qualitative change' (Deleuze and Guattari 1988: 424) in my practice. In this transformative process 'the static relation, form-matter [… was replaced by] a dynamic relation, material-forces' (ibid.). Consequently, *GM* is energetically in line with Deleuze's view of the image described by Sauvagnargues (2013: 20) as 'a composition of force relations […] at the level of matter itself', rather than a representation of pregiven essences.

Finally, as a consequence of this research, a new perspective emerged in my understanding of making processes in general. Now I recognise the works I produce as outcomes of 'qualified movement[s]' (Deleuze and Guattari 1988: 422) and of enacted events of making that integrate human and non-human actors. In light of that, I propose to see my paintings as documents of their own eventual processes of having

been made. I also propose they are objects that afford material contexts where viewers can imaginatively recreate specific enacted processes of making and hence, re-enact and interact with their own registers of a smooth space.

Post-script. After the exhibition I made as part of my Viva examination, I can mention some of the responses I observed from the viewers of the works. Some people when observing a painting engaged in the repetitive act of moving back and forth, looking at the whole and then focussing on details, to then go back and forth again. This movement is suggested by the level of detail in the works, the self-similar relations between the parts and the wholes, and the relations between haptic and optic properties. Some people realised by themselves the existence of mathematics in the pattern relations between colours within a painting, which is presented in all the paintings of the exhibition. Some viewers could identify these patterns before accessing the booklet and others only after getting more information about the exhibition and the ideas behind. Many were captivated by the centred and symmetrical paintings, and mentioned ideas related to religion or spirituality, which they thought was enhanced by the use of gilding and the allusion that a kind of light source was radiating from the centre or coming through those surfaces. That sense of religion, or transcendence, conveyed by these paintings is clearly the reflection of the dominance of "static" elements, which are a lot stronger than "dynamic" features in these centred works, and even more in *Greys* and *Fragmented and Smooth Woven Surfaces,* the first paintings produced in this project.

VI -   References

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VII - List of figures

VIII – Appendix 1: copyright permissions for figures.

Subject:	RE: Image queries and rights
Date:	Monday, 29 January 2018 at 15:20:34 Greenwich Mean Time
From:	Licensing
To:	Rioseco Castillo, Macarena
Attachments:	image007.jpg, image008.jpg, image011.jpg, image012.jpg, image013.jpg, image014.jpg, image015.jpg, image016.jpg, image001.jpg

Dear Macarena,

Thank you for letting me know.

This is to confirm that you would not require a licence for use of the image in your PhD thesis if this is to be printed in 1 hard copy only and published digitally on the University of Lancaster password protected site.

For any further uses that may arise (eg. on Open Access repositories), please do get back in touch with us, as it's possible a licence might be necessary in such instances.

Best wishes,

Sara Toso
Licensing Administrator
D/L: +44 (0) 20 7553 9069
sara.toso@dacs.org.uk

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From: Rioseco Castillo, Macarena [mailto:m.riosecocastillo@lancaster.ac.uk]
Sent: 24 January 2018 15:48
To: Licensing <licensing@dacs.org.uk>
Subject: Re: Image queries and rights

Subject: Re: Image queries and rights
Date: Friday, 19 January 2018 at 17:45:29 Greenwich Mean Time
From: Brenda Danilowitz
To: Rioseco Castillo, Macarena

Dear Macarena
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Best
Brenda

Brenda Danilowitz
Chief Curator
The Josef and Anni Albers Foundation
88 Beacon Road
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Cell: +203 804 4573
Fax: +203 393 4094
danilowitz@albersfoundation.org
www.albersfoundation.org

From: "Rioseco Castillo, Macarena" <m.riosecocastillo@lancaster.ac.uk>
Date: Thursday, January 18, 2018 at 4:43 AM
To: "rights@albersfoundation.org" <rights@albersfoundation.org>
Subject: Image queries and rights

Dear The Josef and Anni Albers Foundation staff,

my name is Macarena Rioseco, I am originally from Chile. I live in Lancaster, UK, since 2014 because I am doing my PhD at Lancaster University. I am about to finish my thesis which is part of a practice-based research in Abstract Painting.

The work of Josef and Anni Albers are very important referents of my own practice, which you can see at macarenarioseco.com.
In particular, I use Josef's series *Homage to the Square*, initiated in 1949, as reference in my thesis and it will be very helpful if I can put pictures of some of these works within my thesis to support my ideas visually.

So I am writing you to ask for your permission to use these images. It is only for academic purposes of my thesis, I am not going to use them for any other reason and they won't be used by anybody else than me. If you have specific conditions for using them, I am happy to follow all your requirement. All the images will be properly referenced with clear authorship, techniques used, year or production and title of works.

Thank you very much for your attention.
I will look forward to receiving your answer.

Best wishes,
Macarena

Subject:	RE: Images Copyright query
Date:	Friday, 16 February 2018 at 15:04:40 Greenwich Mean Time
From:	Licensing
To:	Rioseco Castillo, Macarena
Attachments:	image004.jpg, image005.jpg, image006.png, image007.jpg, image008.jpg, image009.png

Dear Macarena,

Thank you for confirming. In this case, we will not need to issue a copyright license.

Best wishes,

Amberley Jamieson
Licensing Assistant
D/L: +44 (0) 20 7553 9095

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From: Rioseco Castillo, Macarena [mailto:m.riosecocastillo@lancaster.ac.uk]
Sent: 16 February 2018 11:38
To: Licensing <licensing@dacs.org.uk>
Subject: Re: Images Copyright query

Subject: Re: [Contact] Images for PhD Thesis at Lancaster University UK, Copy right permission.

Date: Wednesday, 20 December 2017 at 10:15:42 Greenwich Mean Time

From: Jane Harris

To: Rioseco Castillo, Macarena

Dear Macerena

Thank you for your message.

I am happy to agree to you using the images of my paintings that you list. I would also like very much to read the reference you make to my monochrome paintings in your thesis - perhaps you could send me a copy of this section of the thesis.

Good luck with completing your thesis and with your PhD. I enjoyed looking at your website.

Kind regards
Jane

On 19 Dec 2017, at 14:12, m.riosecocastillo@lancaster.ac.uk wrote:
Macarena Rioseco sent a message using the contact form at http://www.janeharris.net/contact.
Dear Jane,
my name is Macarena, I am originally from Chile. I live in Lancaster, UK, since 2014 because I am doing my PhD at Lancaster University. I am about to finish my thesis which is part of a practice-based research in Abstract Painting.
I really like you work and is partly a reference of my own practice, which you can see at macarenarioseco.com. I use your monochrome works as reference in my thesis and it will be very helpful if I can put pictures of three your works within my thesis to support my ideas visually.
Of course to do that I need to get your permission to use your images, that is why I am writing you. It is only for academic purposes of my thesis, I am not going to use it for any other reason and it won't be used by anybody else than me. If you have some conditions for using them, I am happy to follow all your requirement. All the images will be properly referenced with your clear authorship, techniques used, year or production and title of works.
The works I am interested in using are 'Vers Vert' (diptych) 2014, 61cm x 132cm (24" x 52"), oil on canvas - 'Blue Bleu' 2014, 102cm x 164cm (40" x 65"), oil on canvas, 'Double Delight' 2011, 153cm x 112cm (60" x 44"), oil on canvas and 'Midas Magic' 2011, 127cm x 203cm (50" x 80"), oil on canvas.
Thank you very much for your attention.
I will look forward to receiving your answer.
Best wishes,
Macarena

Subject: Re: Image queries and rights
Date: Thursday, 1 February 2018 at 23:32:16 Greenwich Mean Time
From: Malevich Society
To: Rioseco Castillo, Macarena

Dear Macarena

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I hope this is helpful. If you have any further questions, please let me know.

Kind regards,

Lauren Warner
Administrator
The Malevich Society
info@malevichsociety.org
Tel: +1 646 580 8936
Fax: +1 646 304 8448

On Thu, Jan 18, 2018 at 10:28 AM, Rioseco Castillo, Macarena <m.riosecocastillo@lancaster.ac.uk> wrote:

> Dear The Malevich Society Directors,
>
> my name is Macarena Rioseco, I am originally from Chile. I live in Lancaster, UK, since 2014 because I am doing my PhD at Lancaster University. I am about to finish my thesis which is part of a practice-based research in Abstract Painting.
>
> The work of Kasimir Malevich is a very important referent of my own practice, which you can see at macarenarioseco.com.
>
> In particular, I use Malevich's *Black Square* (1915), *Suprematism: Nonobjective Composition* (1915) and *Suprematist Composition (blue rectangle over the red beam)* (1916) as references in my thesis and it will be very helpful if
>
> I can put pictures of these works within my thesis to support my ideas visually.
>
> Therefore, I am writing you to ask for your permission to use these images. It is only for academic purposes of my thesis, I am not going to use them for any other reason and they won't be used by anybody else than me. If you have specific conditions for using them, I am happy to follow all your requirement. All the images will be properly referenced with clear authorship, techniques used, year or production and title of works.
>
> Thank you very much for your attention.
>
> I will look forward to receiving your answer.

Page 1 of 2

221

Subject: Re: Images query and rights
Date: Monday, 12 February 2018 at 17:02:15 Greenwich Mean Time
From: Laurie Paton
To: Rioseco Castillo, Macarena

Dear Macarena,

Thank you very much for your kind email.

Rob and Nicky would be very happy for you to use these two works for your thesis with the correct credit - please use Rob and Nick Carter and the image details as they are on their website.

If you have any other questions please do let me know.

Best of luck with your thesis.

Best wishes,

Laurie

Rob and Nick Carter

RN at 5A
Open Tuesday - Saturday
10am-6pm

5A Bathurst Street
London
W2 2SD
0207 402 1113

robandnick.com

On 12 Feb 2018, at 16:54, Rioseco Castillo, Macarena <m.riosecocastillo@lancaster.ac.uk> wrote:

Dear Rob and Nick Carter,

Subject: Re: Image queries and rights
Date: Monday, 22 January 2018 at 14:07:26 Greenwich Mean Time
From: Info - greengrassi
To: Rioseco Castillo, Macarena
Attachments: TA_Tehe_1999.jpg, TA_Kena_1999.jpg, TA_Noene_2002.jpg

Dear Macarena,

Please find attached the three images you have requested. The captions and credits are below. This is only for academic purposes.

Tomma Abts
Kena, 1999
acrylic & oil on canvas
48 × 38 cm (18 ⅞" × 15")

Tomma Abts
Tehe, 1999
acrylic & oil on canvas
48 × 38 cm (18 ⅞" × 15")

Tomma Abts
Noene, 2002
acrylic & oil on canvas
48 × 38 cm (18 ⅞" × 15")

Photos: Marcus Leith. Courtesy greengrassi, London.

Good luck with your thesis and all the best,

--
Edwige Cochois

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www.greengrassi.com

current: CONDO 13.01-24.02.2018
upcoming: David Musgrave 01.03-07.04.2018

From: "Rioseco Castillo, Macarena" <m.riosecocastillo@lancaster.ac.uk>
Date: Monday 22 January 2018 at 10:21
To: Info - greengrassi <Info@greengrassi.com>
Subject: Image queries and rights

Dear sir or Madam,

my name is Macarena Rioseco, I am originally from Chile. I live in Lancaster - UK, since 2014, because I am doing my PhD at Lancaster University. I am about to finish my thesis which is part of a practice-based research in Abstract Painting.

Subject: RE: Image queries and rights
Date: Wednesday, 24 January 2018 at 10:51:19 Greenwich Mean Time
From: WebMaster
To: Rioseco Castillo, Macarena, WebMaster

Dear Macarena

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All the best
Lily

From: Rioseco Castillo, Macarena [mailto:m.riosecocastillo@lancaster.ac.uk]
Sent: 21 January 2018 09:36
To: WebMaster <Webmaster@tate.org.uk>
Subject: Image queries and rights

Dear Tate Digital Director,

my name is Macarena Rioseco, I am originally from Chile. I live in Lancaster - UK, since 2014, because I am doing my PhD at Lancaster University. I am about to finish my thesis which is part of a practice-based research in Abstract Painting.

The work of Victor Vasarely is a very important referent in my own practice, which you can see at macarenarioseco.com. For that reason, I would like to ask you for permission to use images of his works *Supernovae* (1959–61) and Banya (1964) in my thesis. I will only use them for academic purposes of my thesis, I am not going to use it for any other reason and it won't be used by anybody else than me. If you have specific conditions for using them, I am happy to follow all your requirements. The images will be properly referenced with clear authorship, techniques used, year or production and titles.

Thank you very much for your attention.
I will look forward to receiving your answer.

Best wishes,
Macarena

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