Digital cinema and affect

Digital Cinema and Affect

by

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I hereby declare that this thesis is entirely my own work

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Abstract

This study attempts to reconceptualise digital cinema at a time when the ubiquity of digital objects and methods means that it is taken for granted. Rather than the commonly studied areas of special effects and CGI, I focus instead at the way in which certain films deploy a 'digital Idea' containing themes and aesthetics that produce a specific type of 'pure' affect, defined as pre-subjective and pre-linguistic. Derived from properly digital characteristics such as abstraction, discreteness, recursion, incorporeality and transmutability, I find this type of affect most prominently displayed in, and produced by, a set of films made after the first wave of digital film texts in the 1980s and 90s, but before the current cinema of seamless digital productions. To acknowledge the 'in-betweenness' I call this the cinema of the *digital interregnum* where the film's digitality is not borne by flashy graphics or pristine imagery but rather displaced onto orthogonal ideational spaces and transversal architectonics. Methodologically, I discount materialist and phenomenological approaches due to their failure to address the incorporeal implications of the digital domain, and turn instead to Deleuze and Guattari for their more capacious and applicable concepts based on machinic-molecular approaches and a metaphysics of the virtual that is inherently creative. I proceed by analysing a set of case studies from a wide range of genres and national cinemas, looking at three important dimensions of contemporary life: politics, the body, and time. Whilst there is a humanistic bias against the digital as a whole, I find an affirmative rationale for digital cinema in the potentialities it creates and in a distinctive modulation of an ethical zone which ultimately creates the conditions for a renewed 'belief-in-the-world'.

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For Paola

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Introduction:

Digital Cinema and the Problem of Affect

"For me there's no way back to film, I'm done with it…"
- David Lynch 2005[1]

"[With digital] there is nothing happening beyond the hard lines
of the object you're looking at"
- Paul Vickery (Film Programmer)[2]

What is digital cinema? So the question was posed by American media scholar Gene Youngblood in 1989 in an article entitled 'Cinema and the code' in which he called for film theorists to discover the 'language' of a new computer technology that was already transforming the boundaries of countless walks of life, including the moving image.[3] Theorists such as Youngblood, John Andrew Berton Jr, Lev Manovich and others were writing at a time when the first meeting of cinema and 'the code' was generating a mixture of excitement and dread in equal measure.[4] As a consequence of this encounter between photographic and digital media, theoretical questions like the loss of indexicality in digital conversion, and technical questions such as comparative resolution and tonal qualities between silver nitrate substrates and bitmapped screens, exercised cultural commentators and practitioners concerned about the future of the film medium. Fast-forwarding to the present, if these questions now seem to have lost their urgency it is because technical differences have ameliorated whilst digital methods have almost completely usurped their analogue predecessors in the production and post-production phases of commercial cinema, as well as in exhibition platforms which are now more likely to be smart-TVs and digital mobile devices than traditional cinema screens. Even devotee directors who champion the materiality of film stock, advocating for a quasi-spiritual superiority of the celluloid substrate in terms of texture or 'feel', do not hesitate to convert principal photography into digitised formats to finalise production in the editing, colour grading and special effects stages.[5] In this sense the deployment of digital technologies into filmmaking becomes so seamlessly embedded in a *modus operandi*, not to mention the remediated film image itself, that the question of 'ontology' becomes all but invisible, or worse irrelevant.[6] Correspondingly, film scholarship

that was once at the vanguard of attempts to theorise the 'digital turn' and to account for the putative schism between the photographic and the graphic, or between the analogue and the digital, has succumbed to a slow 'fade to black.' In short, we now use all but the same language for our cultural analysis as before, taking for granted the constitution of our moving images out of a techne of ones and zeros without bothering to consider digital architectonics at all. We may therefore wonder whatever happened to Youngblood's call to invent a new critical language for computer-based images.

The ubiquity and universality of the digital image, then, presents certain difficulties for the theorisation of digital cinema, not least of which is defining the object itself: what do we mean when we talk of 'digital cinema', 'digital film', or even a digital image?[7] Is the designation purely technical in the narrowest sense, referring to the 'modality' of production most visible in the bitmapped, pixelated figures and landscapes of early computer generated sequences? Or, deploying a more 'cultural' definition, does it refer to the generic typology of big-budget, action-fuelled studio fare associated with computer generated imagery (CGI) and special effects? Alternatively, can we consider the label more philosophically and affirmatively – as having a particular role and potential in the creation of new images and ideas which dialogically impact the social, cultural and political world, as we used to think in regard to the second term, 'cinema'?[8] Is there an aspect of 'digitality' that has gone largely untheorized in this case, so that its productivity in creating new ways of seeing and thinking has been overlooked? Before this, is it even legitimate to speak of 'cinema' as we have conceived of it in the past as a discrete industry and social artefact, or institutional mass media? At the turn of the new millennium when the computer's influence was infiltrating almost every facet of human existence the critical reception of a newly assertive digital cinema tended to fall into one of two grand persuasions. The first of these was empirically orientated, hinging on a superficial resemblance of new to old: despite the acknowledgement of a technological 'dethroning' of a long-standing medium, the perception remained that in terms of the film text nothing much seemed to have changed.[9] According to this view, the smooth remediation of the cinematic image from analogue to digital had resulted not in rupture but continuity in genre, narratology and institutional structure. This is the "false revolution" of which John Belton (2002) writes, based on a perceived consistency aimed at satisfying audience expectations and the economic interests of the industry.[10] In contrast, the second grand persuasion regarded the digital moment as an ontological schism with profound consequences for the film image and its philosophical legacies. Here the surface similarity

between celluloid and digital images, which was explained by the discourse of mimicry, was deemed to hide the very annihilation of the indexical basis of the cinematic sign. The interruption by digital conversion of the physical contiguities in the photochemical process destroys in principle the materialist basis upon which reality could be thought, leading to a host of problematic effects, including the challenge to realist aesthetics and its mobilisation for criticism and for social change (Sean Cubitt, 1998), and the reduced capacity to invoke temporal or spiritual depth which was held as an important marker of film's uniqueness (David Rodowick, 2007). Filmmaker Babette Mangolte, for instance, projects this language of loss into exhibition and reception conditions: "I very much want the passage to digital to be all gain and no loss … But I notice a loss when I compare a film projected as a film…and the same film projected from a DVD" (Mangolte, 2003: 261).[11] Academic work registered relatively few outputs where the move to digital production was regarded more affirmatively, as a potential opening to whole new conceptual terrains that move away from film theory orthodoxy towards more dynamic and transformative dispositions, for instance rethinking film history from the standpoint of digital concepts (Cubitt, 2004), emphasizing non-linearity and the reconceptualization of memory (Le Grice, 2001), and enfoldment, variegation, and interactivity (Murray, 2008).

Whatever the prognosis – positive or negative – for cinema back then, most would now agree that the unmatched cultural profile enjoyed by cinema in the mid-twentieth century is now been ceded to a much wider terrain of commodified digital 'entertainment', much of which is moving-image based and user-created. It is now far more likely that from the point of view of the cultural and communication industries cinema is regarded as a specific and by no means privileged offshoot of a broader interactive, digital-creative revolution. In filmmaker Peter Greenaway's assessment, the inevitable re-invention of cinema means that "it has to see itself as only part of a multimedia cultural adventure" (Greenaway, 2003). To consolidate this argument critics need only point to the fact that, unlike in past decades, today only a tiny fraction of moving image culture is actually consumed in the traditional model of the ninety-minute film projected in movie theatres. Currently, in the face of multimedia convergence and the embedding of computer vision into everyday culture, the nouns 'digital' and 'cinema' both lose a certain bearing and specificity as analytic terms. However, in this supposedly 'post-cinematic' mediascape (Shaviro, 2010) it is also undeniable that the institutions and forms of commercial cinema have not only survived the digital turn, but have proven remarkably resilient, as testified by the economic health of the industry (notwithstanding the

COVID-19 pandemic) and the still elevated status of film stars, festivals and marquee releases all around the globe.[12] If it is true that cinema forms but one diminutive element of an all-encompassing digital culture, then in terms of aesthetic innovation, affective appeal and sustained cultural significance it arguably still sits somewhere at its leading edge.[13] Following the digital pivot, then, several tectonic plates – cultural, technological, industrial, theoretical, to name but four– have undoubtedly shifted, all contributing to complicate the original question: What is digital cinema?

That being the case, I treat the central terms in a new light which is not intended to erase technology, but rather to parse and contextualise technical production as one element in a wider critical discourse. Firstly, if an 'image' is always a set of multilateral relations of visibility and thought rather than an insulated picture or representation, then a 'digital image' will be defined equally, which is to say through its digital contexts, relations and logics rather than through strictly technical determination. Secondly, I take 'digital cinema' as a rightfully multilayered term, encompassing textual, material, and affective determinations, but crucially also as a new 'body' of cinema in which the 'digital' finds novel powers of expression which are not at all synonymous with CGI. Here I am talking of a new textuality that cuts across relations of mathematical law and experiential 'reality', transforming both. The texts studied are highly ambiguous artefacts embodying both continuity and deep-seated change within a formal structure of discrete units (cells, bodies, scenarios) in various combinations correlating to a digital logic that does not petrify or reduce but rather connects transversally and dialogically with some of the most sensorially intensive zones of life. Furthermore, as I will argue, the works which I classify as 'digital' have particular characteristics that emerge at a specific moment when recombinant digitality begins to conflict with cinematic convention in aesthetics and narratology, creating diffraction patterns that confound artistic norms and generate new affects and new orders of meaning. The specification of this digital cinema as an historical formation illuminates exactly the point at which Youngblood's call for the unification of cinema and 'the code' becomes identifiable in the 'feel' and style of cinema – in other words when the infrastructural changes occurring in the analogue-to-digital turn become apparent not solely in the content of the cinema image, but more subtly in the types of stories being told and in the status of images being created. This thesis will therefore be concerned with an important stage in the relation between cinema and the code when detectable digital aspects bubble up 'inherently', rather than instrumentally, into film form. I contend that this phase is evident

and analysable, but it is far from the flamboyant and flashy digital films that come before and after its occurrence. I therefore label this interstitial stage the cinema of the 'digital interregnum' which I will analyse further below. On the one hand this conception of digital cinema exists within the 'old' format of cinematic productions, commercially funded, aimed at a mass audience, and characterised within a paradigm of self-contained, nominally realist narrative designs. On the other, the advent of digital logic – which at times translates as barely acknowledged experimentalism – allows for a formal and semantic radicality rarely afforded to commercially released films. Lev Manovich has conducted a 'materialist historiography' of informatics-based visuality, claiming that "the digital computer [was] born from cinema" (2005: 27). For Manovich, mechanical programming devices and the cinématographe have an intimate connection and a shared history, so it is no surprise that in the latter half of the twentieth century the classical model of cinematic representation paved the way for computer-aided moving-image designs which derived meaning through 'hijacking' the compositions and syntax of cinema. Reversing Manovich's teleological account, I describe a cinema which fundamentally departs from previous models of live action film by virtue of a fruition of specific methods and ideas that are strictly digital in nature, reconfiguring the representational models of visual language and its proposition of the real. These digital aesthetics push the parabola of cinematic expression to become experimental and experiential over representational and commodified. This conception of digital cinema defines films as events – not in the sense of the 'event movie' or latter-day 'cinema of attractions' as they do not pursue novelty for novelty's sake or perform a crude 'monetisation' of the sublime (this would be more the remit of the CGI blockbuster). Rather they are films that emerge transversally from the knots and eddy currents of contemporary informatic societies, engaging the human sensorium in a new, intensely endowed image.

What I term digital cinema articulates in a generative, recursive and metaphysical impulsion that is all-but uncontainable in small screen formats. Moreover, the dialogic relation between aesthetics, technical infrastructure and ideology which sits at the heart of digital cinema means that its potential to inspire ethical renewal is far-reaching. Comprehending the new 'life' given to cinema by the digital turn, then, is a project with built-in consequence. But, importantly, it must extend beyond merely ad hoc descriptions of a putative digital content (Rombes, 2009) or a generic analysis of audience experiences (Purse, 2013), or the discussion of a digital 'reality effect' in various digital environments such as VR or game worlds. It needs also to encompass an enquiry into the proprietary infrastructure of the digital and the

interference patterns it creates in contact with the contemporary. These interference patterns, which are more active-generative than passive-reflective, manifest in new architectures and transformed aesthetics of the moving image. Consequently, the aim of this thesis is to raise again the question of the digital in cinema with a view not to reopen antediluvian debates on indexicality versus abstraction, nor to merely validate the culturally sanctioned outputs of the latest hardware and software, but rather to initiate a more programmatic and analytical investigation which deploys the digital as a perceptual and conceptual category. The impetus behind the research is based on two convictions. Firstly, that the task of defining and evaluating what a digital constitution of the cinematic image might be, has never been fully realised; and secondly a belief that, far from creating a reductive instrument of seduction or control, the very mathematical and algorithmic basis of the new image affirms a creative potential in modern cinema which is not confined to realist immersion or strict monetisation, but reverberates in the social and political fields. Aesthetically, this creative potential stems from a productive alignment of visual form with digital logic; socially it specifies an increased accessibility of the moving image across various platforms and the creation of new collectives in production and consumption; and politically it demarcates the plasticity of the image in digital form and a predisposition towards permutation and syntactic and semantic disjunctivity.

I deploy the 'digital', therefore, as a discursive and critical category which can be separated from purely technical parameters and considered as both machinic agent, able to insert itself into relations of power and production, and barometer of the contemporary, adept to interrogate important facets of the experience of life. This method reveals and at the same time contests the micromanipulations and biopolitical governance occurring under the jurisdiction of the 'control society' thereby demonstrating a capacity to institute a provocation to power or 'shock to thought'.[14] Viewing the digital in this way – as a critical discourse – is not the first time 'irreverent' technology has been mobilised in an ideological stance. In Donna Haraway's 'cyborg manifesto' (1991) the cyborg is not simply an abstract concept newly popular in the science fiction cinema of the 1980s – it is a pervasive nexus of technologies and bodies born from the military-industrial complex (and, we might now add, the pharma-medico-industrial complex). Even though, as Haraway fully realises, the cyborg operates in and through a hierarchy of power geared to reproduce and maintain orders of hegemony, there is a corresponding contention that the entity is a profoundly ambiguous formation, a border-traversing synthesis capable of resignifying its politics in ways

unexpected. Today, it would be true to say that societal fears have shifted somewhat from cyborg-phobia to AI or 'artificial intelligence', often feared as the 'outlaw' creations of big-tech capitalism. However, as Haraway said of the cyborg, "illegitimate offspring are often exceedingly unfaithful to their origins" (Haraway, 1991: 151). Hence, at a time when digital technologies of all sorts are accused of harbouring and propagating harmful social effects my project is an attempt to theorise the digital and its complex association with affect alternatively – as likewise a moment and an opportunity for critical poetics and the creative rethinking of politics and society.

The imperative, then, to analyse and indeed mobilise digital cinema in a more precise and 'political' way than previously attempted in film theory is based not only on the practical reality of a technologised film and creative industry sector which competes globally for profit and influence, it is also intended to reveal possibilities in an image based on numerical processing and disjunctive transformations that create new forms of life and expression. The definition of the 'political' espoused in this thesis does not defer to images or narratives of overtly political power as wielded by the state, or to the ethical conduct of discrete institutions and individuals. If politics is fundamentally about organisation, desire and change on a societal scale then this rethinking of creativity in digital images has implications for drawing the widest cultural critique illuminating the very structures of life, and potentially new forms of action and social relations in the contemporary. An inquiry sensitised to political inflections is therefore one that analyses the thing in relation to the possibilities to forge novel connections in the process of becoming anew: that is, to imagine and create the world differently. The huge transformations implicit in the spread and the power of digital images is therefore treated as both a practical concern aimed at 'the real world', and also as an abstract and theoretical potential, analysable from a speculative base directed at the future. Such a perspective ventures into new formations precisely in those fields that govern life and which provide the focus for this study: namely politics, the body, and time. For instance, adopting a relational and processual approach to the body and the subject cannot but also import a political dimension, for 'the body' is defined by the states through which it passes, open to reciprocal interaction and co-creation with the world. To evaluate the digital image as a vital participant in this conception of political and ethical renewal is, I suggest, a project of crucial significance and a legacy of critical theory and praxis itself. That is, just as the moderns of the early twentieth century – Kracauer, Benjamin, Munsterberg and others – noted in film an astonishing capacity to extend everyday perception into new epistemes – for

art, psychology, and politics – I intend to show how contemporary cinema can under certain conditions embody a 'digital Idea' that in itself does not reflect but 'contracts', synthesises, and ultimately participates performatively in the realities of quotidian life. The digital Idea that I propose is not a force impinging from the 'outside' but rather is an intrinsic impulse wielding its influence from an internal zone of operation, a plane of immanence so integral as to render its structure all but invisible. Such a concept of the digital as explanatory or emblematic has taken hold in different areas of social, cultural, and scientific discourse, where the aforementioned 'digital turn' has given rise to critical inquiry into, for instance, 'Digimodernism' (Kirby 2009), 'digital baroque' (Murray 2008), 'digital humanities' (Berry and Jagerjord 2017), and 'digital politics' (Fenton 2016). In such important contemporary analysis, where the influence of the computer is deemed pervasive and infrastructural, there may be a tendency to adopt 'the digital' as an umbrella term to 'explain' everything. But my notion of the digital Idea is not metaphorical, generalised, or comparative, instead being drawn from the fundamental principles of numerical systems and digital logic. Digital gates, Boolean operators, and sequential circuits are not the usual terms of reference in analysing complex cultural artefacts such as films. In fact 'the digital', in its binary function and reductive conversions, is often presented as the nemesis of the creative impulse. However, essential digital notions, working through disjunction, combination, registration and redistribution, reverberate across digital culture impacting the creative process in novel and often unpredictable ways. Whilst the end results can of course be adopted for controlling purposes and to entrench orthodoxy, it is the aim of this thesis to present cases that resist convention, experiment with new aesthetics, and stand for more open, nomadic ends. Moreover, my project is to pose the digital Idea as a new way of interrogating affect in the moving image, which is to say, enquiring into how digital processes infiltrate into human perceptual and cognitive regimes at a level prior to knowledge, feeling, and ideology.

In this way, even as it is defined through the immaterial operations of numerical and computational systems, the digital Idea is nevertheless intimately bound to new areas of knowledge, action, and subjectivation in the material world (which stem from the realms of political critique, bioscience, and temporal metaphysics, amongst others).[15] Mobilising the idea of digitality entails both a revitalisation of film analysis *per se* – a recalibration sensitised to digital logics that act as a decodifying force on the surface of the image – and an extension of the typical corpus of digital cinema beyond the emblematic genres of action, disaster and science fiction movies that are reliant on computer-generated graphics. From this

standpoint, digital cinema is identified as such when it embodies not a technical characteristic or 'special effect' but rather a concept of the digital that extends from aesthetic construction into sensation, movement and thought. Importantly, this implies a retreat from a strictly 'medium specific' argument, which is to say that it is less important for a work to be made digitally than it is for that work to invoke a 'digital difference'.[16] This difference may be perceptible on many levels – aesthetically, structurally, and affectively – but will generally involve a disintegrative force which can be put down to the disjunctive impulse, recursive disposition, and decoding-recoding operations of digitality in general.

To briefly illustrate with three diverse examples, firstly the emblematic 'digitality' in Michael Bay's *Transformers* franchise (2007-2017) is usually taken as synonymous with its generous use of CGI technologies, which invest the films with a mix of frenetic dynamism, colour-saturated, 'crystalline' surfaces, and epic vistas. This kind of computer-generated 'maximalism' creates an audience primed for a cinema of formal excess, and has led to a plethora of fantastically orientated films of previously unrealisable scope, including variants in fantasy, science fiction and action genres. Correspondingly, the *Transformers* films (which have elements of all three genres) put at stake the conquest of the planet via a series of heroic battles between galactic robotic tribes which, using Earth as a battleground, disguise themselves as everyday technological devices – most famously motor vehicles. The explosively chaotic action sequences, as well as the spectacular transformations between everyday inanimate objects like cars and radios into 'living' autobots, are by now the recognisable signature of Bay's tour de force CGI offering. But contrary to the commonly concluded reduction of digitality to the creation of awe-inspiring morphology and 'immersive' worlding, the digital Idea in the *Transformers* series is anterior to the shell-like armature of fantastical display. Beneath the instrumental deployment of technology which results in narrative dysfunction and visual excesses, the underlying principles are the complementary digital concepts of equivalence and discontinuity. Equivalence in that when objects are converted into numerical data (through A/D conversion) anything can metamorphosise into literally anything else. Following on, discontinuity in that the much maligned incoherent narrative and frenzied editing of the film should be seen less as an affront to traditional continuity filmmaking than as an expression of the algorithmic and distributive functionality in digital coding. In other words, the eponymous 'transformers' symbolise rather well the digital Idea of interchangeability, whilst the narrative dysfunction too is an effect of the discreteness and discontinuity of numerical and digital systems, both

operative notions that propel the film's architectonics.[17] In a second case, Denis Villeneuve's early feature, *Enemy* (2013) was shot on an Arri Alexa digital camera and became something of a calling card that eventually led him to direct some of Hollywood's most anticipated sequels and remakes, namely *Blade Runner 2049* (2017) and *Dune Parts I* and *II* (2021, 2024). Villeneuve's repute as a maker of 'copies' is of interest in so far as *Enemy* itself is essentially a 'Hitchcockian' doppelgänger tale of an 'innocent' man who blunders into his own parallel existence, eventually becoming trapped within it. As such it contains themes of the double and repetition on various levels. Within the narrative a history professor, bored by the incessant repetition of teaching content, comes across an identical-looking individual to himself. In a precipitous, and ultimately wrong move, the professor tries to contact the other and so begins a journey of dark entanglements and multiple crossovers between the lives of the players. This 'nesting' of themes and images is a common feature of digital culture and recombinant art and provokes a reading inspired by the digital Idea. Such a reading does not foreground the digital shooting, or the obvious special effects used to render the same actor (Jake Gyllenhaal) twice, but instead sees the two characters as something like 'versions' or memes that are products of a networked culture where the proliferation of copies and social media presences become uncontrollable and turn 'uncanny'. Or alternatively, the digital copy is where an infinite number of 'versions' derive from the same source material, unleashing potentially forbidding and unforeseen results. Ultimately, the film reveals how the contemporary articulation of the double can be connected not to CGI *per se*, but more compellingly to the fundamental digital characteristics of the copy, the meme, and the recombinant, and the new potential meanings given to the doppelgänger. It may be that the very ease of copying, so often looked upon as a banal function of the digital, can provoke enticing novelties, as well as all sorts of new anxieties in our lives

In a last example, Vincent Ward's 1998 film, *What Dreams May Come* utilises digital technology in a method the director named 'Optical Flow' which was adapted from a computerised image processing technique developed by the US military for tracking missiles.[18] Even if, compared to, say, *Transformers*, the film adopts a more conventional narrative design, it exhibits no less immense ambition and cosmic scope, this time with a nod towards theological underpinnings, transpiring largely in a visualised version of 'heaven' and 'hell'. Plotwise, the film mostly revolves around a doctor named Chris, played by Robin Williams, and his artist wife, Annie, played by Annabella Sciorra, who become separated when the former tragically dies while attending a car accident. Following Chris's traversing

to the afterlife, which is portrayed as a kind of Nirvana, another tragedy ensues when the traumatised Annie takes her own life in order to end her pain. Chris must undertake a perilous journey to rescue his fallen wife, who is condemned to eternal damnation in Hades because suicides "go somewhere else." Before her demise, the couple 'communicate' across the divide through Annie's paintings, which exist as dynamic landscapes in her husband's 'mind'. In the film, Optical Flow is used in the heavenly scenes to imitate the plastic properties of paint as we see Chris traversing idyllic pastoral locations painted by Annie in 'real life', and whose material surfaces move fluidly, squelching from touch like thick oil pigments. The film places its protagonists in sublime Romantic and Impressionist landscapes, which are meant to express Chris's memories and emotional projections and afford an affective gravitas. But the digital Idea in *What Dreams May Come* is not manifest in the computer generated milieus themselves. Rather the digital Idea is seen in the protean form of optical flow *per se*: the journey of the fixed image which, at its limit, melts into fluid form rendering flowers as liquid pigment, and the sky in the unmistakeable physical brush strokes of Van Gogh. This 'paintification' is obviously intended to denote the enchanting colours and intangible textures of heaven. But if the references to art history in *What Dreams May Come* are quite stereotypical, with the depicted Paradise on the side of the Impressionists and Romantics, and Hades envisaged in the gothic macabre of Hieronymus Bosch, then the digital Idea resides in the rejection of such conformist representations in the very mutability of the image itself. This is what Lev Manovich (2001) intended when he wrote of the new status of digital cinema departing from a mechanical registration of reality and replacing it with a blank canvas responsive to the unlimited imagination of the pictorial artist: "No longer strictly locked in the photographic, cinema opens itself toward the painterly" (304). Such an enabling, or 'liberation' of singular artistic vision is a common justification for the supposedly unlimited creativity of CGI, but there is a further creative element of the digital Idea which is not dependent on the auteur, but on the digital process in and of itself. This facet resides in the more complex encounters between the material and the immaterial realms which is a feature of analogue to digital conversion, and which opens up a virtual space for unforeseen affective impacts and, in turn, contracts new lines of ethical challenge. The virtuality of the digital will be analysed further in subsequent chapters. For now, the film's painting-as-expression to allow for communication across incompatible worlds – the living and the dead, heaven and hell – is wrought from the paradoxical opposition between the microtemporal speeds of digital processors and the immensity of the infinite, the technical and the 'spiritual'. The afterlife has of course been depicted in film before. But in *What*

Dreams May Come, the digital methods literally dissolve space and connote the dislocation of time, articulations that bleed out from the digital Ideas of presence and absence, determinability and incorporeality, and instigating a strange kind of suspension, outside of the linear coordinates of the material world. What these three examples show is that the digital Idea is not solely dependent on the outward visual creations wrought from the minds of genious directors or from the technical wizardry of special effects teams, but rather exist as the uncanny residue or after effect of the deeper internal characteristics of the 'code'. The digital Idea is precisely this recursive, recombinant, transmutable digitality that collides with the moving image, creating diffraction patterns that interrupt convention and generate new orders of meaning.

Introducing affect

The question of the digital in fact hinges on a certain unassimilable quality despite the relatively smooth takeover of whole swathes of daily life achieved by computation. In the first instance, the digital's metrification, combination, and remediation of the analogue world speaks of a native tendency to disrupt boundaries and hierarchies and to move beyond habitual modes of expression. How then do we detect, describe, and understand the difference of the digital, whose interruptive order is real and perceptible, but at the same time abstract and unfathomable? It is, of course, a fundamental function of software and HIDs (Human Interface Devices) to ameliorate the interruptive effects of digital conversion and processing. Nevertheless the apparent effect of a digital infrastructure on an artefact – what I call the deployment of a digital Idea – may linger on the edges of perceptibility despite the smoothing techniques designed to conceal it.[19] In referring to images, Brian Massumi (2002) suggests that the totality of an image's effect is not solely a function of its content, defined as its already pre-packaged, recognisable, and articulable aspects. There is also a facet of an image's impact that lies beyond its communicability and the cognitive capability of the subject – a facet which becomes noticeable in what Massumi calls 'duration' and 'intensity', which together make up the image's 'affect'.[20] These terms necessitate more detailed exposition in subsequent chapters, but for now it is important to note their material foundation in situations of movement and change, and their crucial function in exploring in every situational encounter its potentiality and the yet-to-come. Affect, says Massumi, comes to the fore in the very "gap between *content* and *effect*" (2002: 24), drawing attention to the in-between, the interval, whose generative power is all but indeterminable in advance. But

where does affect reside in a digital image caught between the economic and cultural imperative to communicate efficiently, and the innately interruptive effects of the digital Idea? This question will augur differing answers throughout the thesis. For now we can say that deploying the term 'affect' as a diagnostic term in studying digital cinema is a way of moving away from ontological debates about image technologies and mediations of realism towards a more vital discussion of what the digital does or enables today. Furthermore it opens up a whole new field of enquiry related to a 'molecular' investigation of digital images and its correlatives in life, connecting the atomised matrix of the bitmapped screen with the nervous system and neural networks of the human organism. If, as Patricia Pisters (2012) suggests, contemporary spectatorship can be distinguished in terms of a 'neuro-image' whose affective force directly touches the brain then the protean constitution of the digital moving image, formed from millions of individually assigned pixels, each controlled through a system of digital gates and electronic pulses, would appear to be a de facto reverberating plane, a kind of two-dimensional brain itself. In this sense, Pisters' view of the correlation between image and brain as "being affected by 'signaletic material' that changes and forms our subjectivities in an ongoing process" (2012: 31) can be reinforced by recognising that the constantly modulating, elemental composition of billions of digital screens all across the globe acts as a vital agential force today. It would seem that the asignifying qualities of digital cinema – registering the gap between inside and outside – makes it, in my conceptualisation, an affective cinema in principle.[21]

Affect is, generally speaking, the internalisation of an encounter or interaction between forces and bodies, and the resultant quantum reverberation which will somewhere, sometime have an 'outwards' expression.[22] Taking from the philosophy of Baruch Spinoza, as well as Henri Bergson and Gilles Deleuze, Massumi popularised the notion of the 'autonomy of affect', an intensive field of contact and change separated from cognition and emotion. Theories of affect tend to be mobilised in philosophies of 'becoming', dissolving structuralist notions of fixed identity, and constructivist notions of Pavlovian 'effect', and suggesting instead an ineffable field of potential, containing often unpredictable exchanges open to the future along a 'line of variegation'. In this way affect is distinct from the more commonplace term 'emotion', which refers to circumscribed or 'learned' human emotive responses. For Massumi, affect is an intensive state and its distinction from emotion, which is identifiable as quality, is a crucial one, opening up more complex arrangements of individual and social interactions:

> An emotion is a subjective content, the sociolinguistic fixing of the quality of an experience which is from that point onward defined as personal. Emotion is qualified intensity, the conventional, consensual point of insertion of intensity into semantically and semiotically formed progressions, into narrativizable action-reaction circuits, into function and meaning. It is intensity owned and recognized. (Massumi, 2002: 28)

We will have cause to return to the idea of affect as lying outside of 'consensual' progressions and 'narrativized' cause-effect chains, upon which cinema is culturally based. In the specific case of film theory, affect has been, one way or another, a key term in explaining the power of cinema in both social and phenomenological terms, the latter in its role in engaging the spectator in haptic and embodied modes (Sobchack 1992, Marks 2000), and the former in being a communally transferred flow, a relational exchange operating in and through culture in clouds of affective accumulations (Goddard 2012; Döveling et.al. 2018). Different modes and genres of cinema operate across diverse affective-emotional spectrums, from those that invoke shock and involution, such as avant garde and experimental cinema, to those that incline towards consensual sentimentalism, such as melodrama.[23] Deleuze provides in his *Cinema* books one of the central philosophical resources for theorising affect in film, acting as a baseline for a number of subsequent investigations, most significantly those partaking of the aforementioned embodied phenomenology approach. Hence, the so-called 'affection-image', a component of what Deleuze calls the material aspects of subjectivity, will form part of the focus in the next chapter, but here it will be sufficient to note that it is the aspect which transforms the movement of translation into a movement of expression, or more simply put in terms which relate to narrative modes of cinema, it is the linkage between perception and action. Affect, then, is at the heart of Deleuze's generalised theory of cinematic movement and time, suggesting a process which does not rely on narrative, but instead on a relationship between image and subject which bypasses learned responses, working at a level prior to cognition or consciousness. However, it is important to emphasise that this process of action-reaction is not mechanical or 'computational' – Deleuze constantly underscores the creative capacity of affect – that is, the tendency under certain conditions of the brain (not necessarily a human one!) to form new neural pathways in response to singular combinations of 'inputs'.[24] This not only raises the unholy prospect of creating audiences of 'spiritual automatons' – networked, thinking beings, plugged into a 'controlling' image-system, it conversely bequeaths to cinema a unique position from which to mobilize affect for the 'unthought', raising the possibility of new trajectories in art, philosophy and politics.[25]

The digital

Extending the discussion of affect to the digital image, and digitality more generally, poses new questions about the relationship between perception, cognition, and reality. If affect has been a central concern of film-philosophy since even before Deleuze's intervention then what would it take to proffer the vision of an explicitly digital production of affect? How can we speak of affect in the same breath as the 'digital' when the former's conceptualisation has hitherto assumed a realm of corporeal encounter and 'uncertain' expressivity? Commentary on digital media, it must be admitted, has from the outset conveyed considerable scepticism surrounding the affective possibilities of a 'dematerialised' and 'overdetermined' image which, compared to analogue equivalents, appears to offer a much reduced prospect for sensorial engagement. Such pessimism is suggested, for instance, in Jonathan Crary's pioneering work on encultured vision, *Techniques of the Observer*, in which he remarks that "If [digital] images can be said to refer to anything it is to millions of bits of electronic mathematical data" (1990: 2). Subsequently, Rodowick is equally concerned about the potentially damaging impact of computer-based systems on our sensuous contact with images, which in the case of film imparts a "perceptual density...[that]...leads us inward – a self-examination of our relation to time, memory and history" (2007: 75). There is a stated or implied suggestion that in the digital image the destroyed physical causality and annihilated realism also inhibits any deep insertion into enculturation and memory. Pisters' notion of the neuroimage, however, offers an alternative schema suggesting that the terms of debate have shifted away from a putative 'ontological realism', arguing for a more directly affective and affirmative role for digital media: "contemporary culture has moved from considering images as 'illusions of reality' to considering them as 'realities of illusions' that operate directly on our brains and therefore as real agents in the world" (2002: 6). Displacing the focus from strictly technical parameters to extant affective streams recognises, firstly, that most digital images are in any case 'hybrid' in the sense of being both photo-optically and computationally derived, and secondly edges critical analysis towards the 'worlding' effects of digital images. If, therefore, the polysemic expressions of traditional, photographically based film already invented various ways of weaving its tapestries of sensory stimulation, as Deleuze's *Cinema* books suggests, then it is likely that the digital transformation of the image, can potentially multiply the touch-points of affect several-fold. As Thomas Elsaesser says, "Digital cinema's chameleon-like mutations, its morphing of shapes, scaling of sizes

and rendering of materials, in short: its re-embodied manifestations of everything visible, tactile and sensory allow the digital to become much more closely aligned and attuned to the body and the senses." (2010: 173-4).

Despite the above acknowledgements of the significant interventions – cultural, technical, theoretical – made by digital media it has to be noted that in the field of film studies specific research into a putative 'digital affect' has received surprisingly little attention, especially given the wealth of material on film and affect, as well as on digital aesthetics more generally. Outside of film studies, discussion of a socially experienced 'digital affect' is an important emerging field of study in social sciences, communication and cultural studies where it refers to manifold quotidian practices and empirical realities involving wide-ranging digital interactions and interfaces, including routine inhabitation of online spaces that configure and channel emotional resonances and alignments in the socius.[26] These networked bonds of affect-sentiment, which are now regarded as essential modes of subjectivation, are studied from various perspectives, but conspicuously in the popular press from the point of view of perceived outcomes labelled as psychologically constructive or harmful. In the growing volume of work within the so-called 'digital humanities', then, the acceptance of a de-facto 'digital affect' seems to have taken hold.

What I call 'digital affect' is a specific type of bearing or 'impingement' (to use Massumi's term) that issues from cinematic images which embody a digital Idea. It has little to do with the immersive visuals and sentiment of the type at play in special effects and action cinema, but much to do with the fractious leap between two ontologically distinct moments relating to the propensity for disjunction in the digital Idea. It is the affect which stems from a cinematic assembly that is theorized not from the point of view of already actualized forms (an identifiable cause-effect chain), but is the consequence of the deterritorializing operation of the digital: the inalienable mutability of the sign once translated into digital data. What this implies is a probabilistic rather than deterministic line of cognitive and corporeal transformation which is at once an undoing of learned emotion or commodified feeling, and at the same time a mandate for reconnection and re-imagining. It is important to recognise here that this reconnection and transformation is not limited to human bodies or minds but can equally affect matter and spirit in alternative configurations. What new optics, ideas, and bodies are created therein? How is the cinematic 'nervous system' reconfigured digitally? Taking its cue from digital logic, this type of affect becomes equally visible in micro-situations of complex molecular and cellular interaction, as well as macro-situations under

globalised economies and corporatised media. It will be noted here that there is a correlation between my descriptions of affect as a molecular force and the digital image as a constantly modulating, cellular medium. Images of cellular interaction, which abound in popular culture today are, I argue, perfectly appropriate and exemplary translations of digital images which have a likewise recombinant nature. In positing a synergy between the digital and affect my study will proffer a new definition of digital cinema derived precisely from an investigation of affect in a range of films indicative of a digital logic

Thesis structure

The argument is developed across four chapters, the first of which is a methodological section examining three important approaches to the study of film that may be used to explore affect in digital contexts. This opening section is followed by filmic case studies chosen from a range of cinematic genre (where classifiable) and national origin that each interrogate specific expressions and articulations of affect deriving from their own digital infrastructures and aesthetic architectures. Overall, the design of the thesis is intended to provide a basis from which digital cinema can be studied anew, opening up a substantive new line of research to discover newly affected social beings that are emerging alongside the digital logics and political impasse of our time. The methodology for the research proceeds via a combination of the canonical with contemporary thought which is applied and extended through the film examples. It commences from an initial comparison of film-theory approaches which have been historically important, including materialism, phenomenology, and the film-philosophical writings of Gilles Deleuze together with his collaborations with Félix Guattari. Whilst these established approaches have been inflected and cross-fertilised with more recent concepts specific to aspects of the digital Idea, the aims and scope of this thesis do not entail an exhaustive survey of the voluminous and constantly evolving corpus of ‘digital media theory’. Rather, in grounding the thesis around film studies and film-historical approaches this research provides a contribution to the subject that reconfigures the legacy of film theory interlaced with digital concepts which together are intended to instigate a search for affirmative and creative futures which, I argue, are inherent in the digital Idea. Accordingly, this opening chapter allows me to develop the contours of a methodological system that accounts for the ontological and epistemological facets of digital cinema important to this study. With this objective, the section on materialism introduces questions

of politics, ideology and 'effect', with the subsequent section on phenomenology introducing equally important problems of the subject, the mind, and reality. If the methodological chapter ultimately favours the final section, dedicated to the philosophical framework developed by Deleuze and Deleuze-Guattari, it is for their distillation of a series of concepts which combine science, philosophy and the humanities, opening up an holistic field of thinking uniquely capable of accounting for the aesthetics, politics, temporalities and affects of the digital image. Here I give considerable space to develop Deleuze's complex and relational theories of affect together with its associated signs in film – signs derived from the semiology of American philosopher C.S. Peirce, whose basic three-pronged cosmology of 'firstness', 'secondness' and 'thirdness' (explained in more detail in the next chapter) is particularly valuable in my analysis of digital images. Finally, what a Deleuze-Guattarian approach brings is a political conception of digital art that focuses on transformation and ethical becomings, as politics is not just about public policy, economic organisation, and ideological perspective, but intrinsically involves resistance and renewal. As I will show in later chapters, a Deleuzian politics is rooted in critique, as what gives rise to imagining and creating the world differently, and is therefore explicitly tied to becoming and valuing difference positively. Moreover, the bilateral synergy between affect and the digital that is a function of elemental contraction and dilation in coding activates an affirmative, connective, and expansive notion of the political that envisions new ethical problems and experiments on a holistic scale.

Successively, I organise the study around three further sections, each using case studies to investigate digital cinema's symbiotic relation with some defining areas of modern life. These areas, of politics and globalisation, the body and aesthetics, temporality and spirit are selected not only due to their encompassing nature in defining human existence today, but because they are wholly intensive zones of contemporary subjectivation pertaining to complex and highly affective relations of 'inside' and 'outside', subject and world. Moreover, the infiltration of these intensive zones by informatic and calculative systems, often considered in the first instance to be an exploitative imposition of digital capitalism and big data is not, I would argue, conducted from a transcendent position. Rather, in regarding the digital turn as a prime instance of the 'Foucauldian' view of power – as always dialogic, imminent and opportunistic – this approach opens up the analyses to ethical problematics and readings of resistance. In this sense, digital cinema's 'affective function' – its impetus for thought and action – becomes agential, a participant in life which connects and synchronises

with the thinking, corporeal, and political subject. These examples, from an eclectic range of cinema, are not intended as 'illustrations' of the real, much less as pure imaginaries of the unique artistry of the auteur-mind. They are intended more as materialities or events that surface like symptoms from the body politic at moments of intensive cultural and technological transformation. The result is a set of film texts that are generically hybrid and difficult to classify, but each harbouring an extraordinary power to interlocute, interrogate and critique the very 'digital life' that gives rise to them. Moreover, because my focus is on the digital Idea rather than technology *per se*, I maintain that the films themselves need not be 'native' digital artefacts – neither originating necessarily on digital formats nor parading computer generated imagery for its own sake. Thus, whilst some of the film directors featured would count themselves as proudly analogue filmmakers (such as Darren Aronofsky), others (such as Leos Carax) would deny that their films contain overtly digital themes at all.[27] Consequently, just as not all films made digitally conform to my notion of digital cinema, some of the films I take as exemplars of digital cinema were not shot on digital formats. Despite this apparent contradiction, my analyses will demonstrate how the selections individually articulate a coherent designation of the digital Idea which reverberates through the body of the films, making them vibrate in tune with social and technological realities in an inescapable undertow of transformation.[28]

Digital affect in practice

Briefly introducing the case-studies themselves, the second chapter of the thesis opens with an analysis of *Holy Motors* (France, 2012), a film purporting to showcase, in the words of the director, the "experience of being alive nowadays". *Holy Motors* is the first digitally produced film by Leos Carax, one of French cinema's erstwhile *enfant terribles*, and its relentless thematic provocations serve to introduce the 'political' as an always inflected mode of digital affect. Structured in a constantly changing set of scenarios, reality here is expressed in and through its decomposition into discrete and orthogonal vignettes. The scenarios, also invoking a series of transversally related digital spaces, all speak of the performative inhabitations (or 'fakeness') of life – amounting to an audacious synthesis of the coordinates of fractured existence in a modern metropolis. On the plane of symbolism and 'representation', *Holy Motors* is a controversial film in its bewildering obtuseness and enigma, not least in its treatment of some of society's most sensitive social issues such as

homelessness, violence, and the mediatisation of the female form: all visible effects of a globalised economy under the auspices of neoliberalism. Viewed from the level of event and mimesis, however, we can perhaps see how it not only explores, but intervenes in 'life' and its various (de)compositions in digital modernity. Fearlessly dissembling, and at the same time defiantly insightful, we can easily discern how the film presents, or rather performs an encounter with contemporary alienation in a Parisian context. As such the film acts as a set of twisted incitements for (anti-) ethical conducts in our era, reproducing in digital form the 'incompossibility' of modern life within a restrictive economic structure.

The third chapter uses three low budget independent films to assert a connection between digital aesthetics and the body, intimacy and social relations. The first examples in this section are two contemporary horror films from Italy, namely *H_2Odio* (*Hate$_2$O*) (Alex Infascelli, 2006) and *The Gerber Syndrome: il contagio* (*The Gerber Syndrome: the Contagion*, Maxì Dejoie 2012). The analysis in this section sets forth the digital logics which translate the highly rhetorical and sensuous *giallo* formula of previous decades into recognisably modern tapestries. Thus, *H_2Odio* mobilises a glitch aesthetic to pathologise recent fascination with genetic engineering and cellular mutation framed within a socially-sanctioned, gender-specific obsession with ascetic dietary regimes. Contrastingly, *The Gerber Syndrome: il contagio* utilises the tropes of guerilla filmmaking and digital documentary to construct a hybrid audio-visual document ostensibly tracking a deadly viral disease as it sweeps through society creating a class of 'zombies' in its wake. In a remarkable correspondence with real-world events during the COVID-19 pandemic, the climate of fear and cynicism created by the pandemic gives rise to explosive populist sentiments and authoritarian policies that connect with Italian politics of the recent past. The next example is a nominally science-fiction romance from American independent filmmaker Shane Carruth. *Upstream Color* (Carruth, USA, 2013) produces a new vision of love-at-first-sight based not on romantic tropes of popular fiction but on molecular synergies, corporeal violations and ethical motivations that carve out new creative and ambiguous connections within and beyond the human sphere. *Upstream Color*, whose very title implies the 'upstream' search for motivations and origins of extreme affective change (as opposed to their 'downstream' symptoms) establishes what appears at first as a transcendent 'spiritual' dimension, an observational, controlling realm which proves ultimately to be an immanent layer attached to life and only discoverable through a fidelity between the body and the senses. Moreover the film insists on recognising the affective force of change at the molecular level where the

typical tale of human intimacy and betrayal finds a new potency when coupled to the natural world of flora and fauna. What unites the films in this section is their exploration of how digital aesthetics capture the transformation of both individual and social bodies in extremely affected states subject to genetic and microbial attack. Thus, using these case studies I will show how these digital film examples connect the organic and the digital Idea through 'cellular' proliferations, propagating a vision of acute bodily affect that is microbiological in nature, and instigating a symptomatology and template for today's 'biopolitics'.

After these analyses of politics and the body, which exist mainly as intensive spatial transformations in the visual field, the fourth and final section of the thesis probes a preoccupation with time and affect in digital cinema using two Hollywood studio films from esteemed American directors. My analyses of *The Fountain* (Darren Aronofsky, US, 2011) and *The Tree of Life* (Terrence Malick, US, 2012) will attempt to establish a productive protocol on temporality and digital aesthetics, both films containing bold expositions of human subjects caught in time's paradoxical forms and resonating affects which act as entry routes into questions of memory and spirit. The chapter starts by interrogating the fraught theoretical relation between the digital and temporal involution, the latter assumed to be celluloid film's authentication of a spiritual sense. Although both Malick's and Aronofsky's films originate on celluloid, their aesthetics can be related to a computerised age where a consciousness of time rises up, both deriving their context within a surfeit of cultural interest in time-travel and multiverse narratives. Counter-intuitively, I argue that these 'material' films embrace the digital Idea more profoundly than many of the later time-hopping narratives produced entirely digitally. To justify, I look at two aspects of temporality which achieve different affective results – *chronos* or the rectilinear forms at play in common time-travel texts to evoke awe and wonder; and *aion* or the circular semblances more adept in describing how an altogether more pure or 'bottomless' affect finds expression in the digital formations of the fractal and algorithmic structures visible in the chosen films. Contrasting with more popular expositions of multiversal and multi-temporal movies and TV shows, these provocative texts take seriously time's generative power and at their limit assert the dimension of the virtual which constantly encroaches on the actualised forms of character and event.

The *Digital Interregnum*

I have previously mentioned how the selection of case studies in this thesis is based upon my definition of digital cinema through the ideas, aesthetics and affects that course through them. Finally it is necessary to add a further 'periodising' criteria into my corpus of classified films. Even though the project as a whole does not adopt a historiographic methodology it will be noted that the list of case studies (in chronological order, *H2Odio* [2006], *The Fountain* [2006], *The Tree of Life* [2011], *The Gerber Syndrome: il contagio* [2011], *Holy Motors* [2012], *Upstream Color* [2013]) all stem from a relatively short post-millennial parabola arching from 2006 to 2013. This period in the story of the encounter between cinema and the 'code' is significantly located after the early phase of studio investiture in computer graphics in films such as *Tron* (Steven Lisberger, US, 1982) or *The Lawnmower Man* (Brett Leonard, UK/Jap 1992), but pre-dating a present which has seen the seamless embedding of computer-aided imagery into all levels and phases of commercial production– a routine instrumentalism which has become all but invisible. In the words of Andrew Whitehurst, a visual effects supervisor on *Ex Machina* (Alex Garland, UK, 2014), "No one complains about the mountain of well-planned and well-executed CGI, because no one's attention was drawn to the fact that it was CGI in the first place."[29] Prior to this new norm there exists a period to which I turn my focus – an in-between time, which I will call the *digital interregnum*. This is, I contend, a notable and necessary phase where the previously defined digital Idea fully emerges and propagates 'internally'. That is to say, the selected filmmakers in this relatively short period are less interested in promoting the enormous possibilities of the digital for the purposes of film spectacle or imaginative translation than in exploring fundamental ontological and epistemological questions raised in the digital Idea itself. This is not a teleology of digital technology or an 'evolutionary' argument about the deployment of computer graphics, but rather the identification of a certain fruition of a particular set of thematic, formal and theoretical ideas in an intensive period of change. Therefore, where most histories of digital cinema would denominate the aforementioned early phase, together with Spielberg's *Jurassic Park* (US, 1993), James Cameron's *Titanic* (US, 1997) and Peter Jackson's *Lord of the Rings* trilogy (NZ/US, 2001-2003), each regarded as landmarks in the Hollywood CGI 'event movie', I propose my non-standard collection of case studies to argue for a more critical, discerning and calibrated definition of 'digital cinema' which raises technical and social questions, communicating a 'digital affect' that is semiotically open and syntactically

connective. This, ultimately, is what differentiates films of the digital interregnum: a cultural attractor signifying a cinema imminently unified with life.

To talk of the cinema of the digital interregnum is admittedly a retrospective move that assigns to the recent past identifiable markers which qualify as *extra*ordinary. Interrogating digital film history from a diachronic perspective provides a way of locating the development of the digital Idea from an intensive process that lies beneath the surface of the text to a more technical parameter that is visible in themes and aesthetics. To identify such a phase is similar to the post hoc designation of another brief period where popular film textuality turned towards more complex and challenging terrain, namely the era of 'New Hollywood' of the late 1960s and 70s. Scholarship on this period generates titles like 'Hollywood's Last Golden Age', 'Pictures at a Revolution', and 'When the Movies Mattered', signifying not only the critical respect afforded to the set of attributed films but an acknowledgement of a structural change in 'feel' and 'style' of the movies.[30] The causes of the New Hollywood are cited variously as industrial, economic, and cultural but the result was a sequence of films that defied cinematic convention and effused an integral autonomy. To the extent that this cycle of film occupied a limited timeframe representing a break from the past and a staging post to a new future, New Hollywood can also be seen as an interregnum.

Finally, categorising the digital interregnum is a necessary step in my thesis to designate what counts as 'digital cinema' and to delineate a corresponding corpus. The digital interregnum rehearses in an original way the themes and aesthetic strategies that suggest the maturation of a variety of digital ideas, and the exploratory drive to put them into play and test their limits – an impetus that arguably finds expression only sporadically in the contemporary.

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[1] David Lynch reflects positively on his first use of digital shooting for *Inland Empire* (2004) in an interview with *Variety* magazine. Lynch goes on to say "I started working in DV for my Web site, and I fell in love with the medium. It's unbelievable, the freedom and the incredible different possibilities it affords, in shooting and in post-production...if you can think it, you can do it". See Adam Dawtrey (2005) *Variety*, May 11, 2005. Available at https://variety.com/2005/film/markets-festivals/lynch-invades-an-empire-1117922566/. Accessed 23 September 2023

[2] Paul Vickery, former Head Programmer of the Prince Charles cinema, London, speaking to Geoffrey Macnab in the *Independent* newspaper on the 'mystique' of celluloid vs digital projection. 'Film vs Digital? In the same way that a new generation of music lovers are rediscovering vinyl, cinema enthusiasts are discovering, or rediscovering, celluloid' The Independent, Thursday 31 August 2017. https://www.independent.co.uk/arts-entertainment/films/features/dunkirk-film-digital-christopher-nolan-quentin-tarantino-paul-thomas-anderson-lawrence-of-arabia-a7918586.html. Accessed 23 September 2023

[3] Youngblood uses the term 'digital code' as a shorthand for all digital operations including analogue-digital conversion, and algorithmic management and manipulations. His basic stance is that "Digital code...has radically altered the epistemology and ontology of the moving image but has not fundamentally changed its phenomenology", p. 27

[4] John Andrew Berton Jr. (1990) 'Film Theory for the Digital World: Connecting the Masters to the New Digital Cinema' in *Leonardo*. Supplemental Issue, Vol.3, Digital Image, Digital Cinema: SIGGRAPH '90 Art Show Catalog, pp.5-11; Lev Manovich (1996) 'What is Digital Cinema?' available at http://jupiter.ucsd.edu/~manovich/text/digital-cinema.html

[5] The list of directors who insist on shooting on 35 mm film diminishes every year but still includes famous directors such as Christopher Nolan and Quentin Tarantino. Martin Scorsese and Steven Spielberg are also advocates of celluloid film but have pivoted to digital shooting for some of their recent productions. See 'Steven Spielberg & Martin Scorsese: the joy of celluloid' in The Guardian 10/10/2011 available at https://www.theguardian.com/artanddesign/2011/oct/10/steven-spielberg-martin-scorsese-celluloid Accessed 30 September 2023.

[6] For instance, Lisa Purse (2013) suggests that "to isolate or prioritise the digital within [film studies] risks unbalancing the act of analysis and its outcomes." (*Digital Imaging in Popular Culture*, Edingburgh University Press, p.152).

[7] I take the terms 'cinema' and 'film' as complementary terms, the first encompassing the institutional and cultural manifestation of the second, which refers more to the artefact or object under inquiry.

[8] The recent explosion of film-philosophy testifies to a critical recognition of film-art as a kind of research laboratory for thinking through the concepts and problems of an age. However, film and cinema arguably always manifested a supra-quotidian relevance to critics and audiences alike. Serge Toubiana puts it well in his interview with Serge Daney when he says that for the twentieth century film critic, "cinema became the promise of a world, it was synonymous with an opening on to the world, via the voyages that consist of going to verify elsewhere that others live this same experience of the cinema, but through other languages." (Daney, 2007, p. 107). For the anglocentric critic, Roger Ebert (1978) also testifies to the social significance of growing up alongside cinema: "We grew up, lusted, and learned by watching movies that considered so many concerns we did not find included in our daily possibilities." ('Beyond Narrative: the Future of the Feature Film.' https://www.britannica.com/topic/Roger-Ebert-on-the-future-of-the-feature-film-1988414 accessed 30/06/2023)

[9] Thomas Elsaesser and Malte Hagener (2010) put it like this: "As popular spectacle and public event, the 'digital' does not appear to have fundamentally changed the experience, but merely enhanced the cinema's attractions and attractiveness" (174)

[10] John Belton sums up his argument in reductively economic terms: "The digital revolution was and is all about economics – all about marketing new digital consumer products to a new generation of consumers – all about the home electronics industry using the cinema to establish a product line with identifiable brand names for home entertainment systems" (100-101).

[11] DVD stands for Digital Versatile Disc which, since the late 1990s was most commonly used to store and play back the huge amounts of data needed for digitised film texts.

[12] By the 'cinema industry' I refer to the economic health of commercial film and High-End TV Production (HETV) as reported in several institutional accounts, including the British Film Institute and Statista, the market and consumer data website. The BFI's Research and Statistics unit report, for instance, that the combined spend by film and HETV production during 2021 in the UK reached £5.64 billion, the highest ever reported (https://www.bfi.org.uk/news/official-2021-bfi-statistics). The cultural significance of cinema internationally is also registered in the increasing box office revenues around the globe, which in the pre-pandemic year of 2019 reached 42.3 billion USD (https://www.statista.com/topics/852/box-office/#topicOverview).

[13] Film critic Mark Cousins' recent film essay, *The Story of Film: A New Generation* (UK, 2021) charts the innovations and new possibilities opened up by digital technologies for a 'new generation' of filmgoers. Cousins' eclectic selection of significant films since the new millennium expresses a confidence regarding film's unique role and capacity to renew its aesthetic visions and to provoke new thought commensurate with our times.

[14] 'Societies of control' refer to a contemporary type of capitalism characterised by network and information technologies to impose a form of 'self-control over populations regarded as data 'dividuals'. The term acquires exemplary application in my analyses of film case-studies.

[15] Miriam Hansen has charted the moderns' contribution to understanding of film's relationship with modernity, especially in her studies of Kracauer and Benjamin. See for instance Hansen (2012) *Cinema and Experience: Siegfried Kracauer, Walter Benjamin, and Theodor W. Adorno*.

[16] By 'made' digitally I am referring to a production where the principal photography originates on digital cameras, usually using physical lens optics where light is transcoded into data by an internal digital device such as a CCD sensor and stored as such on Flash Cards or external hard drives.

[17] Lev Manovich posits the key notion of 'modularity' as harbouring the digital characteristics of discontinuity and interchangeability: "Media elements, be they images, sounds, shapes, or behaviors, are represented as collections of discrete samples (pixels, polygons, voxels, characters, scripts). These elements are assembled into

larger-scale objects but continue to maintain their separate identities. . . . [The] modular structure of new media makes . . . deletion and substitution of parts particularly easy." (2001: 30)

[18] For the director's own assessment of the development of the Optical Flow technique see: http://vincentwardfilms.com/project/concepts/motion-painting/optical-flow/ (Accessed May 2024)

[19] Anti-aliasing, developed in the 1970s to smooth out the edges of pixellated curves and diagonals, is one classic example of such techniques.

[20] In critically dissecting the term 'affect' Massumi is in a way attempting to theorise the 'untheorisable' in that it lies outside of the recognised 'content' of a form, which is an 'indexing' to conventional meanings. In the case of an image he writes "This indexing fixes the determinate *qualities* of the image; the strength or duration of the image's effect could be called its *intensity*" (2002: 24). It is important to realise that this 'intensity' is not the same as an effect, but is rather an infolding or subsumption *by* the image without necessarily inducing an action.

[21] The kind of digital affect which is indicative in my film case studies is that where inside and outside are not reconciled in the image, which is to say, when 'representation' fails.

[22] I use the term 'quantum reverberation' to indicate the intensive, molecular level of movement, interaction and change, rather than molar level of recognised extensive forms more suited to the description of emotional cathexes.

[23] The genre of melodrama has classically been regarded as providing moments of emotional 'excess' where the usual cause-effect lines break down and the plot opens up to new potentials. See for instance Jiří Anger (2019) 'Unfrozen expressions: Melodramatic moment, affective interval, and the transformative powers of experimental cinema' in NECSUS Autumn 2019. Available at https://necsus-ejms.org/unfrozen-expressions-melodramatic-moment-affective-interval-and-the-transformative-powers-of-experimental-cinema/ (accessed Aug 2023). Although avant-garde film has traditionally been addressed in terms of politics and psychoanalysis, its use of non-narrative and unconventional techniques puts it in the camp of affective spectatorship due to the textual challenges it poses. For the Soviet avant-garde artists such as Eisenstein and Vertov, who invested film art with an almost intrinsic ideological 'effect' (extensive, external), we can perhaps view affect as working in term of relations among elements intrinsic to the work (intensive, internal). See R. Bruce Elder (2010) *Harmony and Dissent: Film and Avant-garde Art movements in the Early Twentieth Century*, Wilfrid Laurier University Press (282)

[24] Deleuze believes that cinema is unique amongst the arts as it is able to achieve a total shock to thought, to plug directly into the brain in order to "communicate vibrations to the cortex, touching the nervous and cerebral system directly" (Deleuze 1989, 156).

[25] Deleuze mentions that the automatism of cinema and the automatism of the masses came together in the apotheosis of controlling or manipulative 'movement-images' in 1930s fascist cinema. This cinema, exemplified by Reni Riefenstahl, used a programmatic syntax of strictly reflexive cause and effect logic to implant a (false) image of consensual and conformist collectivism.

[26] See, for instance Katrin Döveling, Anu A. Harju, and Denise Sommer (2018) 'From Mediatized Emotion to Digital Affect Cultures: New Technologies and Global Flows of Emotion' in Social Media + Society January-March 2018: 1–11 available at https://journals.sagepub.com/doi/pdf/10.1177/2056305117743141 (accessed Aug 2023). See also the volume by Jessica McLean (2019), *Changing Digital Geographies: Technologies, Environments and People*, (Switzerland: Palgrave Macmillan), which charts several areas of highly contested and therefore affectively intensive zones of contemporary public discourse including sections on digital rights and digital justice, digital activism, feminist digital spaces, and disability and digital spaces, and green digital geographies, amongst others.

[27] Aronofsky has reportedly said "No matter how good CGI looks at first, it dates quickly" cited in *Wired* 14.11 Nov 2006 available at https://www.wired.com/2006/11/outsider/ (accessed Aug 2023)

[28] In his chapter 'Digital Technology and Mediation: A Challenge to Activity Theory' Georg Rückriem writes of the adoption of digital technologies as an almost compulsory phenomenon affecting the whole of society: "No matter how we may judge the consequence of this [digital penetration] we cannot but concede that digital technology has entered most things in everyday life, and it increasingly determines the activity of people even if they avoid using it. In more general terms, it has become the basis of an emerging globalization process that is not only economic but cultural, not only universal but irreversible. There is nothing outside it. Reality itself has changed fundamentally" (88).

[29] Andrew Whitehurst (2016) 'Don't knock CGI: it's everywhere – you just don't notice it" in *The Guardian* 25/02/2016

[30] See Elsaesser, Thomas; Horwath, Alexander; and King, Noel. (eds.)(2004) *The Last Great American Picture Show: New Hollywood in the 1970s*, Amsterdam: Amsterdam University Press; Harris, Mark. (2008) *Pictures at a Revolution: Five Movies and the Birth of the New Hollywood*, New York and London: Penguin Press; Kirshner, Jonathan and Lewis, Jon (eds.) (2019) *When the Movies Mattered: The New Hollywood Revisited*, Ithaca and London: Cornell University Press.

Chapter 1: Methodology and Critical Frameworks

The problem of affect in digital cinema, as mentioned above, is a fraught one; and yet several critical approaches, drawn from established film theory, can be utilised to interrogate the issue, each with their own strengths and limitations. In the introductory chapter I sought to define digital cinema and to undergird its important, if under researched connection to affect. In this chapter I set out three critical approaches which have formed significant bodies of work in film studies and whose application to digital cinema have each been influential in varying degrees in recent decades.

1.1 Materialism and Digital Cinema

This section analyses the development of a materialist approach to digital cinema and how, within a critical horizon of detecting social change, the fraught question of affect is a central, if largely unrecognised concept that runs through these perspectives. Materialism as an overall approach and 'philosophy' has an essential historical investment in the question of how symbolic processes such as film refer to a social and physical reality, and in turn how technological systems facilitate and extend this function. We can add to this, with the evident connection between 'historical materialism' and Marxist theory, a concern to mobilise technology for specific outcomes: namely the production of concepts and actions conducive to collective, progressive and sometimes revolutionary politics. The concept of affect, although not always claimed, is a key operator in materialist film theory capable of, crudely put, catalysing change or, alternatively, blunting the critical faculties with 'sentiment'. Instrumental in this lineage, and arguably still the highpoint of materialist film criticism, was the work of a number of Marxist inspired theorists in the 1920s and 30s such as Bela Balász Siegfried Kracauer, Walter Benjamin and Sergei Eisenstein. Since these complex and nuanced materialist writings, the view that art and institutional media simply and unilaterally reflect the world in which we live has been increasingly challenged, and with the cultural studies turn, more or less debunked. The field of cultural and media studies has in fact instituted the belief that images and media objects now operate not beneath the economic and social spheres that orthodox Marxism deemed primary in shaping history and material reality, but in tandem, and sometimes above. But the growth of the disciplines of media and cultural

studies occurred in an epoch dominated by analogue media in a post-Fordist capitalist system. What has more recent materialist-inspired film and cultural studies work to say about digital culture and how the information age has revolutionised cinema, and in particular how does it theorise the mechanism of reception and reality? The following review of some important materialist interventions in the subject reveal certain inadequacies and omissions in the theorisation of the 'digital object', despite its otherwise essential role in communicating the role of culture in everyday experience, and in the creation of real-world identities and ideologies.

In her book, *New Digital Cinema: Reinventing the Moving Image*, Holly Willis (2005) reflects on the "exploding cinema" of the 1990s, a dual explosion of new cinematic form and the critical hyperbole that follows it, which becomes increasingly evident as the call of CGI (computer generated imagery) begins to strengthen towards the cusp of the new millennium. Willis, who is amongst the first of the film scholars to analyse the varieties of new digital cinema claims that mainstream Hollywood responds to this call by introducing CGI, sparingly but critically, into a series of high-profile films such as *Jurassic Park* (Spielberg, 1993) and *Forrest Gump* (Zemeckis, 1994), films that on one level embrace a digital future for film but which are actually, in Willis' words, "thinly-veiled allegories depicting the dangers of digital technologies," (23). This is an allusion both to the 'Death of Cinema' debate of the mid 1990s, and to a claim that Hollywood's pact with CGI leads to a cinema mainly interested in the "promulgation of fantasies."[1] Willis contends that far more vital and affirmative signs of "digitality" in filmmaking are visible not in big-budget studio films, but rather in independent, "art-oriented" cinema, an early example of which is provided by the Danish *Dogme 95* movement headed by Lars von Trier and Thomas Vinterberg. Advocating a direct and authentic form of cinematic realism, their documenting, voyeuristic style and their use of domestic digital-video (mini-DV) technology is "indelibly connected" (28). In an equally significant development, new documentary modes themselves become, at once, destabilized and repurposed due to the new immediacy and transparency afforded by consumer-level digital equipment, characteristics which are paradoxically both consequent from the thorny issue of the broken indexicality of the digital image.[2]

In fiction film too Willis holds that the conventional 'seamlessness' of filmic narrative is subject to distinct signs of rupture in which mixed media combinations "call...attention to disparate registers of reality, memory or consciousness."(38) Richard Linklater's mix of live action and rotoscoped animation in his *Waking Life* (2001) and Eric Rohmer's *The Lady and*

the Duke (2002), which sets its tale in a digitally painted Paris of the eighteenth century, both indicate a "hybridity" of the image where live action is combined and layered with computer-generated imagery. Finally, Willis highlights the emergence in sections of independent cinema of new digital modes of filmmaking that pose a more visible challenge to erstwhile principles of cinematic form. Firstly she posits a "desktop aesthetic," which shatters the singular integrity of the cinematic frame, replacing it with "the visual syntax of the computer screen and its cacophony of frames and layers" (39). The example *par excellence* is Peter Greenaway's *Tulse Luper Suitcases* (2003), a narrative film composed of multiple frames-within-frames which is actually just one part of a multi-media project comprising a network of "cinematic objects", gallery installations and online resources. Secondly, Willis identifies a new type of "database narrative": film storylines that work by foregrounding processes of selection and combination usually hidden in the unilinear plotlines of classical narrative cinema. This formulation is seen in the visual structure of Mike Figgis' *Timecode* (2000), whose radical splitting of narrative space divides the frame into quadrants that each play out different spatial configurations of the same storyline. But it is also seen in the opposite tendency where the "database" selection is based on the chance-driven "unfolding" of events, as in Alexandr Sokurov's *Russian Ark* (2002), a single-shot feature film whose gliding steadicam *duree* paradoxically draws attention to contingency in time and the nomadic "encounter" with cinematic event. Or the "temporal immersion" of Craigie Horsefield's *El Hierro Conversation* (2003), a four-screen, nine hour long experiential video installation unveiling the minutiae of life in a small village in the Canary Islands.

Willis' survey of a nascent digital cinema outside of the confines of "Hollywood" offers an affirmative view that these new modes and forms have exploded the boundaries of film creating "an extensive moving image discourse unparalleled in the history of cinema." (4) But despite this radical innovation and diversity in praxis her investigation fails to open out equally new lines of critical thinking. On the contrary, Willis' work is indicative of a critical perspective that remains largely trapped within the orbit of an orthodox materialist concept of film culture. Whilst it acknowledges the digital as a mode of abstraction and evacuation of the physicality of the world, it proposes that the job of theory, as well as praxis, is to undertake the return journey from abstraction back to the 'real'. In Willis' own words, "the goal centres on making the intangible tangible, of using digital technology towards very material ends" (97). This perspective typically results in the validation of a singular mode of digital cinema: namely, a rejection of 'blockbuster' digital aesthetics, assumed to evoke mere

fantasy and escape, and a corresponding endorsement of artistic practice that references an orthodox notion of the 'real' inviting an analysis which proceeds "not only in aesthetic terms, but in economic, political and social terms." (95). While the methodology of digitality differs from the indexical medium of film, the purpose of 'representation' remains the same. Digital technologies are seen as no more than tools in the formal repertoire of cinema, leading to identifiable changes in film form, but leaving fundamental categories (image, world, technology) untouched. More trenchantly put, a materialist approach sees the digital as a nominally intermediary step between a physical input and output, so that in the words of Janet Harbord, "There is no separate object that can be designated 'digital' film...digitalization exists [only] within and across the activities of production, distribution and consumption." (Harbord: 138).

Cinematic effect

To examine the critical-philosophical perspective of materialism more closely, to uncover its geneology, its founding assumptions, and its inadequacy as a means to think 'the digital' in cinema, it is necessary to examine its proposition of a key concept in the power of cinematic images: filmic 'effect'. It would seem that materialist film theory favours epistemological questions over ontological ones, or put another way, questions as to film's operations and utility over questions of essence and being. This is not to say that the question of ontology is absent from the enquiry, rather that film's ontology is reductively linked to its indexical connection to the world and thereafter subsumed into a more vital discussion about its epistemological function. A wider ontological debate is therefore hidden from view under the more vociferous claims as to its proclivity for realism and its impact on the spectator, which in most of the twentieth century, could readily be taken to be the 'social spectator' defined in relation to 'the masses' rather than through individualised relations to the screen, which would subsequently become the focus for phenomenological film theory. From this standpoint, film's indexical base is crucially connected to its capacity for realism and one of the tasks of a materialist film theory is to show how it 'feeds back' into the real: how it 'acts' on the world. On the side of critical theory, this issue of impact, or 'effect' has been as central to a materialist analysis of film as it has been to 'statist' views on film, as indicated by the many attempts to regulate and control cinematic content in the twentieth century, from the

Hays Code in the USA to the European Fascist authorities' restrictions on Hollywood imports in the 1930s and 40s.

For materialist criticism, one of the first responses to this new focus on effect was formulated in Walter Benjamin's now seminal essay on 'mechanical reproduction' which not only seeks to explain how film as a social-technological apparatus inflects and produces subjectivity under capitalist economic conditions, but also in a wider sense consolidates a Marxist narrative of the usurping of the spiritual world by the material (Benjamin, 1999 [1936]). Whilst arguing that film's reproducibility destroys the 'aura' of the erstwhile artwork, Benjamin both decries its enslavement to capitalist organisation and marvels at the new possibilities of the film image, not least in totally reforging human 'apperception.' The expunging of aura from the artwork, especially from the reproduced and mass-distributed photographic image, is a political as well as critical move: it recasts the work of art as a 'public' object of labour and politics under the auspices of a modern condition of distraction rather than a private one of aesthetic contemplation. At the same time, however, it could be said that the invention of a radical political dimension of the photographic reproduction is at the cost of a diminution in the ambiguity of the image, its spatio-temporal connections as well as its playful and mimetic function.[3]

The question of exactly how to harness this new radical potential was less clear to Benjamin than it was to the great Soviet directors including Eisenstein. For Benjamin, the photograph's mass-reproducibility releases, at least potentially, the image-content from the determinations of meaning imposed by institutional context and ritualistic function. Beyond this, the film camera's penetration of the world totally situates the modern subject within its fragmented reality. Benjamin, unlike Adorno, considered this a way in which technology provides a democratization of the image. Even more strongly, Eisenstein's adoption of a constructivist montage method was geared to the production of revolution, or more precisely revolutionary 'effect,' just as the factory was geared to the production of goods and materials (Eisenstein, 1925). All this in opposition to film's other more sanitising cultural role which by the mid-1920s was firmly established: in Benjamin's words, "the capitalist exploitation of the film [which] is trying hard to spur the interest of the masses through illusion-promoting spectacles and dubious speculations" (226). Both Benjamin and Eisenstein, then, were grappling with film's undeniable power to affect 'the masses', to stir them from their acceptance of the world 'as it is' by revealing new dimensions of reality and, in the case of Eisenstein, adopting a form corresponding to the idea of a 'manufacturing' movement of history.

In fact, in his writings Eisenstein promulgates a notion of an abstract and predictable relation between image and audience, one that is carried over and consolidated in his cinematic art where, even more strongly, the 'attraction' – or the programmable shock moments in the work – is held to be "the mathematical calculation of...effect" (Eisenstein 1926:64). Already in the vehemence of both Benjamin's elimination of 'aura' and Eisenstein's critique of bourgeois cinema there is the call for a strategic divorce in modern cinema between on the one hand a 'sentimental' power to penetrate and move that is deemed static, individualized, and commodified (exemplified by Griffith), and on the other, a cinematic impetus that is aligned to the dynamic, collective and revolutionary power of 'effect'. Benjamin went further in his famous warning about the reappearance of aura (an 'aestheticization' of raw emotion and spectacle) and its proclivity for fascism. In searching for an alternative filmic ground which could avoid the dangers of auratic modes, Benjamin offers the concept of 'innervation' as a means to harness effect for the technological potential of the medium to both represent the modern world in its ever-new material reality, and to extend aesthetic perception from its erstwhile basis in individual contemplation, towards a new collective realization. But, as stated above, Benjamin's promotion of such a theory was itself achieved at the expense of reducing the complexity of filmic reception in the 1930s to a distanced mode of distraction.[4] Nevertheless, in comparing Benjamin's ambivalence on cinema with Eisenstein's certitude on effect, we come tentatively to a first materialist acknowledgment, if not iteration, of affect in cinema.

The tension between effect and 'sentiment' is also articulated through a second stress point: that between experimental, non-narrative cinema and the 'mainstream' – operating through a commercial imperative and predominantly narrative in nature. If the Surrealists and other avant-garde movements of the 1920s defined themselves largely in opposition to the 'easy' narratological syntax of the mainstream then materialist practitioners like Eisenstein profess a more ambivalent relationship to the fiction film: cognisant of the 'capitalist exploitation' of narrative cinema but nevertheless coveting its popular reach and proselytizing potential. Indeed Eisenstein sees in D.W. Griffith something of a model for a powerfully emotive cinematic expression, albeit "with a social purpose that is hostile to us."(Eisenstein, 1924: 40). The problem, post-Eisenstein, of whether to embrace this populist potential, or abandon it altogether in favour of 'formalism' (the charge levelled against Eisenstein) comes down to a fundamental question for film materialism: are the normative conventions of cinematic

narrative ineluctably structured through capitalist paradigms or can those same conventions be utilized for a 'progressive' materialist agenda?

Indeed, through the structuralist turn of the late 1960s onwards, the discourse of co-option vs. resistance appears as the main problematic in articulations of film materialism. Illustrative of these positions are Comolli and Narboni's *Cinema/Ideology/Criticism* (1972) and Marxist filmmaker Peter Gidal's *Materialist Film* (1989). Comolli and Narboni's taxonomy of cinematic ideology notes in their 'category (e)' how resistance can issue from film's "unconscious," even when on the surface the text seems complicit in perpetuating "dominant ideology." This forms part of the trend in film studies scholarship of the time engaged with a re-examination of film cycles and genres that were previously dismissed as ideologically regressive or conservative. Interestingly, the majority of this work of reassessment was undertaken by feminist scholars on the most 'emotive' genres of melodrama (including the 1950s films of Douglas Sirk) and the musical. Eschewing the slippery terminology of affect, the more materialist oriented criticism of the time reframed the discussion in terms of a formal 'excess' which, as Kristin Thompson describes, are the material aspects of a film which escape the unifying structures of narratology oftentimes displaced onto aesthetic anomaly such as wild framings and violation of editing codes.[5] Peter Gidal for his part summarises the positions of ideological criticism and lays bare the stakes for materialist film when he writes that, "without a theory and practice of radically materialist experimental film, cinema would endlessly be the 'natural' reproduction of capitalist and patriarchal forms." (Gidal, xiii). For most materialists of a more or less orthodox persuasion, (including the 'digital materialism' of Holly Willis) the answer to the question of whether so-called normative conventions of cinematic narrative can be utilized for a materialist agenda is seemingly negative.

Discourses of the digital

The introduction of digital technologies into the process of filmmaking and film viewing in the 1980s initiated, as we have seen, a rapid and far-reaching reassessment of the ontological dimensions of the filmic object and the assumed stability of its cultural forms. This sea-change in the history of the moving image can be seen, in retrospect, to have caused a range of critical responses, of which Willis' is but one of the more balanced. The polarities of the debate were defined at one end by the shrill cries heralding the "Death of Cinema" under the

auspices of a "digital dark age" (Paolo Cherchi-Usai, 2001), and at the other by effusive endorsements like that of filmmaker David Tamés (2002) who celebrated the "escape from the physical limitations imposed by the mechanical and photochemical technologies of the 19th century". Finally there were the more measured analyses that focused on the surface similarity between analogue and digital production, or the "remediation" of old by new (Bolter and Grusin, 1999).

For materialist film theory, the incorporation of digital techniques in film production was initially accepted with a degree of cautious optimism. Digital technologies had entered into experimental film in the heady countercultural epoch of the 1960s and 70s, but by the time they also made inroads into mainstream commercial cinema the cultural scene in America looked very different. The generation of liberal and materialist film critics who had championed the brief flowering of a cinematic counterculture in late 1960s and early 1970s Hollywood had seen this supposed New Wave assimilated or snuffed out altogether by the 'Reaganite' cinema of the 1980s.[6] In the discourse of cinema and politics, digitality raised once again the question of resistance and at the same time opened up a number of fronts for challenging the stranglehold of plot and character-based mainstream cinema with its model of "cathartic-identification" and associated ideology. Theorists like Malcolm Le Grice (who was also an experimental filmmaker), writing in the 1970s and 80s, wrote of the great potential for experimental cinema in the digital age, in which the hackneyed paradigms of narrative film could be refreshed and invigorated in progressive ways by the introduction of the computer. For Le Grice, as for Youngblood previously mentioned, each technological mode articulates its own specific intellect, a set of ideas or 'ideology' that is embedded into its operations. Concomitantly, filmmaking that incorporates digital intellect such as random access, non-linear permutation, and repetition, "represent[s] the development of philosophical constructs which constitute more appropriate 'models' for contemporary experience than do those offered by the singular and fatalistic structure of classical narrative" (247).

We can see this search for "more appropriate 'models' for contemporary experience" mirrored later in Willis' designation of the 'database narrative', one that might be applied to grass-roots 'reality' cinema like *Tarnation* (Jonathan Caouette, US, 2003). This film, edited on a commercially bundled home computer editing package is literally composed out of smartly selected and carefully configured snippets of consumer-gauge super-8 film stock, a technological and economic feat which only becomes possible several decades after the original footage was shot in the domestic settings for which its use was intended. Even

though the 'instrumentalist' and democratising use of digital technologies was arguably somewhat inevitable once the associated hardware and software entered the mass-market, Le Grice points to a much more daring impetus that drove the early practitioners of digital filmmaking, connecting them with the pre-digital experimental cinema of Kurt Kren, Maya Deren and Stan Brakhage, whose work in some ways anticipates the disjunctive linkages of the computer. In terms of filmic time, for instance, these works "aspir[e] to a form of temporal connectivity better represented as a matrix than as a single linear causality" (ibid.). What interests Le Grice is the new facility given by computer technology of challenging normative narrative cinema, and specifically its "condition of narration – temporal sequentiality." (201). We shall see this condition of narration contested in chapter five of this thesis, when digital configurations point towards virtual temporalities over chronological ones and towards fractal architectures of space-time over linear ones. In the armoury of the experimental filmmaker, then, digitality reinvigorated the power of film form to resist a complete assimilation or commodification by capitalist forces. However, this heralding of the digital image harks back to the excitement manifested by Benjamin, Siegfried Kracauer and other moderns who celebrated a film image beholden not to its fantasy-illusory orientation – the commercial model pursued by the "industry" – but to its realist-revelatory capacity. The materialist discourse of resistance continues apparently unchanged into the digital era. And in terms of film form, Le Grice himself admits that there is a lineage of experimental cinema that similarly utilises the "digital intellect" of non-linear permutation and repetition (and we would have to extend backwards his references to Vertov, at least). Le Grice's enthusiasm for the possibilities of digital cinema seems merely to repeat the materialist search for a strategy of resistance to the commercial imperative. Moreover, his retrospective alignment of digital film form with older experimental cinema seems to undermine any true innovation in film practice. Far from establishing a new ground for thinking about cinema, Le Grice paves the way for a certain approach to film and digitality which asserts that, in Thomas Elsasesser's words, "cinema had always in some sense 'wanted' to be digital" (2010: 173). This would seem to be a first indication that a materialist approach to digital cinema based upon ideological analysis will be ineffective.

Subsequently, Sean Cubitt's work on "Digital Aesthetics" has contributed substantially to the delineation of materialist lines of inquiry into digital cinema, although with the addition of a more critically ambivalent tone. In *Digital Aesthetics* (1998) Cubitt, like Le Grice, aligns digital cinema with a renewal of moving image culture bestowed by digitality. However,

going beyond Le Grice's call for a disruption to narrative sequencing, Cubitt argues that the works of early digital artists like Jordan Belson and John and James Whitney provide a more fundamental challenge to the structure of contemporary visuality. Taking from Stan Brakhage's avowal of a "mechanical perception" as enunciated in his *Metaphors on Vision* essay, Cubitt aligns digital art filmmaking with Brakhage's invitation to "imagine a world alive with incomprehensible objects and shimmering with an endless variety of movement and infinite gradations of color." (Brakhage, 1963). As a corrective to "vision in a world overdetermined by conceptual knowledge" (36), Brakhage offers a kind of purity of light, and a removal of the "artistic mind" from the equation. The issue for Cubitt is not one of narratology, or the replacing of one system (narrative) with another (the computer) but the very atomistic breakdown of an image and its subsequent reordering – a process which follows the code of the machine rather than that of traditional visual art, or indeed that of the artist's consciousness:

> no human control could have ordered the multiple variables [of these early digital films] into coherence. Perhaps, then, Brakhage has a point when he argues that cinema has a specific capacity for renewing vision, registering far more than intention envisages: the marvels of an apparatus autonomous of our scopic regimes. (37)

In linking digital cinema – as does Le Grice – with its forebears in experimental film, Cubitt makes a retrogressive move that attests to an ambivalence in his acceptance of the digital image as allied in principle, or useful in practice, to a materialist project. Just as in the case of cinema in the first few decades of its existence, the question asked by materialism is exactly how to harness the potential of a new technology which is born under the yolk of capitalism. Today, of course, capitalism takes the form of a trenchant globalisation underpinned by neoliberalist philosophy. Cubitt's project is to help in the construction of a new "socialisation" through digital aesthetics, but his equivocation stems from the realization that already, "The fastest and widest impact that computers have had is in deepening the class structures of contemporary society on a global scale" (ix). The commodification and monetisation of computing and network culture is, of course, no surprise in the 'age of planetary computerisation'.[7] But the political stakes for digital aesthetics are, in Cubitt's words, "whether vision as a whole, optical and subjective, can be allowed to become the sole property of a hyperindividuated mind, or whether it can be prompted to produce a new socialisation through a symbiosis of bodies and machines." (30) Addressed this way, a new avenue for subjectivity is, if not opened up fully, then at least suggested in Cubitt's question,

one which is not based upon a "hyperindividuated" visual regime, but rather on "social instinct". How to theorize this social instinct, or where to look for it in digital aesthetics, is left unspecified. Importantly, the characteristics of digitality itself are not regarded as a ground for new connectivity and new thinking. If there is a social instinct to harvest in digital media it seems that Cubitt looks for it in the concrete forms and outputs that emerge from it.

This ambivalence in the search for an effective theorization of the forms and directions of digital culture is extended in Cubitt's later work, *The Cinema Effect* (2004) which narrows its focus away from the database, satellite imaging and network culture towards the more specific case of cinema in its more commercial or popular forms. As in the earlier work, Cubitt opens his critique with a tacit acknowledgement of how "digitality" has impacted film theory in destabilizing subjectivity, and by extension certain epistemological categories including the film-object itself (my introduction poses some of the problems in defining 'digital cinema' itself). Cinematic subjectivity needs to be recast, Cubitt argues, "in the division of object from subject in the relationships with light particles in time, the horizon of the screen, or cinema's represented worlds" (2004: 4). Within the orbit of this ambition, Cubitt's specific objective is to investigate certain problems of space and time that arise from the case of digital cinema or, more precisely, how the case of digital cinema has provoked a need to re-examine these founding categories of cinema per se, ranging from the Lumière's and early animation to the New Hollywood and digitally enhanced 'event' movies. Digitality, then, incites a retrospective reassessment of the cinematic object which, in Cubitt's case, means recognizing the major challenge for materialist film theory which is the recasting of the very point at which materialism "begins":

> Our task here is... to work at a moment prior to the constitution of either the [formalist] model or the represented as a given. We have to start, then, not with things but with relationships and especially with change. (5)

From Cubitt's sceptical but open-minded approach in *Digital Aesthetics,* there is a realization in this later work that the very idea of digitality, the numerical designation of the object, puts materialism under strain and the intellectual journey, supplementing Youngblood's earlier call, has become a search for a "digital language" with which to recast the materialist critique of cinema, rather than an attempt to investigate any "effect" of digital cinema per se. In fact, according to Cubitt, the characteristics of contemporary digital cinema – which he takes to be large scale Hollywood-type movies – can already be seen in the "baroque" trends emanating from the 1970s. In his own words, a new language is needed "because in a digital age the

humanities can no longer afford to remain innumerate" (33). But the extent to which Cubitt succeeds in developing such a language, especially a 'numerate' one, is a moot point. Far from exploring the numerical or algorithmic structures that could inhabit the digital image, Cubitt reverts to the old terms of materialist representation, claiming that digital cinema, in its "Hollywood" manifestation, is abstract to the extent that,

> It is no longer the case that films respond to, refract, express or debate reality or society. Mass entertainment has abandoned the task of making sense of the world, severing the cords that bound the two together. This, as much as economics, is what has driven the North American cinema into the realm of digital imaging." (245)

Here Cubitt argues that it is not that digitality has 'dematerialized' the world, but quite the reverse – the abandonment of any materialist purpose in entertainment media has in some ways led to the digital. The disconnect with reality is not an effect of digitality, it is what connects digital cinema to its pre-digital antecedents. "[T]o some extent nothing fundamental has changed: the machines execute the same tasks humans used to, their skills turned into fixed, 'dead' capital" (ibid).

There is, in effects-driven cinema, a flight from history, a tendency to create highly immersive worlds that condense their own sense of internal history revolving around contemporary market discourse. The purpose for this removal from history is to "abstract themselves from the temporal to grasp for the eternal" (246). Instead of Comolli and Narboni's "category (e)", where film texts reveal the cracks in the ideological edifice, despite their best efforts to conceal them, "[t]he most successful films...succeed because they have nothing to say: no roots in the social or the material world, alternatives to reality, neither antidotes nor commentaries" (243). This makes these films quite inaccessible to the kind of ideological critique of the kind exemplified by Robin Wood or Andrew Britton. There is a wanton denial of reality here, for "as the supposed triumph of consumerism decays into poverty, injustice, and ecological catastrophe" the films themselves turn their gaze inwards (247). For Cubitt, digital technologies are employed instrumentally to create these escapist fantasies, solipsistic and artificial worlds which intensify emotions, beauty and the adrenalin rush of the real world. This supercharged affect links to baroque art's elevation of spiritual values, but with the important distinction that where the baroque presented its stylised visions to reach out to the world, digital cinema's "spirit" does not feed back to reality or ideology, instead remaining enclosed in "bubbles of space-time" (247). At the same time as Cubitt laments this lack of ambition in relation to ideology, he concedes that in the area of

"morphology" digital event cinema offers its hyperindividuated audience a spectacularization, "a certain seamlessness, a generic expectation of something new, a willingness to sever connections with fundamental laws of nature" (245-6).

Cubitt defines this spectacularization as "neobaroque", an anti-realist tendency which entails an "intrinsically decorative structuring of narrative" (223) a stylistic tendency that cements picaresque and episodic narrative with "a series of alternating surfaces: the show, the fetish, the spectacle, the soundtrack album, the star, the performance, the auteur" (217). For Cubitt, this mode of spectacle fundamentally alters the temporal dimension of classical cinema based as it was on a thorough "processing" of cause and effect and an organic balance between plot and the contingency and ambiguity of the real. By contrast, in digital cinema, randomness and dumb luck are the motors of narrative and cement a "spatialization" of narrative form. "Space succeeds time as an organizing principle...a spectacularization of plot in an ironic mode in which mere coincidence satirizes the classical working through of causes and their effects" (249). These spatializing tendencies were already visible in pre-digital technologies like the steadicam but accelerated considerably with the introduction of digital forms of image processing that disseminated spatializing structures like the database and the bit-map image, technologies which "shaped the ways in which the diegeses of the neobaroque were built" (249).

The new mocks the older model by simulations and ironic restagings that eschew ambiguity and contradictions from which are born authentic or "worked-through" life-dramas. Homing in on film form, Cubitt takes James Cameron's *The Abyss* (1989) as an early example of CGI cinema that showcased compositing possibilities for the sci-fi genre. In this tale of undersea exploration we have the scene where a serpentine aqueous creature, all evanescence and dissembling guise, presents itself to the protagonists of the sub-ocean installation. Up until now, Cubitt notes, the film form has been characterized by a typically "neobaroque" camera mobility. However, despite the Peircean "firstness" of the nebulous pseudopod, rendered using state-of-the-art digital morphing and compositing methods, this particular scene reverts to a series of cuts from discrete angles that reorientate the constantly shifting entity in space and time. This relapse back to traditional cutting, which is to say, back to a classical organisation of sequenced images, contains the otherwise protean image analytically, and "serves to unify and give identity and direction to the unnameable water, which is all we can discern in the first frame" (255). This digitally produced "firstness" which would seem to invoke the Lumiere's primal, "uncoded" adventures in the moving image, is instead what

Cubitt sees as a typical activation of CGI technologies to produce an incantatory effect, "the drifting reverie appropriate to a pseudo-reality reconstructing itself constantly from clouds of poligons, pixels, photons below the threshold of conscious perception" (ibid). Cubitt's argument revolves around an ever increasing mobilization of digital image technologies to produce this stupefaction. In *The Abyss* the rollback to "identity" editing during the scene in question can be regarded as the last vestiges of an old Hollywood style. However, this concession to an older style was only temporary. Ten years after *The Abyss*, in Alex Proyas's *Dark City* (1999), Cubitt notes how the editing does not reground the morphing event as previously. In the latter film, the morphing is not restricted to one creature or entity but extends insanely every night to the material fabric of the dystopian "dark city" as well as to the immaterial conscious minds of its inhabitants. In fact, point-of-views are often inhuman, "the viewpoint of a mechanical perception autonomous of human sensoria" (257). Where, in its moments of most intense digital manipulation, *The Abyss* resorts to a traditional repertoire of cutting to foster identification with human protagonists, in the later film cuts are as likely to be motivated by graphical rather than continuity matches. This, suggests Cubitt, is a sign of the victory of the new over the old, or the domination of the "photographic" by the digital or "graphical" code.

Although Cubitt argues that CGI is used to create the enclosed diegetic spheres of the neobaroque, devoid of connection with reality, he also points out that an effect of digitality in *Dark City* is the supplanting of a "machine perception" over a human one, generating a sense of openness and possibility. We are back, albeit briefly, to the prospects and potentialities offered up by "digital aesthetics" for the decodification of media, opening up new avenues not only in art and representation, but also in the realm of human perception. Cubitt's oscillation between on the one hand asserting the power of digitality to completely reconfigure cultural formations, and on the other his pessimistic assessment of digital cinema's ideological disposition testifies to a problem for materialist approaches to digital media. For Cubitt this impasse involves a necessary drawing back from the limited hopes he advances in *Digital Aesthetics* which at least entertained the possibility of digitality being "on the side" of visual renewal. By contrast, his later critique of digital cinema places contemporary aesthetics "on the side" of complicity in the face of an "emergent loss of an ideological structure to social meaning because [digital cinema] no longer pretends to represent the world" (250). Despite Cubitt's eclectic and probing critique, his search for a method by which to define "digital aesthetics" in terms of a social formation ultimately fails

due to the narrow frame of reference prescribed by classically materialistic concerns. This impasse in analysis condemns more or less any manifestation of digital culture (rather than the digital-as-such) to a fate of final absorption into the wider schema of global capital, and the neutralization of its immense potential.

Cubit requisitions the terms of digital media in an otherwise traditional critique of media representations. In a telling passage Cubitt says digital compositing

> moves away from the infinite [of possibilities], not toward totality but toward the stasis of zero as a balance of forces, producing a hypnotized subordination to the magic of illusion. Artificial but not synthetic, this is a moment of subordination to the machine as consciousness (256)

Cubitt's intervention in the materialist debate on digital cinema is both penetrative and wide-ranging; however his writings never amount to an explanation of concrete 'apparatus' of digital cinema, much less to a theory of digital affect. As I show in chapter three of this thesis, Cubitt's view of the instrumentalism and stupefaction which plagues the mainstream completely misses the generative and propagative aspects of the digital itself, and the ways in which these characteristics find release in the crevices of 'digital cinema'.

New materialism

Finally, a survey of materialist approaches would not be complete without regard to a major development over the past two decades in the conceptualisation of the frames of reference, or the 'onto-epistemology' of the subject, namely 'new materialism'.[8] In this period, a number of scholars such as Karen Barad, Jane Bennett, and Bruno Latour, have sought to significantly extend the terminology, scope and ethical reach of materialism as it was purveyed in the twentieth and early twenty-first century by some of the aforementioned theorists.[9] Its interdisciplinary grounding in science, philosophy, and the 'political' fields of feminism and cultural studies make new materialism a compelling attractor apparently in tune with a 'progressive' agenda and 'eco-conscious' disposition which to a certain extent provide a challenge to the domineering sway of neoliberalism. The basic tenets of new materialism can be easily gleaned from the title of Bennett's influential work, *Vibrant Matter: A Political Ecology of Things*, which implies an ontological vibration and interlacing of matter at micro and macro levels, as well as an agential force in 'things', both solid and not, commonly regarded as inanimate. In this volume, Bennett advocates for a new

consideration to be afforded to all types of matter (including energy and signalitic materials) which, after all, possess a "vital materiality" and emit agential force in the world. As Bennett says, "A lot happens to the concept of agency once nonhuman things are figured less as social constructions and more as actors, and once humans themselves are assessed not as autonoms but as vital materialities" (2010: 21). As an explanatory approach for material effects in the world, and a recasting of ethical considerations outside the ambit of the purely human, new materialism has a seductive power. If the ideologically based historical materialism to which the study of film was largely indebted in the mid-twentieth century was to an extent replaced by cultural studies and aesthetic criticism in the latter years, then new materialism can be regarded as a 'molecular' reconfiguration of the parameters of material relations, human and non-human, as well as in 'mediatic' processes of all sorts. Jussi Parikka (2012) notes how new materialism and other scientifically endowed approaches to meaning creation in symbolic processes such as film have distanced themselves from cultural studies' perceived myopia in the science of materials, signals, vibrations and rhythmics. (96). This opens up a new method of textual analysis which can potentially enrich the reception of expressive art with a much more precise awareness of and attention to heterogenous material processes and interactions on a truly physical level. Although Bennett herself does not specifically address the question of digital technologies we can extrapolate a project which sees a challenge to the 'myth' of immateriality around digital communications and imaging techniques. A scientific awareness of the kind fostered by new materialism reveals the facticity of digital materialism, composed as it is out of mineral compounds, substances, particles, waves, voltages and energies, all processed and instrumentalised 'mechanically'.

As part of the exposition of material vitality and the 'conative' body, Bennett imports the terminology of affect, but strangely not as a part of the conation involved in interactivity, but more as a 'mechanism' of distributive agency. That is, although a body must adopt "continual invention" to maintain the specific relation that obtains between its various connections, affective relations are considered in a mechanistic way "to creatively compensate for the alterations or affections it suffers" (22). In other words the process of affect is a zero sum game in a cauldron of mutually affecting and affected bodies. In this, she does not afford the central importance to affect as a genetic font of the new in thought, and hence driver of change as does, for instance, Deleuze (as we will encounter later). Ethically too, the ontological challenge to anthropocentrism launched by new materialists in their 'democratic' spread of entitlement to things means the promise, in theory, of a more

egalitarian world where the relations between humanity and nature are rebalanced. As Bennett says, “How would political responses to public problems change were we to take seriously the vitality of (nonhuman) bodies?” (Bennett 2010: viii). Equally, however, Parikka warns that “[w]hat was often left out of such techno-materialist methodologies was the more political side of thinking through these new materialities” (96). Parikka’s, in fact, is not the only voice registering a disquiet regarding the inherently abstracted and dissipated relation to existing social and political conditions in new materialist writings. Simon Schleusener (2021) in an essay entitled ‘A Politics of Things?’ also challenges a structural vagueness of this political engagement in what he regards as Bennett’s myopic stance on the “actual hierarchies informing the spheres of life and politics.” (527). Far from a contestation of neoliberalist capitalism, Schleusener sees “the strategy of assigning an anthropomorphic ‘thing-power’ to objects and artifacts (while tending to bypass an analysis of the relations and processes which led to their production) may ultimately reproduce the capitalist strategy to mystify and ‘enchant’ commodities” (529). As a kind of polar opposite to the modernist materialist thinkers whose historical materialism led to a critique of the effects of film art on ideology and politics whilst often neglecting to analyse the apparatus itself, Bennett’s brand of new materialism effectively leads to the almost total abandonment of political critique itself. Raising the onto-epistemological question of vibrant matter, whilst valuable in mapping the techno-aesthetics of digital cinema, also requires a concomitant analysis of the concrete conditions and power dynamics of capitalist production, which after all dialogically affects most every ‘thing’ in the world, contributing to its power/lessness.

As a final but important contributor to the canon of new materialism, Shane Denson’s (2020) recent work on the ‘discorrelated image’ seeks to apply certain insights of the new materialist approach directly into the critical discussion of new media and digital film. In highlighting the ‘discorrelating’ effect of the computer on human perceptual and experiential faculties, and in situating their impact in the affective realm, Denson’s trajectory and critical framework shares some methods and objectives of this current thesis. However, the absence of any theory of the creative impetus and inventive potential which lies at the heart of the digital principle of disjunction and connection, difference and repetition, renders Denson’s work, like that of new materialism generally, lacking a dimension of social renewal that I take as imperative in the promulgation of an ethical grounding for digital cinema. Denson’s basic thesis starts from the assumption that today's image production technologies imply a break from an earlier ‘correlation’ between subject and object where photographic media

was cut to the cloth of human phenomenological coordinates. This, according to Denson, is the 'postcinematic' era, a new material basis upon which images are produced signalling a change from the previously commensurate techno-phenomenological rapport between screen and audience. Today, the current dominance of digital new media augurs a "dismantling of individual, subject-oriented perceptual vistas" (193) inaugurating a new 'metabolic' function that connects humans and environment. The algorithmic and digital infrastructure of computational systems are of another order to human perceptual and experiential faculties to the extent that they are "fundamentally 'discorrelated' from phenomenological processes of noetic intentionality" (2). Certain aesthetics of contemporary moving image culture such as digital glitches and artificial lens flares act as 'emblems' of discorrelation, making visible the substratal disconnect from the analogue world. Films containing such emblems can be read as "allegories of the experiential transformations that ensue as a result of our encounters with the underlying processes of computation and its altogether nonhuman affectivities" (3). Such media objects provide "sensory complements to subperceptual events, helping us in a sense to negotiate the transition to a truly posthuman, post-perceptual media regime" (2).

The argument that resonates particularly strongly between Denson's work and my approach is the notion that the technological infrastructure of digital images acts on a pre-conscious level: one that is logically prior to perception. The microtemporal and algorithmic mechanisms that define digital operations work on our perceptual and cognitive faculties in a fundamentally different way from analogue media, introducing a new type of active mediation that instigates a direct connection between technology and bodies thereby forcing us to reconsider essential categories of subjectivity, representation and society. In this way Denson posits a materialist argument that blends into phenomenological terrain, which is the focus of the next section. But whilst I agree that representation is put under strain by the infrastructure of the image, my study differs methodologically from Denson's firstly because I do not consider film from the standpoint of 'allegories' or metaphors for digital transformations, but rather as actors or co-participants in the affective and subjective changes occurring in a technologized socius. And secondly the trajectory I propose is away from an emphasis on the end-results of digital processing and towards an investigation of the 'digital Idea' which produces it. Denson's study is an exercise in establishing the new 'metabolic' relation of the digital image to human subjectivity, but whilst this contention is a compelling argument on the globally colonising force of computational image-industries, it leads to an over-emphasis on exteriority – an analysis too beholden to the surface 'effects' of

technology, at the expense of a thorough investigation of the 'internal' molecular-cathexis of digital affect. Correspondingly, inspecting Denson's exemplary corpus of works, examples are selected that express the metabolic aspect of 'discorrelated images' quite obviously in the outward forms and subjective effects of the filmic text. Hence films such as *Blade Runner 2049* (Villeneuve, 2017), *Paranormal Activity* franchise (2007-12), *Her* (Jonze, 2013), *Ex-Machina* (Garland, 2015), *Unfriended* (Levan Gabriadze, 2014), together with a manner of multimedia installations, short films and video games outwardly showcase their substantial CGI deployment or obvious digital themes and aesthetics.[10] In contradistinction, my thesis attends to a tangential digitality, the films of the 'digital interregnum', which is to say a moment where the digital aesthetics are firstly the result of the digital idea and only secondly outputs of technologies of computerisation. My focus is therefore less in a modified norm of production that 'metabolises' with a newly configured world, and more in the hidden code that operates silently beneath the surface: the granular and the cellular forms, the numerical and probabilistic orders, the disjunctive and the recombinant relations, which are yet to congeal into recognisable forms.

Finally, although Denson mentions the 'ethics of discorrelation' by which he seeks to discover the possibility of agency in a newly constructed edifice of human-world interaction where digital networks and artefacts articulate the conditions of life, the question of the political is left hanging. Denson offers no worked-through notion of how a reshaped social and political sphere can emerge. In fact, ethical renewal seems blocked in Denson's field of discorrelated images where, as he comments, "The [digital] camera thus imitates the process by which our own prepersonal bodies synthesize the passage from molecular to molar…replicating the very process by which signal patterns are selected from the flux and made to coalesce into determinate images that can be incorporated into an emergent subjectivity" (33). In replicating human cognitive processes, this digital perception also presumably replicates the resultant social order. The problem is therefore not only how to escape social control within a computerised surveillance culture, but also how to account for a true agential impetus or politics in the first place. In a situation where human sense ratios and perceptual faculties are so captured by the digital camera, and where affect is subject to technological imbrication at the same molecular and electromagnetic level that is involved in the pre-individual processual interactivity lying at the foundation of thought and action, where is the space for political intervention? Ultimately, without a theory of the virtual, which will be theorised below, the 'creative moment' or a 'line of flight' from the

determinate material patterns of the discorrelated image is absent, and the subject is forever caught in a technological bind.

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[1] The so-called 'Death of Cinema' debate had many adherents amongst which were Paolo Cherchi Usai (*The Death of Cinema: History, Cultural Memory and the Digital Dark Age*, 2001) and more recently André Gaudreault and Philippe Marion (*The End of Cinema: A Medium in Crisis in the Digital Age*, 2015). Although not directly concerned with digital cinema per se, Laura Mulvey's *Death 24x a Second: Stillness and the Moving Image* (2006) is inspired by the capability afforded by technology enabling a reassessment of the cinematic past.

[2] Willis sees examples of documentary's new digital forms in Bennett Miller's *The Cruise* (1998), Agnes Varda's *The Gleaners and I* (2000) and in the short films of Tommy Pallotta and Bob Sabiston, where *actualité* footage is transformed by a process of overlying animation.

[3] Miriam Hansen (2002) argues that whilst Benjamin considered that modernity in general enhanced the opportunities for mimetic relations between subject and object, in the case of cinema "collective reception is segregated… subsumed under the notion of distraction, which in turn is reduced to a Brechtian attitude of critical testing and thus robbed of its mimetic, eccentric, as well as mnemotechnical dimensions" (71).

[4] From the point of view of feminist criticism, Miriam Hansen again critiques a mode of distraction which "elides – and all too readily surrenders – the regressive aspects of the cinema, its mobilizing of pre-rational mental processes, and thus unwittingly joins the long tradition of bourgeois rationality that asserts itself in the containment and exclusion of the other, of sensuality and femininity." ('Early Silent Cinema: Whose Public Sphere?' *New German Critique* 29 [Spring-summer 1983]: 180).

[5] For a materialist account of 'excess' see Kristin Thompson (1986) 'The Concept of Cinematic Excess' in Philip Rosen (ed.) *Narrative, Apparatus, Ideology*, New York: Columbia University Press pp.130-142. See also Thomas Elsaesser (1972) 'Tales of Sound and Fury: Observations on the Family Melodrama' in Christine Gledhill (ed.) *Home is Where the Heart Is: Studies in Melodrama and the Women's Film*, London: BFI, 1987 pp.43-70

[6] Ronald Reagan was the Republican president of the USA from 1980-88 and instigated a radical right-wing agenda in both economic and social spheres. For an ideological critique of 'Reaganite' cinema see Ryan and Kellner, 1988; Andrew Britton, 1986; and Robin Wood, 2009

[7] The 'age of planetary computerisation' was a term coined by Félix Guattari in his work *Schizoanalytic Cartographies* (2013).

[8] 'New materialism' is in other contexts and by other scholars also referred to as 'speculative realism', 'agential realism' and 'object oriented philosophy'.

[9] See Barad (2007) *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Bennett (2010) *Vibrant Matter: A Political Ecology of Things*, and Latour (2004) *Politics of Nature: How to Bring the Sciences into Democracy*

[10] Denson does analyse one cinematic example that I also examine in a subsequent chapter, namely Shane Carruth's *Upstream Color* (2013). However, although we align in some aspects of the dispersal and overlapping of subjectivity in the film, I contend that its digital status lies in its granular and molecular constitution, as an example of the digital interregnum, whereas Denson's analysis places the film more generally in its 'metabolic' relation to a wider postcinematic culture.

1.2: Phenomenology

With the arguable exception of new materialism, the emphasis that materialist film theory places on social relations means that it gravitates towards questions of epistemology over questions of ontology. This is not to say that ontology is irrelevant for film materialism, but rather that in its sociological and political orientation, a materialist ontology is taken as given in order that the 'true' object of study – questions of reality, representation and spectator effect – may emerge. On the other hand phenomenology, in its various guises, reverses the emphasis, purporting a greater concern with the totality of human experience, consciousness and being rather than with social relations per se. Moreover, in relation to this research phenomenology has an unambiguous relevance for questions of affect stemming from its investigation of the various ways in which perception and sensation 'touch' us experientially and consciously. From the beginnings of film theory the question of the melding of camera and human perception has been an important dimension, detectable in the work of Bela Balázs, Hugo Munsterberg and Walter Benjamin, but it was arguably in the writings of Andre Bazin, despite his renown as a realist critic, that phenomenology first achieves an autonomous status and distinctive connection to affect. In his essay on the 'Ontology of the Photographic image', for instance, Bazin writes that photography "affects like a phenomenon in nature, like a flower or a snowflake whose vegetable or earthly origins are an inseparable part of their supernatural beauty" (2005:13). This extraordinary capacity of photography, and even more so film, to not only capture reality, but to affect and to move "like a phenomenon in nature" is more than a mere capability – in the thought of Bazin it becomes nothing less than a responsibility and an ethical duty. In his study of Bazin and Italian Neorealism, Bert Cardullo (2011) invests the Bazinian film camera with a "a purifying power and a superhuman impassiveness that could restore the virgin object in all its purity to the attention and love of the viewer" (6). Although Bazinian film theory suffered a fall from grace after the linguistic and structuralist turns of the 1960s, its materialist grounding in the Piercian index – a physical link between sign and referent, instigated a renewed interest following the digital turn in the 1990s, when the question of medium, index and ontology assumes – albeit temporarily –a new urgency.

Bazinian ontology is evidently directed at an intangible, not to say spiritual, quality of film that is somewhat inimical to structuralist, materialist, and sociological epistemology. But the term 'ontology' clearly has different meanings for different strands of phenomenology. We can say, more precisely, that where materialist approaches depend on a theory of

representation based on the relationship between an object in the work of art and an *a-priori* object in the world, phenomenology does not necessarily concern itself with this relationship, but instead with the affiliation between consciousness and experience *per se*. In Vivian Sobchack's words, "Making conscious sense from our carnal senses is something we do whether we are watching a film, moving about in our daily lives and complex worlds, or even thinking abstractly about the enigmas of moving images" (2004: 1). For phenomenologists, though, the film event is no ordinary cultural object amongst others – it provides a nuanced and multi-faceted experience, one whose image reflects and re-presents the world for both consciousness and the body. In comparison with materialist approaches, it is not that phenomenological approaches deny the social and political, it is more an assumption that where materialist analyses demand a separation or idealising 'gap' between subject and object, the filmic image offers, in principle, a unique moment of reconnection that takes us closer to the world as-it-is, before political structuration. Phenomenology's critique of ideological and post-structuralist studies of film is that it removes us from that primary connection: in the words of Gabrielle Hezekiah, semiotic and representational analysis "typically imposes theorizing upon the moving image and the moment of vision is lost" (iii). How one describes and theorizes this moment of vision, is the key project of phenomenological approaches to film, and its influence has gradually, and somewhat paradoxically, grown in era of digital cinema.

Bazin's is but one strand of phenomenology that has been adopted in this regard to produce a rich tradition of film phenomenology, which has gained a new lease of life in contemporary film scholarship particularly in its 'embodied' varieties. In its initial manifestation, Edmund Husserl is often cited as the founder of transcendental phenomenology in the early twentieth century and although he himself never applied his philosophical thought towards the case of cinema, his method was dedicated to examine ways of non-habitual seeing which, as we have seen, is precisely the innovation of cinema as proclaimed by early film theorists of a materialist persuasion. For Husserl, the aim of phenomenology was to arrive at our purely subjective experience of the phenomenon removed of external or contextual influences, to experience the 'pure phenomenon' or 'the thing itself' as it exists subjectively in an act of 'pure seeing.' The methodology appertains to nothing less (and nothing more) than the relation between consciousness and the world. However, in order to understand this relation Husserl demands a bracketing or suspension of 'the world' and a reference of the object at hand to those acts of consciousness which bring the object into the world for us. But how can

this work in the case of film? Film phenomenology attempts to address the film not as a text to be read but rather as an object to be apprehended, and the techniques of cinema such as camerawork and editing become tools of this apprehension rather than ways of creating meaning. Gabrielle Hezekiah in part adopts Husserlian phenomenology to investigate the call to a 'pure vision' in the work of Trinidadian director, Robert Yao Ramesar, famous for envisioning aspects of Caribbean culture – mythologies, carnivals, weddings, and other rituals specific to the region – in the form of analogue and digital videos. In an aesthetic which he calls 'Caribbeing,' Ramesar employs slow motion, exaggerated postures, and surreal imagery in his attempt to "represent the supernatural essence of Caribbean existence beyond the realm of linear realism imposed by colonial rationalist convention" (Hezekiah 2007: 1). According to Hezekiah, Ramesar's videos invoke in their methods a 'Husserlian' stripping away of layers of habitual looking that provokes an intensive reflection on the acts of consciousness through which objects present themselves in perception.

> Ramesar tends to unsettle native and non-native viewers' relationships to culture by suggesting that the cultural object is given only partially in appearance. Culture and ritual are tied to essence, character and performance. We witness their transformation. He slows down the rituals and allows us to step inside. The formal techniques serve to dislodge audiences' sedimented viewing of the cultural object. They allow us to see it anew. (2010: 4-5)

Hezekiah claims to see in the videos an array of techniques that amount to a 'phenomenological reduction,' enabling the viewer "to witness perception as it occurs for us rather than merely existing within the experience of perception" (2007: 2). The formal techniques used by Ramesar: high-contrast, shallow depth of field, and a focus on character and movement rather than linear narrative, is at once a stepping back from the object, and an immersion into its material being. This combination of objectivity and immediacy of experience represents "the space between the act of consciousness – or the perceptual act – and the experience of perception itself" (2-3). This type of 'transcendental' phenomenology insists on there being a final identifiable truth to be discovered by conscious reflection upon the sense-data provided by the moving image and sound nexus.

Despite its tangential application to film theory, most notably by Alan Casebier, a Husserlian strain of phenomenology has been largely rejected by film theorists. For based on an encounter between a 'pure consciousness' and the screen, transcendental phenomenology is viewed as imposing a rarefied and 'programmatic' method in search of essentialist truths of an objective reality – a course considered intractably 'idealist' since the structuralist turn.

Against this transcendental approach, existential or embodied phenomenologists such as Vivian Sobchack turn from an exclusive emphasis on the conscious mind and its role in the determination of fixed essences, to a more 'gestalt' view of experience based upon the living body. For embodied phenomenologists, the Husserlian method forgets the role of the body in constituting the subjective world. Furthermore, where Husserlian reduction seeks to bracket off the world in order to accurately describe the relation between conscious subject and object – the realm of experience – Sobchack follows Merleau-Ponty in insisting that experience is always already qualified by history and culture. Contrary to an ahistorical and acultural 'idealism,' "the phenomena of our experience cannot be reduced to fixed essences; rather, in existence they have provisional forms and structures and themes and thus are always open to new and other possibilities for both being and meaning " (Sobchack 2004: 2).

Sobchack claims that her theories of embodied experience are grounded by a "materialist" rather than idealist understanding of aesthetics and ethics. This is not the same as Marxist or 'sociological' critics, whose materialism is constructed around a critique of human relations set out against overarching historical and economic formations. What Sobchack intends by this designation is the preconscious, more 'primary' materialism of bodily presence that structures cognition: the "carnal, fleshy, objective foundations of subjective consciousness as it engages and is transformed by and in the world" (2004: 2). Consciousness is not, as materialist film theorists would have it, an individual reification of external ideology that precedes bodily action; but neither is it an isolated and abstracted entity as Husserlian phenomenology sees it. Rather, for Sobchack, consciousness is inseparable from the body. Thus, the lived body "provide[s] the material premises that enable us, from the first, to sense and respond to the world and others...charging our conscious awareness with the energies and obligations that animate our 'sensibility' and 'responsibility'" (2004:3). Focusing more directly on embodiment, Sobchack's complaint is that critical and cultural theory's various investigations into the human body since the 'structuralist turn' has tended to objectify it, treating it as a sign, amongst others, to be read. This body, treated as an inert thing-in-itself is, to all intents and purposes, a deceased one, totally forgetting "what it means to be embodied and to live our animated and metamorphic existences as the concrete, extroverted, and spirited subjects we all objectively are" (2004: 1). In Sobchack's lexicon, therefore, experience replaces 'consciousness,' and embodiment replaces 'the body'. For Sobchack the aim of theory is to enable a view of the lived human body as "at once both an objective *subject* and a subjective *object*: a sentient, sensual, and sensible ensemble of materialized

capacities and agency that literally and figurally makes sense of, and to, both ourselves and others" (2004: 2).

What then of film? How can phenomenology go beyond the view of film as merely an instrumental technology that 'expresses' or indicates human intentionality? For Sobchack both structuralist and transcendental reduction misses the point and potency of film as a medium which is capable of reminding us of our embedded existence and being-in-the-world. Moreover, it is apparent that the film image too has an 'embodiment' and address which is more than the 'vision' or 'expression of experience' of the film auteur. Firstly, there is the vaunted autonomy of the cine-machine, which founds Benjamin and Vertov's materialist film evangelism. This is a machine embodiment – the physical configuration and capacities of the "kino-eye." But beyond this there is the sense of film's body which, for Sobchack, is neither reducible to the cinematic apparatus, nor to film form. Instead, it is only visible in the film's "intentional agency and diacritical motion...It is discovered only reflexively as a quasi-subjective and embodied 'eye' that has a discrete – if ordinarily prepersonal and anonymous – existence" (2004: 66n). The film's embodiment is thus integrally linked both to its own physical facticity, and to its own 'act of seeing' – a material and sensible aggregate. Meanwhile, the presence of the filmmaker, whilst not completely excised, is demoted in Sobchack's analysis in order to conceive of the film experience as having a double nature: on the one side there is the mediation/creation of the world performed by the film 'text.' On the other there is the contribution of the spectator, which is also a mediation and creation of meaning. Film's embodiment conditions and guides our own experience of it, making film a significant ally for phenomenology in *extending* the "inhabited space" of direct experience.

> The viewer...shares cinematic space with the film but must also negotiate it, contribute to and perform the constitution of its experiential significance. Watching a film is both a direct and mediated experience of direct experience as mediation. (Sobchack 1992: 10)

Watching a film, then, is neither 'the same' as, nor a bastardisation of, direct experience. The materialist opposition between film representation and 'reality' is made more complex, or nuanced, from the point of view of the encounter between embodied subject and embodied film. Following Sobchack, therefore, "films are extensions of our bodies, extensions of our experiences, or experiences and bodies of our extensions" (Weaver and Britt 2007: 23).

Phenomenology and the digital image

How, then, is the phenomenological position on film impacted by digital cinema? The essential problem to be addressed by phenomenology and theories of film embodiment is one in which the central role of the human figure in representation, and the 'material reality' of the human body becomes incidental, if not irrelevant, in an economy of immateriality and free data flow. To be precise, digital imaging is said to have ruptured the ground of human perception so that the 'single-view' is demoted in favour of the entire dataspace or the whole gamut of recalculated vistas. In terms more specific to an occularcentric culture, the shift from human-centred image production to a computer-based one implies more than a technological enhancement of vision. John Johnston (1999) writes of "Machinic Vision" that it "presupposes not only an environment of interacting machines and human-machine systems but a field of decoded perceptions that, whether or not produced by or issuing from these machines, assume their full intelligibility only in relation to them" (p. 27). Jonathan Crary further lays out the challenge when he alleges that digital images refer not to the real world, but solipsistically to millions of bits of data:

> Increasingly, visuality will be situated on a cybernetic and electromagnetic terrain where abstract visual and linguistic elements coincide and are consumed circulated, and exchanged globally. (Crary 1990: 2)

Embodied visuality (and sensation more generally) is in this view replaced by machinic processes of data collection, manipulation and even 'interpretation.' For the sentient body the situation is one where, in the words of Laura Marks (2010), a leading theorist in embodied spectatorship, the digital images and sounds that surround us "demand cognitive attention as information to be processed, not sensuous material to be experienced" (3). Even so, Marks takes a more nuanced view of the relationship between information and sense-experience, making the point that in nature too, perception is guided by information-processes such as the stripes of a zebra's pelt, or the ribs of a seashell. Following Gilbert Simondon, Marks believes that "form arises almost symptomatically from a ground modulated by information processes." (2). There is a distinction, therefore, between art in the Hegelian sense as the sensible presentation of an idea, of making the invisible visible, and today's "new level of invisibility – though not immateriality: information" (2). What this signifies, according to Marks, is a change in the regime of the image from the perceptible to the legible – or from the iconic to the 'aniconic' – meaning that "what we do not see [in the image] is more significant than what we do" (5). Relating this to the socio-political arena, Marks considers that,

contrary to the rhetoric of transparency in the 'information society,' there is a new invisibility to contemporary power which operates "below the radar" of public scrutiny. Much contemporary visual art, Marks claims, works on the traces or indices of this invisibility. "These relationships of the visible, legible, and invisible characterize new media art, and the arts of the information age in general" (ibid). The move to an information based visual culture relegates the perceptible image to just one of a number of possible informatic 'outputs': "the most important activity takes place at a level prior to the perceptible image. The image that we perceive refers to its underlying cause – in ornament, geometry, pattern, text, and code-generated images" (5). This ostensibly reinstates a primary function to legibility, or semiosis, which due to its abstracting tendencies, existential phenomenology fought hard to counter in the first place. Further, in positing human corporeality as but one of its possible 'traces', the introduction of the digital image diminishes the existential centrality of embodiment, representing for Sobchack at least, an obvious challenge to phenomenological theory and praxis:

> we can see all around us that the lived body is in crisis. Its struggle to assert its gravity, its differential existence, status, and situation, its vulnerability and mortality, its vital and social investment in a concrete lifeworld inhabited by others, is now marked in hysterical and hyperbolic responses to the disembodying effects of electronic representation. (Sobchack 2004: 161)

The realization of the 'dematerializing effects' of digital conversion helped in the 1990s to fuel a flurry of theorization on 'post-human' futures, 'virtual realities,' and cyberpunk cultures.[1] However, against this idea of a total rupture in the regime of the image and the 'crisis' of the lived body, John Weaver and Tara Britt allege that the crisis is not of the lived-body, but of the filmic body. In fact, "with the advent of digital images, the lived-body experience is more pertinent for film studies than ever before, and therefore, is not in crisis – just transformed" (Weaver and Britt: 34). The crisis of the film body is not one of identity or existence, but one of 'beginnings,' which is to say, one of constructing a viable set of critical pathways. This is not a negative assessment, "it is a crisis that will open up numerous opportunities to read films not just phenomenologically but in many theoretical ways" (ibid).

If this is a similar call to Sean Cubitt's for a renewal of theory, then for embodied phenomenology the question is how can the human subject assert a primacy in the face of a new informational film image? As the foremost phenomenologist of digital media, Mark Hansen (2004) says that one strategy is to separate out "properly human perceptual capacities from the functional processing of information in hybrid human-machine assemblages"

(Hansen 2004, 101). New media art, Hansen suggests, is more attuned to this affective, embodied dimension of vision than abstract theory that displaces affect on the side of technology or film form (Deleuze is a particular target here). For these digital moving-image artists, such as Jeffrey Shaw, Douglas Gordon, and Bill Viola, the 'vision machine' is a catalyst for a 'splitting' or 'doubling' of perception into a machinic act of perception which is actually just an instantaneous registration and conversion into computational data, and a human form which "takes place in a rich and evolving field to which bodily modalities of tactility, proprioception, memory and duration – what I am calling affectivity – make an irreducible and constitutive contribution" (101).

Hansen adopts the notion of the 'frame', and the process of 'enframing' as the critical concept that separates phenomenology from materialists. Where the rectangular frame was an integral aspect of the cinematic 'apparatus', its function as a necessary technical and aesthetic limit has been exposed by new media art. Against Lev Manovich (2005), who argues that the computer has adopted cinematic optics, including the classical rectangular frame, as the de facto reference point for its visual forms, Sobchack and Hansen would insist that the frame is an arbitrary technical parameter rather than a formal condition or final limit.[2] The frame in phenomenology is not taken literally as the demarcation of the film image's scope. Rather, because of vision's intentional structure, "[t]he frame is invisible to the seeing that is the film. It is a limit, but like that of our own vision it is inexhaustibly mobile and free to displace itself" (Sobchack 1992: 131). Part of film's embodiment, then, is also manifest in this itinerant intentional drive that supersedes the edge-of-frame. In relation to digital media, Hansen goes a step further in proclaiming an expanded concept of enframing. For him it is the boundless possibilities of the digital image, rather than vision's intentional posture, that renders the rectangular cinematic frame as conventional, not to say irrelevant:

> Since the set of elementary numerical points comprising a digital image contains within itself, as alternative permutations of these points, all potential images to follow, and since therefore, any point whatever can furnish the link to the next image, the digital image *explodes* the frame. (Hanson: 35)

Hanson clearly regards the classical film frame (in whatever aspect ratio) as obsolete in the face of new media, a needless restriction on the polymorphous potential of the digital image. Even though the physical frame (which today is most likely to appear in widescreen 16:9 ratio) has clearly not been abandoned by digital cinema or HDTV, Hansen's argument that digital data is, regardless of surface appearance, polymorphous in nature, seems to diminish

the actual importance of the hardware-frame itself: “lacking any inherent form or enframing, data can be materialized in an almost limitless array of framings” (ibid.)

Weaver and Britt claim that with the infinite potential of data, and the exploding of the frame, a new ‘enframing’ is primarily realised precisely with reference to embodiment, in the co-constitutive nature of the phenomenological encounter between the corporeal individual and digital visualization. Without detailing any mechanism, they note “how the digital image is able to latch onto the human body as a supplement and demand more creatively and physically from any human individual who comes in contact with the digital image” (Weaver and Britt: 34). Against competing arguments about a ‘posthuman’ digital age, the body is said to have an extended role – a ‘framing function’ which involves extending the power of the human bodies to reach into the technological image, or “feel the world beyond their natural means” (35). Theories of the posthuman’s challenge to anthropocentric phenomenology will be discussed later in the analysis of Shane Carruth’s *Upstream Color*, but for now, the digital image’s capacity to, in Hansen’s term, ‘explode’ the frame can only be tamed by the anchoring exigencies and limitations of the human body. In this sense the body has a new aesthetic and hermeneutic role in digital imagery. But what is the basis for this new role?

In a recent shift towards embodied phenomenology, Thomas Elsaesser, together with Malte Hagener, concur that the body and the senses are even more important in the digital age. Unlike Hansen, however, they focus not on the digital image’s explosive and disruptive potentiality, but on systems of continuity that structure the image as it is deployed in digital cinema. Using as an example the first fully digitally animated film, *Toy Story* (John Lasseter, 1996), they argue that notwithstanding the film’s hybridity in terms of genre, a recourse to recognizable, even clichéd, generic characteristics reassures the audience that things will remain the same in the radical aesthetic move from analogue to digital. Despite the great changes wrought by this move, the example of *Toy Story* suggests for Elsaesser and Hagener that there is a continuity of the “affective and affecting experience” that is cinema (172). The framing suggested by Elsaesser and Hagener, then, is not the human body per se, but affect, or more precisely, the affective experience which digital cinema is able to intimately construct and dovetail into the bodily senses.

Cinematic affect, in the phenomenological sense, is not the simple creation of an emotional response in the spectator. But nor can it be equated to the programmatic ‘effect’ of cinematic

construction claimed by Eisenstein and the moderns. These polarities are but instituted circumscriptions, or concretizations of a much wider field of potential that is affect. Where emotion and sentiment are culturally given and reproducible filmic categories, affect is the ground from which such emotional effects issue. Where Eisenstein took the shock-effect of montage to be galvanizing, psychological, and quasi-quantitative, affect is more unpredictable, 'bodily,' and qualitative. Going beyond melodramatic passion or uncontainable emotion, affect describes more holistically the transformations and the multiplication of connections wrought in the encounter between bodies, including, principally, that between the 'bodies' of film and spectator.

This shift from an enframing constituted by the image, to one constituted by the body changes the focus of debate from the process of digitization to its interaction with the spectator. To quote Elsaessar again:

> [The] re-embodied manifestations of everything visible, tactile and sensory allow the digital to become much more closely aligned and attuned to the body and the senses...[which] testifies to the new malleability of the cinematic image when approached not from the basis of the code, but rather from the perspective of the spectator's experience. (174)

Thus, for theories of embodied phenomenology, substituting 'end-user' experience for questions of the image generation, image-ontology or 'realism', throws into relief the 'affective fit' that the digital image is able to negotiate. Control over every aspect of the image creates a union of image and human body where every move on screen, every change in the parameters of the pixels, both articulates and accesses the subtleties of affective relations.

It is clear that in the phenomenology of Elsaesser and Hagener bodily feeling, "everything visible, tactile and sensory," is activated more fully in the digital age. According to Mark Hansen, this "feeling" invoked by the digital image inaugurates a new "affectivity," or "the capacity of the body to experience itself as 'more than itself' and thus to deploy its sensorimotor power to create the unpredictable, the experimental, the new" (Hansen 2004: 7). Weaver and Britt take this as saying that each individual has not only the ability but the responsibility "to act as a framing function in and of the world" (36). It is the human sensorimotor capacities that are the means to extract the affective, and afterwards the meaning, from an otherwise frameless digitality which provides the human being with an added role. "As digital images act as canvasses that give color, shape, texture, and potential to the world, it is the individual who feels, smells, sees, and hears the world that gives

meaning to what is. Technology only enhances our proprioceptive abilities" (ibid). Far from becoming irrelevant in a technologized world, phenomenology has a new purpose in establishing a significance for the individualised body in the digital era. For Weaver and Britt, digital aesthetics is "the realm of merging technology with aesthetics, with our bodies firmly connected to both" (37). We have seen in this brief survey of film-phenomenology an evolution towards embodied and haptic varieties which are deemed to better integrate the individual into a world and to describe more holistically the sense experience of the body. We have also seen the innate threat of digital immateriality woven back into an increased importance of human enframing. At the same time, though, for all of phenomenology's contextualisation of the human body's consciousness of the world around it, it is clear that cinema's social frame and operation within overarching capitalist formations has been lost.

To summarise the theoretical terrain covered so far, materialist and phenomenological film theory have been two of the most important critical approaches applied to the question of digital cinema: materialism because of its historical importance dealing with questions of art and technology, realism and politics; and phenomenology due to the quest for discovering an embodiment in the changed relation between spectator and image, which is to say a ground for meaning, sensation and purpose in a potentially amorphous dissonance of virtual images. However, their divergent positions on the digital object, whilst fruitful in some respects, in my view fail to create new concepts that can adequately deal with digitality as such, or explain the methods, processes and social significance of digital cinema with sufficient specificity. Materialism can be seen to emphasise technology as primarily an epistemological tool, digital versions of which can open up new ways of seeing in a teleology of the cinema machine. Phenomenology, on the other hand, can be seen to emphasise human intent, agency and consciousness as circumscribing the body's process of perceiving and creating meaning from the new image. However, in both these approaches which, generally speaking, are too beholden to their grounding positions, the ontological difference of the digital is subsumed into a discourse of 'continuity' with previous forms and agendas. In this situation, neither the content nor form of digital cinema, which is privy to logics of abstraction, recursion, and transmutability, can herald an artistic future precisely because the terms of analysis in these critical approaches offer no new perspective. Materialism and phenomenology, then, demonstrate structural limitations in their respective positions in relation to digital properties. However, their corresponding positions on affect also show distinct inadequacies in thinking virtuality. Materialism, especially, fails in its account of an 'excess' in the film image, which

can traverse the cognitive imprints of the film text. Phenomenology places more importance on sensation and hapticity, but for all its emphasis on embodiment it is seen to have diverged from the Bazinian 'spirit' mentioned at the beginning, failing to identify a place for affect which lies outside the orbit of human perception and intent. Affect, then, is evidently a vital category for both materialism and phenomenology today, but to find an equating, new and 'progressive' designation the limitations of the two approaches need to be bridged with one that theorises the 'digital affect' in the social spectator.

[1] See, for instance, Donna Haraway (1991), Bukatman (1993), and N. Katherine Hayles (1999).
[2] Lev Manovich (2005), 'Cinema and digital media' in Andrew Utterson (ed), *Technology and Culture: The Film Reader*, London and NY: Routledge pp. 27-30

1.3: Deleuze and Deleuze-Guattarian Approaches

It is no exaggeration to say that in the wake of Gilles Deleuze's gargantuan influence on film theory and criticism from the latter stages of the twentieth century, a veritable mini-industry of associated research and publications has grown – a corpus which is too voluminous to catalogue here. Deleuze's two volumes on cinema written in the 1980s, together with his various collaborations with Félix Guattari, initially caused a slow sensation in the field – the impact of which has picked up pace steadily ever since. But of all the innumerable lines of enquiry and applied routines opened up by the works, the number which focus directly on digital cinema are relatively small in quantity. To start with, any survey of Deleuze's intervention into the discourse of the digital must acknowledge that in his modest references on the subject he expresses a certain suspicion or even hostility towards the information societies in general. This is seen in his writings on the so-called 'numerical image' in his second volume on cinema, as well as his short but extensively cited essay, 'Postscript on Control Societies'.[1] All in all, Deleuze has mostly been considered as an anti-structuralist, a non-binary thinker, a philosopher of the analogue – and with some good reason. A Deleuzian ontology emphasises qualitative not quantitative movements, openness not determination. However, in his writing on Francis Bacon he expresses a more nuanced attitude where the artist's method is validated in adopting a mid-way technique between determinate and 'chaotic' features, which is to say between digital and analog communication.[2] Moreover, in his multiplicity of publications on varied subjects including art, literature and cinema, as well as philosophy, Deleuze, and Deleuze-Guattari, never ceased in creating concepts which are mathematical as well as political, virtual as well as corporeal, and theoretical as well as affective. It is in this practical 'toolkit' of ideas that are found the notions that are, with precision and imagination, attuned to the various paradoxes that arise out of algorithmic and computerised operations in the world, and out of digital images in particular. This opens up a fertile and inexhaustible space for investigations into the problematic relation between digitality and culture, and this is where my project begins its work to explore 'digital affect'.

Even before the digital turn film theory was witnessing an increasing interest in the accounts of perception, consciousness, and reality given in the philosophy of Deleuze and Guattari. Critical interest in Deleuze was at this stage twofold. Firstly, Deleuzian concepts in some ways initiated a reassessment of classical film theory of the earlier twentieth century at a

moment in the mid-1990s when claims about the 'Death of cinema' were beginning to be voiced in sometimes feverish terms. Secondly, in bypassing questions of medium and index, Deleuze's film ontology seemed inclined toward the 'virtual future' that beckoned in the form of digital cinema. For his part, Deleuze's interest in cinema was likewise twofold. Firstly, like any artform, cinema connects 'empirically' with philosophy and thought. If philosophy is defined by the movement of thought and the connection of ideas, then cinema as an art of movement at various levels, can act as a model or 'prototype' for the brain also inaugurating a space for the aforementioned 'neuro-image' proposed by Pisters. In this sense all films are a place of reflection – a type of thinking – and provide 'openings', if not solutions, to the problems and agendas that they pose. Secondly, and more importantly for Deleuze, cinema practice is used as an ally in the project to describe the workings of 'incorporeal materialism', derived from Henri Bergson and Baruch Spinoza, that forms the basis of the Deleuzian ontology of film. Thus, the constitution of cinema, which for Deleuze proceeds out of movement-images and time-images, does not support a descriptive analysis of film form in the mode of conventional film-criticism (this, or that representation evoking this or that interpretation). It rather articulates the real in all its virtual and actual forms. In doing this, it enables, firstly, a desubjectified, or 'non-anthropomorphic' view of consciousness and perception, implicating cinema in the 'universe of images' that, following Bergson, makes up the material processes of reality. Secondly, it enables readings and analyses of films that extend beyond the purely realist parameters of materialism (which correspond to 'actual' formations and relations) towards virtual determinations and interactions *from which* the actual emerges and *with which* it is in constant correspondence (a feature that will be important for exploring the 'recombinant' formations in digital cinema).[3] For Deleuze, cinema is more than an illustration or an image of philosophy – it is an affirmation of, and a participation in, the vital forces of life. And while the same can be said of all art, the particularities of film – its curious mix of technological and natural 'automatisms', and its particular impositions on perception and consciousness make it a kind of laboratory of human potentiality facing toward the future. In this light, Deleuze's work on cinema is also an attempt, in David Rodowick's words, to "acknowledge philosophy's debt to film and film theory" (Rodowick 2007: xiii), a debt spawned from the empirical ontology of film that is prior to the subjects and objects that populate it, and an experimentalism that amounts to a 'field of indetermination'.

Deleuze's philosophy, then, regards the universe as a 'metacinema' (Pisters, 2003) where virtual and actual images, past and present ones, and cinematic and non-cinematic images intermingle and interact. This vision is mainly set out in the groundbreaking volumes, *Cinema 1: The Movement-Image* (196) and *Cinema 2: The Time-Image* (1989), at the cusp of the technological changeover from analogue to digital media. However, despite generating a generous lexicon of moving-image types in these works, Deleuze provides only a few passing remarks on the encroaching 'information-image' at the end of *Cinema 2.* Deleuze fails or refuses to include this new image into his overall schema of image-types, at one point only pondering whether the digital image will emerge as a new type of time-image (1989: 265-7). Therefore, to bear down on the question of how Deleuzian theory can productively be used to explore the specific innovations and implications of digital cinema it will be helpful to compare a few key concepts vis-à-vis the previously discussed critical approaches of materialism and phenomenology. Most directly, where a Deleuzian framework departs from the materialist approaches to digital cinema, and what it shares with embodied phenomenology, is its notion of image and body. Firstly, an image is not a second order projection, a representation that is always already subjected to, and tested against its referent in the real. Neither is it a discrete 'text' whose mystery can be unlocked through application of a linguistic or psychoanalytic model of semiotics, models which, adopting the dual frameworks of Marx and Freud, became staple groundings for 'political'-materialist criticism of the 1970s and 80s. Returning rather to Bergson as a principal influence, an 'image' in the Deleuzian lexis is simply that which appears, completely coexistent and continuous with any putative referent. Defining the image as an "existence" which is "more than that which the idealist calls a *representation*, but less than that which the realist calls a *thing*", Bergson circumvents the opposition between matter and mind precisely by placing the 'image' at the centre of his ontology, and combining it with a view of the universe as a material plane of immanence in a state of permanent and irreducible movement or flux (Bergson 1988: 9). With this irreducible relation of movement and image, the stage is set for Deleuze to posit, in the first of his cinema books, the existence of an "acentred universe of movement-images" in which "each image varies for itself, and all the images act and react as a function of each other, on all their facets and in all their parts" (1986: 62). This, simply put, is the 'materialism' of Bergson-Deleuze: the plane of matter-in-movement is the plane of movement-images, and it is the world of movement-images, and their interactions, which we call 'reality'.

So far, this picture of universal interaction is not dissimilar to the deterministic Newtonian model of the universe governed by the 'natural laws' pertaining to the forces of action-reaction, albeit with 'brute matter' being replaced by movement-images. However, this stark determinism is ameliorated in Bergson's ontology by a double complication, meant to address the dilemmas-in-materialism of how to account for a 'creative' rather than fully mechanistic evolution and, even more problematic, how to account for 'consciousness' (or its related variant, 'subjectivity'). Firstly, the plane of movement-images is but one of the dimensions of reality, an 'actual' dimension, which coalesces out of a 'virtual' order governed not by determinism but by potentiality or, in Bergson's nomenclature, by duration. Any actual form of matter or state is a 'contraction' from the virtual order. Secondly, out of the acentred universe of movement-images, there is a special kind of image which is irreducible to 'brute matter' and which relates to other images in an impulsive rather than mechanical way. "Whereas the other images act and react on all their facets and in all their parts," writes Deleuze, "here we have images which only receive actions on one facet or in certain parts and only execute reactions by and in other parts" (1986: 61). This new image is the 'living image', one that 'frames' the world by allowing 'indifferent' images to pass through, whilst arresting those, or aspects of those that are of interest to it. Herein lays 'perception', or more precisely, the 'perception-image': a passage which goes from the movement-image, "from total, objective perception which is indistinguishable from the thing, to a subjective perception which is distinguished from it by simple elimination or subtraction." (1986: 64). What Deleuze calls the 'first material aspect of subjectivity', then, is a subtractive process isolating and retaining only the movement-image, or part of the movement-image corresponding to its purview. But this moment of perception is already a predisposition to action, for the 'incurving' of the universe around the perceptive centre of the living-image occurs under the jurisdiction of the 'sensory-motor schema,' a bodily regime that not only governs movement, but also, as Paola Marrati (2008) says, provides the cognitive horizon of possible actions: "the most necessary illusions of life" is a 'reality' forged out of a warped viewpoint (79). Hence perception is always connected to the living image's capacity for action, and the perception-image slips 'naturally' into the action-image.

The perception-action register issuing from the living image of course anticipates cinema per se, which is said to cut or frame its 'perceptions' out of the world's incessant movements – perceptions that in the vast majority of cinematic images (what Deleuze calls cinema of the movement-image) leads invariably to action in typical chains of cause and effect. But before

that Deleuze's 'image-materialism' also shares, as we have seen, some ontological basis with embodied phenomenology. The 'incurving' of the universe towards a subjective centre reminds us of phenomenology's method which starts, in the cinematic case, from the subject's experience of the image, which is to say the subject's coextension with, and intentional relationship to the filmic image. Phenomenology is less captivated by 'meaning' given by strict rationality or reflective interpretation than by affinity – how the image engages with the human sensorium to become pre-reflective thought itself. Furthermore, in terms of human corporeality, phenomenology and Deleuzian approaches are allied in refuting materialist accounts that are prone to consider the body ultimately as an object, a final destination, ready to act and be acted upon, in a Pavlovian equation of cause-effect. To recap, materialism of a Marxist persuasion thinks of this effect as either physical or mental, neurological or ideological: in both cases logical or 'systematic' (if not deterministic) – the physical component of Eisenstein's 'Kino-fist', or the ideational reproduction of capitalism theorized by Comolli and Narboni. In contradistinction, Bergson's 'living image' allows Deleuze to consider the body as having a 'curious' relationship to its perception-images, one where "executed reactions are no longer immediately linked with the reaction undergone" (Deleuze 1986: 61-2), and one in which linear causality is replaced by non-linear processes. In Elena Del Rio's words, "Deleuze's understanding of the body as an assemblage of forces or affects that enter into composition with a multiplicity of other forces or affects restores to the body the dimension of intensity lost in the representational paradigm." (2008: 3). Del Rio here introduces two important concepts, 'intensity' and 'affect', that further differentiate Deleuze's philosophy from the critical approaches previously explored.

The first concept, 'intensity', can be applied to anywhere, or anything manifesting a change or differential that leads to a qualitative alteration or change of state. Manuel De Landa (2000) had already familiarised the term in reference to spaces of potential difference and processes of emergence. It refers to Deleuze's idea of a nodal point of impinging factors, or the knot of tendencies – actual and virtual – that traverse a situation or object at these 'intensive' moments leading to an actual change. Where extensive processes indicate physically perceived 'end states', intensive processes refer to the interacting forces that are not necessarily detectable or quantifiable, but which underlie the genesis of actual, physical form at critical tipping points of transformation such as the melting or boiling points of materials, or the contortion of multiple forces leading to an event. Hence the human body, in Deleuze's formulation, can be seen as one such potential site of intensity – an ongoing and

mobile one – that escapes the boundaries set by the cognitive and physical capacities of the sensory motor schema, echoing Baruch Spinoza's famous saying: "We do not know what the body can do" (Spinoza 2001: 77). Integral to the idea of intensity is the quality of undecidability and unpredictability that complicates and confounds the Newtonian universe of mechanistic and calculable action-reaction. Where Eisenstein's materialist theory of montage was based on laws of reflexology, instantaneous responses that determine the relation between image and spectator, Deleuze takes from Henri Bergson's understanding of the human body which, as we have seen, is nothing but a living image, a "centre of indetermination" that, far from being a synchronised relay, introduces an interval between cause and effect. When Deleuze writes, "the brain is nothing but this – an interval, a gap between an action and a reaction" (1986: 62), he is displacing the classical image of thought which proceeds through functions of association and synthesis (1989: 210), with a Bergsonian notion of the brain-as-void.[4] But he is also saying that the relationship between the human sensorium and the sensory-motor schema, is not governed by a determinable reflex to shock, as Eisenstein presumed, but is instead radically open, at least potentially, to the auspices of the interval.

We have, then, between perception and action, an interval in the case of the living image. And, for Deleuze, this interval or gap can be considered as the entry point of the second concept, already introduced in chapter 1 – 'affect', for it is in this gap that the external image touches and interacts with a facet of the living image precipitating a change – in movement, in thought, or both. In Eisenstein's aesthetic theory it is not that the caesura, or interval is denied – in fact Eisenstein's montage technique seeks to draw attention to the cut that 'bourgeois' continuity editing would nominally hide. It is not even that he refutes the power of affect. On the contrary, he insists that all revolutionary art should aim for "the maximum intensification of the emotional seizure of the audience" (quoted in Taylor 2019: 56). It is rather that the interval is conceived mathematically as rational segmentation, as the very principle of dialectical progression allowing images to build up through stops and starts, where qualitative leaps are repeated at each compositional level to achieve an 'organic' whole.

Pathos, or "emotional seizure", is clearly a main intent of Eisenstein's method, and is achieved by the same dialectical activation of the interval that propagates change: "At each step there is a leap from one dimension to another, from one quality to another, until, finally, the change affects not one individual episode ... but the whole of the method" (Eisenstein

1939: 60). But conceived as a product of the same dialectical process, pathos is mobilized as part of an instrumental, and again calculable phenomena precisely aiming for, in Eisenstein's words, "the organisation of the audience through organised material" (Taylor: 57). This organization involves a pre-ordained system of calculable relations between images, relations established by the interval and which are deemed to operate as proper 'cause' for the chain of effects (psychological and, ultimately, political) that are galvanised in the spectator. The "organisation of the audience" through the image is thus radically opposed to the indeterminability that defines the Bergsonian-Deleuzian interval. We can now surmise that within Bergson's image-universe the encounter between film image and spectator (living image) is neither like two billiard balls colliding with a mathematically predictable outcome. Nor is it like the generation of a 'mental' image that is contained 'within' matter (an individual brain) but separated from it. Instead it is to suggest that there is a productive relay, a dynamic synthesis between the received and the receiving images causing a change or movement in both. As Richard Dienst (1994) puts it, "The deflection of movement that occurs through the 'living' image is the basis of subjectivity and the beginning of affect" (149).[5]

Affect, or in Eisenstein's vernacular, 'pathos', forms something of a battleground for materialist film theorists and practitioners, although, as Eisenstein readily admits, the concept itself is less important than the outcome: its putative effect – emotional and intellectual – on the spectator.[6] R. Bruce Elder (2008) nominates that this methodology of Pavlovian effect was "calculated (in the strictest sense of the word) to produce human beings endowed with a heightened sensibility – new humans that would be ideal citizens for the new Soviet state" (333). On the other hand, that affect should be of prime interest to embodied phenomenology is also of no surprise, given its inclination towards questions of the body and sensorial emotions. But where phenomenology views affect through the perspective of the (human) body, making it effectively a human experiential category, Deleuze reverts to Spinoza's definition which lends a prepersonal, if not universal aspect to the concept, one which encompasses all bodies in nature, sentient or otherwise. As Del Rio (2008) succinctly puts it,

> While for Merleau-Ponty movement and affect are subjective phenomena arising out of an intentional and individuated rapport with the world, Deleuze regards the kinetic and the affective as material flows whose individuation and exchange do not rest upon subjectified intentions, but rather upon the workings of a non-organic, anonymous vitality. (Del Rio 2008: 115)

Bergson has already questioned phenomenology's privileging of 'natural perception' (which is to say human perception), supplanting it with an ontology of universal variation, or image-to-image interaction (see Deleuze 1986: 64). In the case of affect too, the placing of the human subject at the centre of affairs is likewise rejected by Deleuze and replaced with a more universal concept of pre-individual affection, or "anonymous vitality". Hence, at a primary level, affect does not reside in the 'I', but in things themselves ('modes' in Spinoza's terminology, or the movement-image in Deleuze's). At a secondary level, affect refers to the change of state of a body: the power of a body generally to affect and in turn to be affected, causing an increase, or decrease in the power of that body to act. The demotion of human consciousness from the centre of both perception and affect in Deleuzian thought is intended to release a knowledge of complex causes – impinging on intensive zones – from the dominating purview of effects. In his early study of Spinoza, Deleuze (1988) attacks the phenomenological position by proclaiming that "consciousness is by nature the locus of an illusion. Its nature is such that it registers effects, but it knows nothing of causes" (1988: 19). The charge is not that the human's affective capacity is less encompassing than that claimed by phenomenology. Rather the subtractive perception of the living image preconditions the subject to take only the 'nearest' stimulus in time and space, or the facet of the image that interests it, and register this as the origin of affection: to take it for 'all there is'.

Cause and effect

But if phenomenology can be accused of "knowing nothing of causes", then what of materialism? Eisenstein himself, despite his admiration for D.W. Griffith, criticised an American cinema which he saw as inaugurating a cinema of popular sentimentalism. Griffith's cinema, for example, is deemed to separate out and make autonomous that which is truly related by a singular cause, like the condition of rich and poor, which are treated as causes of conflict, rather than the effects of the true cause – the exploitative socio-economic conditions to which American cinema is blind.[7] Thus, where Griffith crudely opposes and then resolves the already constituted and individualised entities of good and evil, hero and villain, into one concept of an organic whole, Eisenstein countered that his 'cellular' montage method could reveal the context, genesis, and development of any social, historical, or even individual encounter in a more 'scientific' as well as dramatically forceful way. The composition of Eisenstein's work can be described as another approach to an organic whole –

a cell that divides and reintegrates at higher levels rather than a discrete element that solely combines and accumulates. In this sense it comes closer to Deleuze's incorporeal materialism, but at the expense of instituting an ideal or transcendent spectator assumed to occupy a singular position or perspective, 'locked-in' to a meaning and truth of the image. Eisenstein's method depends ultimately on a vision of totality and identity which, at the level of effects, produces a singular outcome, establishing an order of determinacy and a concept of the interval as inert border line connecting discrete images. In this light, the confrontation on the Odessa Steps in *Battleship Potemkin* is just as much a clash of effects – the bringing together of final elements – as the climactic duel of countless American Westerns, only this time the conflict achieves its 'pathos' through political opposition rather than through the values of good and evil invested in 'character'.[8]

Counter to this, Deleuze insists that the order of causes is inherently more complex, occurring at a 'molecular' rather than a 'molar' level. In his monograph on Spinoza Deleuze writes "[w]e are in a condition such that we only take in 'what happens' to our body, 'what happens' to our mind, that is, the effect of a body on our body, the effect of an idea on our idea" (1988: 19). But in truth the order of causes is "an order of composition and decomposition of relations, which infinitely affects all of nature" (ibid). With such a study of 'molecular' causes, morphogenesis out of complex or intensive relations can replace the play of effects, and this can act as a beginning for a theory of pre-individual affect. We can detect how this theory is in turn related to the question of the image. For Spinoza, each thing or mode is determined via its incessant interactions on the plane of immanence: the change of state of the affected body is registered as a corporeal trace or image of the affecting body. An image, in fact, is the body's recognition of affect, as Deleuze quotes from Spinoza, "The affections of the human body whose ideas present external bodies as present in us, we shall call images of things" (Deleuze 1988: 48). These images constitute a certain state (a transitory one) of the affected body, which is a change from the previous state, and a precursor for the next one. Even more strongly, within the Bergsonian order of universal variation, affect is already inherent in the movement-image in the facet of 'qualities'. Quality, here, "has replaced movement with the idea of a state which persists whilst waiting for another to replace it" (Deleuze 1986: 59). We are moving towards a concept of the 'affection-image' and insodoing, Deleuze refers to American philosopher Charles Sanders Peirce's metaphysical category of 'firstness', where quality is in a pure sense autonomous and independent of any actualized state.[9] Here it is worth expanding on Peirce's semiological system of categories as

they are also integral to understanding the affective functioning of the 'recombinant' digital image as it is variously deployed in the later case studies. The categories, which divide experiential phenomena into three typologies describe human experience as 'firstness' (the primary state of sensation and new experience), 'secondness' (actualised states: the category of the real), and 'thirdness' (the set of relations and arrangements), which tangentially correlate to Deleuze's own three material aspects of subjectivity.[10] To elaborate, 'firstness' is the power or chance deriving from a monadic ground of pure heterogeneity: the power for the emergence of the new from a condition of disparity. 'Secondness' refers to the dyadic order of discrete correlates: 'things', singularities and facts. 'Thirdness' is a further level of triadic interrelation, organisation and interpretation, often depending on semiotic systems. Laura U Marks (2002) sums it up well when she explains that "[f]irstness takes place in that microsecond when something appears to perception, but before it has been distinguished from other phenomena (Secondness) and related to symbols and other general rules (Thirdness)" (Marks 2002: 148).

Firstness, then, is the category of potential, expressed or actualized as 'pre-cognitive' sensation or feeling. Put another way, and in relation to the living image,

> There is an inevitable part of external movements [images] that we 'absorb', that we refract, and which does not transform itself into either objects of perception or acts of the subject; rather they mark the coincidence of the subject and the object in a pure quality. (Deleuze 1986: 65)

Rodowick reminds us that after perception and action, affection is, in the Deleuzian programme, "the third material moment of subjectivity... defin[ing] how the subject perceives or experiences itself 'from the inside'" (1997: 37). Turning once again to Peirce's terminology, affect, expressed as 'firstness', outside of spatio-temporal coordinates, forms a "virtual conjunction" leading to an objectless emotion or feeling. Expressed as 'secondness', that is, in a concrete actual state of things, it constitutes "real connections." In this case, affect, according to Rodowick, takes the form of "[w]hat cannot be fully expressed by an action or conflict" (1997: 64), a phenomenon he terms "excess".

Rodowick's use of this term is interesting for, returning momentarily to classical materialist approaches discussed previously, we can now see that the same term, 'excess', theorized by Kristin Thompson as a component of film narrative's formal system comes close to a Deleuzian notion of affect-in-'secondness'. For Thompson, excess is a 'structural' component of all narrative cinema. But in remaining outside of the unifying forces of narrative, it escapes

common capture by cognitive processes. There is, therefore, a gap, or lag, as Thompson notes, between the motivation of filmmakers to impart a univocal narrative meaning, and the aspects of the image that thwart such overarching determination. In so far as excess is outlying, it provides a useful tool for materialist film criticism primarily to support the venture of 'ideological' counter-reading, but also, more tentatively, it opens up a domain for recognising the affective pleasures of film. For Thompson, a consideration of film aesthetics is especially important in ascertaining the degree of this excess: at one end of the polarity, the tight formula of the classical Hollywood text is deemed to minimise excess; at the other, art or avant garde cinema is where "style becomes foregrounded to an unusual degree, necessarily calling attention to the material of the film." (136). Deleuze would concur with this to the extent that the sign of cinematic affection is expression. But for Deleuze, expression emerges or 'congeals' out of a relationship to pure quality or power – that is, in being a sign of expression out of 'firstness'. On the other hand, Thompson's axiomatic division of the image into 'unified' and 'excessive' elements is a separation of the self-identical. The 'materiality' of the film is foregrounded in excess, but is permanently referred back to the supposedly unified aspects, whose own materiality is hidden by the techniques of conventional filmmaking. In other words, both the unified and excessive elements are regarded on the level of the already actualised, the order of 'secondness' – an essentially quantitative separation. This is affect as real connection – visible and extensive, but unexplained: the effect that 'knows nothing of causes.' In contrast, Deleuze locates the expression of pure affect in a qualitative rather than quantitative assessment, in firstness rather than secondness, releasing the genetic matter from which actualized qualities and powers are discernable.

Combining Spinoza's philosophy of affect with Bergson's ontology of universal image interaction, therefore, Deleuze posits the 'affection-image' as the term which, alongside the perception-image and the action-image, completes the three material moments of subjectivity, moments that find their correlation in the cinema of the movement-image. Affect, as it permeates intensive states, has the capability to release qualitative change and therefore it is really this last term of the affection-image that is mostly related to the creation of the new in art and cinema generally. Deleuze posits the specific question of the cinematic affection-image in two ways. Firstly, by the 'discovery' or 'invention' of the close-up of the human face (the most expressive part of the human body), and secondly from the creation of the 'any-space-whatever'.

Faciality

Deleuze considers the close up of the face as a particularly important development in the history of cinematic images introducing a 'purer' affective dimension to the repertoire of the movement-image. "We must always distinguish power-qualities in themselves, as expressed by a face, faces or their equivalents (affection-image of firstness) and these same power-qualities as actualised in a state of things, in a determinate space-time (action-image of secondness)" (Deleuze 1986: 106). In his discussion of 'faciality', Deleuze acknowledges the long standing fascination with the power of the facial close-up that a string of earlier film theorists have sought to explain.[11] The power of the face is not that of psychological identification in the mere enlargement, that is, in the quantitative change in the proportions of the image. In fact the close-up, according to Deleuze, abstracts the object from all spatiotemporal coordinates and submits it to an absolute change. What is extracted from the space-time that surrounds it is a pure quality or potentiality. While Eisenstein calls this the 'pathetic', Deleuze calls it the ecstasy or the pure affect. The discovery of the affective potential of the face in early and silent cinema periods has an interesting corollary in early manifestations of digital moving image culture which often showcased the possibilities of computer based image processing by digital morphing of one face into another. Thus, in James Cameron's *Terminator 2* (1991) the awe for new cyborg's 'liquid skin' is chiefly activated in the scenes of facial morphing. Similarly, in pop videos such as Michael Jackson's *Black or White* (1991), the ideational message of multiculturalism is captured and enhanced at the end of the video by a series of close-ups of ethnically diverse faces morphing into one another. More recently, in *The Curious Case of Benjamin Button* (David Fincher, 2008), the famous face of Brad Pitt is digitally altered to show him as an octogenarian undergoing a reverse-ageing process through the course of the film. Where the former examples might be seen as representing a challenge to common assumptions about the uniqueness of the human face as a marker of identity, the latter modifies Brad Pitt's 'unmistakable' face in a highly evocative and nostalgic tale weaving together personal and social history. All of the cases, though, provide evidence that CGI has attempted to capitalise on the affective power of the facial close-up and has invested it with new possibilities.

However, whilst the magnified human visage is an important instance of the expression of affect, the power of the close-up is, in principle, not reserved for the face, but any object whatever. As Paola Marrati says,

> The close-up is thus defined not by its relative dimensions but by its absolute dimension or its function, which is to express affect as entity, its being in itself that is independent and distinguishable from every person, every individualized state of things, and every determined space-time. This independence should be understood as the irreducibility of affects to anything but themselves, not as a lack of connection. (Marrati 2008 : 42)

The Any-Space-Whatever

The close-up's decoupling of affect from the 'personality' or recognisability of the face brings us to the alternative "figure of firstness": the any-space-whatever which is, for Deleuze, the "genetic element of the affection-image" (Deleuze 1986: 110). The logic of cinema, from a materialist view, assumes a formal organisation whereby a multiplicity of spaces, events and characters are held in a mutually supporting structure that builds up towards a Whole. From a phenomenological point of view, the logic of cinema assumes a system 'englobed' around the homogenizing consciousness of the subject. In contrast, the any-space-whatever is a figure of cinema that defies such unifying analyses, a multiplicity lacking the cognitive determination presumed by either materialism or phenomenology. Nevertheless, it is not an abstract or imaginary space; as Deleuze remarks,

> It is a perfectly singular space, which has merely lost its homogeneity, that is, the principle of its metric relations or the connection of its own parts, so that the linkages can be made in an infinite number of ways. It is a space of virtual conjunction, grasped as pure locus of the possible. What in fact manifests the instability, the heterogeneity, the absence of link of such a space, is a richness in potentials or singularities which are, as it were, prior conditions of all actualisation, all determination. (Deleuze 1986: 109)

Where the facial close-up releases affect by unanchoring the face from its spatio-temporal contexts, the any-space-whatever makes visible a pure quality/power by unanchoring space itself from its already-recognised grids of experience. The any-space-whatever does this by breaking the sensorimotor links that would connect an action to a 'proper' reaction, or a situation to a 'proper' exploit. The connections and orientations given in the cinema of the action-image here dissipate into looser constructions that challenge materialist 'effect' and phenomenological 'intention' alike. If the digital image is a true 'decoding machine', with

any given pixel in theory modifiable or exchangeable into any other, then we might expect to find such any-space-whatevers replete within the forms of digital cinema. In fact, all kinds of ordering and continuity imperatives (generic, industrial, narratological) prevent this 'chaosmos' from occurring most of the time resulting in more common forms that hybridise properties belonging to digital and analog, blending the respective properties of discreteness and continuity. Nevertheless, as we shall witness, such digital any-space-whatevers receive considerable expression in my case studies of recent cinema– the cinema of the interregnum which harbours the digital idea. Instances of incompossible spaces, fractal variegation, and disjunctive aesthetics all manifest this oppositional and 'unanchoring' tendency.

As mentioned previously, Deleuze cites these two articulations of the affection-image (faciality and the any-space-whatever) as cinema's intrinsic correlative to a material aspect of subjectivity (the third moment in the perception-action-affection triad). But there is another type of image related to the movement-image, or rather to its change or mutation into something else. This is the so-called relation-image, linked to Peirce's category of 'thirdness' – the cognitive process of interpretation (mental relations). Hitchcock is cited as the master of mental relations by encompassing the range of movement-images into an organic whole defined by the 'idea': "He makes the relation itself the object of an image, which is not simply added to perception-, action - and affection images, but frames them and transforms them" (Deleuze 1986: 203). The genetic sign of the relation image is the *symbol*. This is the condition of possibility of all mental relations: the abstract conjoining of any term with any other. Rodowick sees the relation-image as a crucial type which speaks of a central paradox in the Deleuzian project of situating cinema within the Bergsonian image-cosmos. This dilemma pits a general tendency to imagine cinema as a machine for producing visions of totalising wholes, closed orders, against that which is radically open: universal variation of time itself. Whether through Eisenstein's or Griffith's montage strategies, or through Hitchcock's relation-image, the possibility of a totalising image – in 'effect', or in 'idea' – seems within reach. "But whereas the action- and relation-images imply that totality is possible – indeed that movement can be stopped or constrained by a universal image- the movement-image in itself shows otherwise. For movement in the physical sense cannot elide or subsume the force of time as change" (Rodowick 1997: 73).

This internal tension in the movement-image is, as Rodowick suggests, to do with the attempts throughout the history of cinema, to install an all-encompassing totality in essentially spatial terms, a project perfected by Hitchcock's 'relation-image'. Here time is

imaged not in itself as duration, or indeed as 'change itself', but only indirectly as succession of spatial instants, an intensive series of images, given in montage, and governed by an essentially materialist faith in the sensorimotor schema. However, this 'taming of time' through the spatialisation of the movement-image is only a partial history of the cinematic image for Deleuze. Referring to the so-called 'historical argument' or 'historical discourse' in Deleuze's cinema books, what is meant by this appellation is not so much a teleological progression of cinematic art as a working through of this difficulty of time, resulting in turns in either the dominance of the action-image or, alternatively, a challenge engendered when cinema, as an art 'proper' to its period, loses faith in the marriage of situation and action. Rather, the image of history is both more contingent and momentous. Hence, if there is an overarching crisis in the movement-image, Deleuze asserts, it comes at the point of the Second World War after which there is, in European cinema especially, a general dissolution of the sensorimotor schema as guarantor of a direct linkage between action and response, resulting in the birth of the aimless character, a 'seer' rather than a 'doer', and a new visibility, a new importance, for the any-space-whatever.[12] The threat to the integrity of the movement-image simultaneously inaugurates a new regime of image, one in which cinema exacerbates the disjunction between the (conventionally) seeable and the (absolutely) visible, one in which a little bit of time in its pure sense seeps into the image. As Rodowick says, "to withdraw perception from action means putting it into contact with thought. This idea will be the foundation for [Deleuze's] definition of direct images of time." (1997: 77)

The Time-image

The ensuing 'time-image' forces thought from the newly ambiguous image, and forms the second great order of cinematic images according to Deleuze, or the second pure semiotic, according to Rodowick. From the historical perspective, the ravages of the Second World War causes reality to fracture, to furtively retreat, as it were, so that the 'unthinking' or 'habitual' operation of the sensorimotor schema no longer holds sway; and from the philosophical perspective the logical relations between thought and time also change, for, as Rodowick observes, the image "must turn from exteriority or extensiveness in space toward a genesis in mental relations or time" (1997: 79). Where the movement-image takes an 'organic' form, the time-image is 'crystalline': images proceed as divergent series rather than sequentially as cellular growth. And intervals are now irrational, meaning that the passage

from one image to next is newly opened up to qualitative change or affect. In losing its determination by action, the film image tends towards a pure optical situation, combined with a pure sound situation: autonomous signs that refuse subsumption into an organic whole. These 'opsigns' (optical signs) and 'sonsigns' (sonorous signs) are instead harbingers of time in its pure sense. Referring to Yasujiro Ozu's pared down visual style, Deleuze writes of the formal technique concerned with the 'internal' qualities of the image that evoke thought and time itself. In Ozu's *Late Spring* (1949), a still-image of a vase is intercut with a woman smiling and then beginning to cry. The image of the vase here acts as the transcendent form of time itself:

> There is becoming, change, passage. But the form of what changes does not itself change, does not pass on. This is time, time itself, 'a little time in its pure state': a direct time-image, which gives what changes the unchanging form in which the change is produced. (Deleuze 1989: 17)

Of course at another level or periodicity the vase itself will change, will slowly, 'objectively' decompose. But in its local juxtaposition it provides a relative image of an unchanging temporal frame 'in which' movement happens.

The digital and Deleuze

This example serves to remind us that Deleuze is concerned in the cinema books with concrete aesthetic forms and cinematic articulations of the 'image of thought' available as a set of possibilities at a given time. Originally published in France in 1983 and 1985, the *Cinema* books, of course, were written at the cusp of a still fledgling digital culture. Nevertheless certain facets of the 'information age' had already been gathering pace during the 1960s and 70s, a phenomenon that clearly preoccupied Deleuze, even though a developed thesis on 'digitality' does not appear in his work. Yet the dawning of another epoch of the image and the inauguration of new and unforeseen relationships between cinema and thought is recognized in two ways. Firstly, in the Cinema books themselves he refers to the 'new automata', the computers that invaded the content and form of cinema that were default machines for automation.[13] Secondly, a more political argument emerges in the 'Postscript on Control Societies' where Deleuze acknowledges the control possibilities of new technologies of bioengineering and informatics, programmed not for invention and creativity, but rather in the service of cliché and regulation, a critique which, as we have seen, is also echoed by Cubitt.

Deleuze states that it is beyond the scope of the Cinema books to make any profound or comprehensive analysis of the new 'numerical' image, as he terms it. Clearly the significance of the new image, constituted out of electronic and digital technologies, is already recognised, but the debate as to its prevailing usage and its implications for the question of image and thought is still in its infancy. In any case, Deleuze's discussion on the digital image at the end of the second Cinema book is conducted in a more 'political' vein, following, as it does, a summary of the 'automatas' of cinema in the twentieth century: Walter Benjamin's mechanical reproductions (of both art and the masses), leading to 'psychological automata', and eventually to Hitler. Coming finally to the electronic and digital automata evolving all the time around him, Deleuze hedges his bets on the problem of digital computers and thought: "But we are all the time circling the question: cerebral creation or deficiency of the cerebellum?" (1989: 266).

Deleuze has already compared the brain to the cinema screen in that the living image cuts mobile sections from life's images according to its self-interest and, like cinema, transforms this perception into action. But in addition the reverse is true: the screen is also a brain in the creation of new circuits or synapse paths, more especially, but not exclusively, in the cinema of the time-image. Now, in the case of the digital screen, Deleuze supercharges the analogy, identifying it with an "instrument panel" displaying an "incessant stream of messages" (Deleuze 1989: 267). The shot, previously discussed in terms of perception and thought, is now "less like an eye than an overloaded brain endlessly absorbing information: it is the brain-information, brain-city couple which replaces that of eye-Nature." (ibid.)

Clearly there is an aspect of the computational image that bypasses thought, or better the relation between perception and thought, and acts as a new automata. But is this new automata *de facto* instrumentalist, or can it be recuperated for the 'spiritual automata' of the time-image? Deleuze suggests that the digital image may yet be integral to the development of unknown aspects of the time-image, but it will be useless, or worse still dangerous, unless and until it can express an affirmative "will to art", which is to say, generate a momentum on the side of creation rather than on the side of reaction and control. Deleuze's ambivalence on this question is especially acute given the birth of the 'control society', the technocratic organisation and regulation of the socius, as an effect of the pervasive spread of information gathering and processing for the purpose of commodification and control – what is now termed 'big data' and its attendant technology.[14] Many commentators have taken Deleuze's limited pronouncements on the information society and digital media as amounting to a

systematic condemnation. Alexander Galloway, for instance, claims that Deleuze is fundamentally an 'analogue' philosopher rather than a 'digital' one due to a presumed preference for empiricism over metaphysics (2012: 521). Nevertheless, a number of critical approaches in the theorisation of digital culture have attempted to use a variety of Deleuzian and quasi-Deleuzian frameworks to explore the possible characteristics and limitations of an affective dimension in the digital moving image, the potential for a 'will to art' that problematises the simple binary designation of a 'cold' digital versus a 'vital' analogue. Thus, Markos Hadjioannou has explored how stillness in the digital image can invoke the ontological force of change on grounds other than indexicality; Timothy Murray discusses how new media art can express an affective fervor that lies at the core of the baroque; Steven Shaviro asserts a 'post-cinematic affect' in his analysis of contemporary moving image culture; and finally, whilst exploring an affective 'ethics of time' in film, David Rodowick enquires into the new powers of digital imaging. Discussing each of these interventions in turn will reveal once again the problematic of the digital case, and in particular of assigning a digital affect capable of expressing the 'new'.

Firstly, David Rodowick adopts Bergsonian concepts of time and duration to interrogate the possibility for 'deep temporality' in the digital context, introducing affect as a missing term in the digitally produced sign. Arguing that the 'ethics of time' and the expression of duration is the most powerful affective quality of celluloid film, the supposed absence of duration in the digital moving image would seem also to diminish its potential for affect. The basis of this power of film to express duration lies in the indexical trace contained in the filmic image, what Rodowick refers to as 'photographic causality,' wherein "the camera confronts the prior existence of things and people in time and in space, preserved in their common duration" (Rodowick 2007: 74). Rodowick presents what is essentially a medium specific argument where the main stakes in the affective capacity of the digital image are drawn in the distinction between analogical transcription (the physical process that determines the photographic imprint on the film substrate) and digital transcoding or conversion (the technical means by which light is converted into digital data). The film image – which is to say the one attached to the older technology – is now, claims Rodowick, our lost object. This matters because unlike its digital counterpart the film image was, in terms of causation, in contact with, and intrinsically part of, the world as materially registered. Analogue outputs are isomorphic with, and continuous in space and time to their input. However, in the case of the digital, the conversion to binary data implies a rupture with the physical world and

requires an analogue 'interface' to make it readable. Therefore outputs and inputs are of a different order and photographic automatism is fundamentally altered:

> [T]he enhanced graphism of digital images has rendered them more painterly; they are now more available to our creative intentions and less anchored to causal relations with the physical world. Similarly our perceptual criteria for judging these images have become more spatial and less temporal, and less indexical and more iconic, although this iconism is an output for symbolic notation. (Rodowick 2007: 123)

Materialist criticism validates the indexical sign by virtue of its connection with the physical world of cause and effect. If, as Rodowick points out, digitality breaks the indexical relation with its object then it is the Peircean category of secondness that is suddenly thrown into doubt, and with it the materialist criticism that privileges it. Although Rodowick accepts that computational algorithms can replicate spatial information according to the perceptual coordinates established by cinematic prototypes, the more significant question is whether the digital image can embody the complex temporal aspect of film. For Rodowick, the attempt to theorize the difference between the analogue and digital image provokes a return to classical film theory, less for its psychological concerns than for its exploration of film's affective reach and temporal perturbations. What these theories endeavour to do is to explore our "sensuous contact with images," a "perceptual density...[that]...leads us inward – a self-examination of our relation to time, memory and history" (75). Photographic film, in its registering of not only things themselves, but crucially the duration wherein they exist and persist, was uniquely capable of achieving an affective bond with the world. This capability made film "a historical medium par excellence." However, Rodowick suggests that it might not just be the medium itself – the film image – which is lost, but also the temporal density which constituted film's affective power. In fact, Rodowick disputes Lev Manovich's claims relating to the historical continuity of visual forms between analogue film and digital computing, saying "we do not [yet] possess a historical image of these forms [of 'new media'] because we do not yet completely understand what concepts condition their possible genealogies" (93).

Despite this rupture of the index, and the apparent medium specificity of Rodowick's analysis, his insistence that, affectively, temporality exceeds spatiality affords the possibility of an exploration of digital affect on the grounds that the digital moving image provides new possibilities for temporality – possibilities that are the subject of investigation in Chapter 4 of this thesis. The digital image takes and emphasizes only the aspect of the photograph that it

can easily duplicate (i.e. spatial coordinates) and supplants the "primacy of the temporal sense" that Rodowick uses to define the photograph, with its own temporality, which includes "the time of calculation or computer cycles" (104). The question for digital analysis is how do we define the temporality of the digital image, and therefore its affective possibilities?

One method is highlighted by Markos Hadjioannou (2008) who takes the digitally produced film *Into Great Silence* (Gröning, 2005) as a case study to investigate the destroyed or interrupted temporal relations in digital cinema and consider how these might be rethought in terms of recurrence in the numerical constitution of the image. Echoing Rodowick, the real issue in the passage from film to digital, says Hadjioannou, is the obliteration of the "link to time as historical trace, as unpredictable progression, as expression of change" (2008: 2). This is on the face of it a most direct challenge to the Deleuzian time-image, which supposedly denotes the pure quality of time as change and creation. Essentially, Hadjioannou sees a new temporal relation, technically determined, and operating in the dialectic between stillness and activity in the digital screen's refresh rate. Arguing that celluloid cinema's internal structure provides a direct contact with constant change [freeze frame produced a special case of duration], Hadjioannou notes how the digital image's constitution out of 'static' pixels (those that computer compression algorithms leave unchanged from one frame to the next) and 'altered' pixels (those that need to be adjusted for the depiction of movement), creates a new tension between past and present. Hadjioannou writes that "as the digital combines pasts and presents in one image, it seems to bring an archival strategy into constant accessibility" (23). He concludes, however, that the numerical constitution of the image is an ineluctable block to temporality and duration. If there is a duration in the digital image it is only in the interactivity with its (human) interlocutor, that is, in its "invitation for transformation and a metamorphosing activity" (25). In this case, trying to find a progressive dimension in the technical constitution of the image, which is to say a method that opens up to a creative generation, or indicating an ontology predisposed to invention, appears to be a dead end, needing to revert to phenomenological validations of the image.

From the basis of Deleuze's temporal theorization of cinema, Rodowick and Hadjioannou appear sceptical of the innate affective capacities of the digital image. Steven Shaviro's *Post-Cinematic Affect* (2010), still one of the groundbreaking works to directly analyse digital attributes in popular media, attempts what might be called a more classically materialist revision of Deleuzian theory, which is to say, he discerns the methods of capitalist accumulation or reterritorializations operating in and through a world defined by the

Deleuze/Guattarian concept of machinic desire. The work also captures an idea of post-millennial cinema as 'affectively intensified' in adopting aesthetics of extreme visual and auditory impact.[15] Thus, contemporary digital culture produces 'blocs of affect': films and music videos "are machines for generating affect, and for capitalizing upon, or extracting value from, this affect" (Shaviro 2010: 2). Shaviro claims that digital films and music videos are an abstract articulation or fractal patterning of "social technologies, or processes of production and accumulation" (2). This means that they are iterations, at another level, of those social technologies. Just as the continuity editing regime of classical Hollywood was part of the Fordist production model, digital cinema is part of a new media landscape that plugs symbiotically into contemporary informatics-capitalism. Digital cinema, and other examples of moving image culture, do not represent this structure of capitalism so much as being part of its form and, "[a]s such, they are not ideological superstructures, as an older sort of Marxist criticism would have it"(2), but rather integrated into a new machinery of affect. As an example of the 'affective blocs' and fractal digital patterning in contemporary media Shaviro takes the Grace Jones music video *Corporate Capital* (dir. Nick Hooker, 2008) as an apt example that, in its warping and contorting of the barely recognisable face of the artist, seems to want to blend the human figure into the far reaches of the frame, rendering the corporeal body as "an electronic *signal* whose modulations pulse across the screen [which] works as a material support *for* this signal/image" (15). This treats the person not as an individual but, as Deleuze says, a 'dividual', subject to many of the 'modulating' strategies of the control society where "[e]very event is translated into the same binary code and placed within the same algorithmic grid of variations, the same phase space." (Shaviro 2010: 13-14). The problem with this reference and reduction of (all) digital culture to the "same phase space" means that it is difficult to conceive of the emergence of the genuinely new. What are the very digital conditions under which such novelty could arise from within this 'binary ether'? Compelling as Shaviro's economic and aesthetic analysis is, it does not attempt to theorise the way in which the affective blocs of moving-image can lead to new ethics and critiques of the global forces to which they apparently belong.

Digital baroque

This preponderance of powerfully affective forms has led several theorists to posit digital culture in terms of a 'neo-baroque.' Angela Ndalianis (1999), for instance, is an early

proponent of this assignation, locating in digital culture the stirring of sensations associated with the baroque characteristics of extravagance, impetuousness, and virtuosity, as well as the contemporary excitations of cross-media intertextuality. Timothy Murray (2008) casts the net wider than digital cinematic forms, seeing in new media art more generally a tendency of the baroque operating in the fragmented and 'spatialized' view of temporal flow indicated in the infinitesimal calculus of science and mathematics. Finally, Patricia Pisters (2012) also relates the ornamental influence in contemporary cinema to a 'digital baroque' whereby the infinite mathematical folds and pleats of the seventeenth century artform become associated with the fractal and proliferating geometrics of the 'neuro-image'. As mentioned in the introduction, Pisters' notion of the 'neuro-image' refers to the contemporary fascination with neurology and cognition as infiltrated through the textuality of cinema and popular culture. In this way, the notion anticipates a digital logic and is undoubtedly consolidated in medical imaging technologies that present mobile digital maps of our brains and bodily interiors. The remarkable resonance between these cellular-level 'mind-maps' on the one hand, and digital affect on the other will be discussed in subsequent chapters but for now the significance of the 'neuro-image' is in bringing aesthetics into direct contact with both the technology of the algorithm and the workings of the cerebrum. This linkage effectively conjoins a binary determinism and syncopated thought that characterises a type of desubjectified or even 'unhinged' creativity in digital contexts, summoning a number of 'powers' and analytical terms that can be used to productively explore how the digital Idea becomes embedded in what I call the cinema of the 'digital interregnum'.

Firstly, in the power of the 'delirium', Pisters identifies the juncture where the impossible forces and pure intensities of the 'real' erupt onto the sociopolitical field, eroding the public and internalised structures which usually contain and suppress the individual, often leading to a violent outbreak of resistance or despair. This formulation will be all too apparent in my case-study analysis in the next chapter, where the accelerated pressures and inconsistencies of globalisation find full expression. Secondly, the power of the remix or recombinant, where formerly avant-garde practices of collage, photomontage, decoupage and other types of disjunctive combinations are now commonly reworked in everyday network culture. Pisters relates what is now a quotidian consumer performance of mixing media and digital objects to the pronouncement of a database logic advanced by Lev Manovich (2002), whereby images are now part of a wider and infinitely mixable data archive, whose 'autonomy' in terms of history or memory is put in question. The recombinant, of course, is a key term in the recent

science of genetic engineering in which DNA sequences are cut, spliced and recombined to form new genetic entities and recombinant organisms – an idea realised in the digital glitch where coding 'errors', regarded initially as catastrophic, can actually lead to whole new unexpected lines of digital objects. The outlier identity of the glitch, which is a genetic and evolutionary concept as much as a digital one, makes it cinematically predisposed to horror formations which will be analysed more closely in chapter 3. Finally, Pisters raises the notion of nested instancing as a recursive formulation which replicates the fractal qualities of the brain (the fractal principle in which simple operations in lower orders become replicated, with ever increasing variation and complexity, at higher orders). This nested structuring of the image is also a characteristic of temporal folds and replications typical in the time-order of 'aion', which is the Bergsonian realm of duration, opposed to the 'chronos' or clock-time of rational arrangements. I will show in the fifth chapter of this thesis how the chronos-aion paradox comes to the fore in the contemporary time-travel and 'multiverse' narratives, and how especially it finds a receptiveness to virtual resolution in the cinema of the digital interregnum.

The terms and concepts associated with Pisters' formulation of the 'neuro-image' can be seen to complement and extend Deleuzian film-philosophy fittingly and purposefully into the digital era, additionally emphasising the important dimension of politics and subjectivation which Deleuze and Guattari realised in their various collaborations, most notably in *A Thousand Plateaus* (1988). Integrally, this interdisciplinary edifice of critical and philosophical theory will enable me to explore a particular seam of digital cinema which I call the *digital interregnum* with a specificity related to computational logic all too uncommon in film and cultural studies. Exploring the typologies of passion relayed or passing through digital cinema (the 'blocs of affect' to use Shaviro's term) will involve closely analysing the aesthetics which refract and transmit the digital Idea using concepts most conducive to unpacking 'digital affect'. The prepersonal affects and intensities that surround us in contemporary capitalism are, if anything, multiplied several fold in their power and reach due to prolific digital production and instantaneous networked dissemination, and yet they are difficult to detect due to their 'unqualified' nature. As Laura Marks (2010) has said, despite the rhetoric around transparency and accessibility, information technologies have given rise to a new invisibility in the public space related to the unfolding of digital objects out of an impenetrable source code. In this sense "form arises almost symptomatically from a ground modulated by information processes." (Marks 2010: 3).

Therefore, my project in the case studies I have selected represents an important task of detection which amounts to identifying various junctures where cinema gives thorough expression to this symptomatology – a chimeral emergence of forms arising from a participatory society that requires nothing less than "forcible inclusion, and compulsory monetization" (Shaviro 2010: 62). Given this sociopolitical reality, it would not be without irony to construct an analytical project in which the very digital logics which facilitate algorithmic alienation and control is repurposed for transversal critiques and pathways that, on the contrary, point to a new creative ground for ethics.

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[1] Towards the end of *Cinema 2* (1989) Deleuze writes in ambivalent terms about the coming digital image: "The electronic image, that is, the tele- and video-image, the numerical image coming into being, either had to transform cinema or to replace it, to mark its death" (265). The essay 'Postscript on Control Societies' appears in a publication of Deleuze's essays in the collection *Negotiations* (1995) pp.177-182. Elsewhere in the same collection Deleuze complains in 'Letter to Serge Daney' that television's embrace of "information", perfection and control provides the greatest threat for cinema which, conversely, cinema makes a source of critique. Deleuze implies that the powers of control have harnessed TV, and asks whether in cinema this control could be "harnessed by the supplementary function opposed to power: whether one could develop an art of control that would be a kind of new form of resistance. Taking the battle to the heart of cinema, making cinema see it as *its* problem instead of coming upon it from outside" (75)

[2] Deleuze (2004) *Francis Bacon: The Logic of Sensation*, London and New York: Continuum pp.99-112. Deleuze implies that Bacon's method initiates from a reductive figuration which he then proceeds to violently reshape into a kind of chaos to arrive at the emergence of another world. Here he describes a type of digital-to-analogue transformation, that could also be seen conversely as an analogue-to-digital one.

[3] Janae Sholtz puts it well when she describes Deleuze and Guattari's notion of the actual-virtual dyad in *A Thousand Plateaus* thus: "The virtual and the actual are always engaged in processes of reciprocity - actualisation and counter-actualisation. Bodies are always in the process of composition and recomposition, falling out of sync with themselves, making new connections, and entering into new relations - a level of continuous variation underlying any and all fixed forms" (213). See Sholtz (2021) '*A Thousand Plateaus* and Cosmic Artisanry: On Becoming Destroyer of Worlds' in *Deleuze and Guattari Studies* Vol.15 No.2 pp.197-225

[4] For an extended discussion of the photographic and cinematic interval, and its genesis and connections with Bergsonian thought see David N. Rodowick (1997: 8-17).

[5] Dienst argues that the Deleuzian system of universal images is modified by the 'living image' in the following ways: "[the] alteration and reconfiguration of images occurs through one of three mental "powers": the *concept* that translates, the *percept* that contracts, and the *affect* that expands the force of a particular image in relation to the image of oneself." (See Dienst 1994: 148).

[6] In analysing his own *Battleship Potemkin* Eisenstein writes, "We do not intend to define pathos as such. We shall confine ourselves to studying the effect a work marked with pathos produces on the spectator." (Eisenstein: 1959 [1939], p. 58)

[7] See, for instance, Eisenstein's extended analysis of Griffith's methods in 'Dickens, Griffith and the Film Today' in Eisenstein (1977 [1948]) *Film Form: Essays in Film Theory*, Trans. and edited by Jay Leyda, New York and London: Harvest pp.195-257.

[8] Deleuze notes that despite his dialectical method, "Eisenstein retains Griffith's idea of an organic composition or assemblage of movement-images: from general situation to the transformed situation, through the development and transcendence of the oppositions." (1986: 33)

[9] The cosmology and semiology of American philosopher Charles Sanders Peirce (1839-1914) appears several times in Deleuze's Cinema books. Of especial note here is Peirce's categorisation of human experience as 'firstness' (the primary state of sensation and new experience), 'secondness' (actualised states: the category of the real), and 'thirdness' (the set of relations and arrangements), which tangentially correlate to Deleuze's own three material aspects of subjectivity.

[10] For an account of Deleuze's three stages of 'material subjectivity', which are differentiated into perception, affection and action, see Joe Hughes (2008) 'Schizoanalysis and the Phenomenology of Cinema' in Ian Buchanan and Patricia MacCormack (eds.) *Deleuze and the Schizoanalysis of Cinema*, London and New York:

Bloomsbury pp.15-26. These stages, Hughes explains, are connected elsewhere in Deleuze's work analogous tripartite system consisting of the syntheses of 'connection', 'conjunction' and 'disjunction'.

[11] Amongst the early film theorists to write on the facial close-up are Béla Balázs in *Visible Man* (1924) and *The Spirit of Film* (1930); and Jean Epstein in 'Magnification' trans. Stuart Liebman in *October* Vol.3 (Spring 1977), pp.9-15

[12] The Second World War is, perhaps, only the most important in a number of factors which Deleuze says include "the unsteadiness of the 'American Dream' in all its aspects, the new consciousness of minorities, the rise and inflation of images both in the external world and in people's minds, the influence of new modes of narrative with which literature had experimented, the crisis of Hollywood and its old genres." (Deleuze 1986: 206)

[13] In *Cinema 1* Deleuze posits the idea of automatons (1986: 41): mechanistic structures operating like clockwork. These types of bodies are used as a metaphor for a certain type of movement: images, actions and thinking that proceed along 'automatic' or preordained lines. In *Cinema 2* he states: "automata of movement…made way for a new computer and cybernetic race, automata of computation and thought, automata with controls and feedback" (1989: 264-5). Deleuze contrasts this figure with the 'spiritual automaton' which conversely is a transformative body able to fashion new ways of perceiving and thinking (1989: 156).

[14] Deleuze asserts the emergence of the control society in various sections of the collected volume, *Negotiations* (1995), especially in 'Postscript on Control Societies' pp.177-183. For an 'update' on Deleuze's remarks which encompasses our present societies predictive algorithms and generative AI see James Brusseau (2020) 'Deleuze's Postscript on the Societies of Control Updated for Big Data and Predictive Analytics' in *Theoria* Vol. 67 No. 3 (September 2020) pp. 1-25 available at https://philpapers.org/archive/BRUD_O-4.pdf (accessed September 2023)

[15] The idea of "intensified continuity", incorporating many of the features of affective amplification such as fast-paced editing, tighter framings, and high-impact sound design, was introduced by David Bordwell (2002) in Film Quarterly

Chapter 2: Politics and Globalisation

During the exponential growth of cinema as a mass medium in the inter-war years, Walter Benjamin was thinking about how photographic image technologies bring the past and present together in a dialectical circuit, thereby becoming a crucial diagnostic tool in recognising "the now".[1] At roughly the same time Bela Balázs argued in an essay entitled 'World view' that "Film is perhaps the only art to emerge as a child of capitalist industry and it embodies its spirit." However, Balázs insists that, "it need not remain within the confines of capitalism."[2] These positions invoke an ambivalent political role for film within a 'culture industry' steeped in a commercial and ideological system, but also manifesting a whole set of alternative capacities: what we might call a dream of 'liberation'. Subsequently, commercially released cinema for the 'masses' has only sporadically and under very specific historical conditions come close to any perceptible independence from the commodity form.[3] So now, one hundred years on, what of this revolutionary vision espoused by Balázs'? Steven Shaviro's analysis of contemporary moving image media in *Post Cinematic Affect* (2010) provides an updated thesis on the symbiotic relations between cinema and capital in the so-called 'post-cinematic', digital age. In this work, which denotes a convergence in the mediatic forms of film, television and video, Shaviro concludes that digital moving image culture manifests, if anything, an even more ineluctable inscription of contemporised capital within its structures and ontologies, an economic frame given by 'globalisation'. Writing in the few years after the new millennium, Shaviro argued that we don't yet have a language to account for "*what it feels like* to live in the twenty-first century" (2). Instead, globalization produces a hallucinogenic culture which gives voice to "a kind of ambient, free-floating sensibility that permeates our society today" (ibid.). The idea that the formal, institutional record of a time is an inadequate resource to account for lived social experience was introduced by Marxist critic Raymond Williams (1977). In his estimation it is essential to supplement this formal record, which is always a post-hoc representation, with an assessment of the "structure of feeling" of an epoch, an evidence-based examination of the lived lives of any given period and the "semantic figures" produced therein. The terms of debate will be further examined and put into play further on, but for now it is enough to identify a particularly exceptional, if not inscrutable moment and its emergent and pre-emergent forms. In simple terms globalisation is the capitalistic, technology-driven articulation of neoliberal

politics and philosophy, itself a newly invigorated ideology of privatised resource and the sovereignty of the individual, deriving a hegemonic power and relevance in Western countries following the collapse of communism in Russia and Eastern Europe. More than this, the space of globalisation is at once 'abstract' and distant, derived from virtual flows of information, and seemingly with a life of its own, and at the same time entirely present and immersive in its ever-real impact on corporeal beings. In Shaviro's estimation globalisation and digitalisation go hand in hand to further propagate and consolidate the neoliberal conditions which, by turn, feed back to inhabit the very 'unconscious' of the digitally produced image. Digitalisation in communication and financial systems are the perfect tools for a deregulated entrepreneurial capitalism, exploding the opportunities and demands on individuals by equal measure, all of which find expression in the realities of life, labour and culture around the world. Given this reality of the ineluctable power and scope of globalisation the question arises: what would Balázs' dream of liberation look like today? Is there a strain of contemporary feature film production which displays a modality that goes beyond a passive reproduction of neoliberalist forms? And notwithstanding the symbiotic relationship between the free flows of globalisation and digital productivity, is there any visible expression of a criticality thrown up, paradoxically, by digitality itself? I address these questions of extreme socio-cultural significance by examining the case of *Holy Motors*, a much debated film which forms part of what I term the 'digital interregnum,' a period of recent cinematic history peppered with films demonstrating an 'infectious' digital logic that tends towards abstraction, dislocation and dysfunction. Made by Leo Carax and released in 2012, *Holy Motors* is a film that seems to me to be symptomatic of digital creep, partaking in the impossible torsions that characterise the abstract and immanent forces of globalisation. Furthermore, in its main character it introduces what Williams calls a 'semantic figure' that perfectly articulates the experience or 'structure of feeling' of the given time.

In the previous chapter I laid out the theoretical background of the thesis. I explored the question of digital cinema and presented the problems and limitations of two important theoretical strands, namely materialism and phenomenology. Finally I proposed the positive contribution of Gilles Deleuze in theorising the digital as it pertains to cinema, whilst also noting how the more materialist and phenomenologically inflected applications deriving from the Deleuzian approach have been so far ineffective in establishing a basis for aesthetic and political renewal. In particular, what is missing from the application of Deleuze's body of work to the digital object is a sustained interrogation of the problem of affect. Critically

analysing digital cinema from the point of view of affect and its related concepts releases a politics of the digital and opens up a futurity that is, at source, unshackled from restrictive, dominant norms of globalization. This is to argue that 'the digital' in digital cinema is not a technological classification but rather a modification of Deleuze's time-image that harbours not a blind replication of concurrent neoliberalist forms but a potential for divergence and difference. This assertion proceeds by aiming to show in the following chapters how the digital idea itself becomes a potent dynamic force in films of the 'digital interregnum'. The first of these previews just such a challenge and renewal in the areas of art and politics.

2.1 The Incompossible and the Fake: The Case of *Holy Motors*

> I mean, it's not a film about cinema, or about digital.
> Who would go and see that, you know? I really think of it as
> a film about the experience of being alive nowadays, alive in this world.
>
> - Leo Carax on *Holy Motors*

Leo Carax's *Holy Motors* (2012) is a controversial film that visibly bears the imprint of a new type of production. Right from the opening frames the idea promulgated by Balázs of cinema as a media capable of stirring the masses seems but a pipedream – but replacing it is the stamp of what I call digital affect: a destabilising and dissembling force arising from an artifact that is less a representation of modern life's challenges than an event that replicates those vicissitudes 'digitally', capable of engaging our senses and triggering our thoughts in unexpected ways. Like globalisation itself, the scenarios the film narrates are both distant and proximate to our stark experience of contemporary urban life, adopting narratological methods and aesthetics that can be thought of as inherently 'digital' and that provoke questions – if not answers – in vital areas of culture, politics, and everyday life. As I will show, its scenarios are at once condensations of recognisable experience and at the same time entirely fake, indicative of socio-economic reality in globalised societies, and perhaps an answer to Shaviro's query regarding "*what it feels like* to live in the twenty-first century." Furthermore, notwithstanding its reference to contemporary technologies, *Holy Motors* harbours a deep affinity with the primitive, a kinship that is in fact key to its power and potential to refresh thought and filmmaking in radical ways. Indeed, prior to its release it would be fair to say that *Holy Motors* aroused a high level of anticipation, fostered by the

reputation of Carax himself as an *enfant terrible* of French cinema, and enhanced by his absence from filmmaking for a number of years. Upon release, however, the critical response was mixed to say the least: less a sense of achievement than a certain bemusement and perplexity. Opinion was divided as to whether the film was a "visionary, game-changing masterpiece", as described by Jonathan Romney in *Screen Daily*, or alternatively a rank example of "uneven, indulgent filmmaking" with an unjustified investment in "images and feelings over storytelling", as pronounced in *Sight and Sound* magazine by French film expert Ginette Vincendeau.[4] In my analysis I aim to show how these contradictory responses are more than the expected fluctuations of opinion in film reviewing, and in fact express an understandable ambivalence, being the logical consequence of a digital affect.

The film opens with a prologue which sets an inscrutable tone that persists throughout. Initially we see a frontal view of a large audience staring impassively at a cinema screen, as if frozen in aspic. The setting then changes to a night-time hotel room overlooking an airport and its connected industrial hub. The distant sound of seagulls and foghorns permeate the demure lighting lending a dreamy atmosphere to the bedroom interior where a man (played by Carax himself) slowly rises from his bed. Sensing another presence, he slowly traverses the room and carefully examines a wallpapered partition, eventually finding a secret passage which he unlocks with a spanner-key grafted on to his middle finger. The narrow corridor leads the man to the balcony of an adjoining cinema auditorium from where he looks down onto the same deathly silent audience as before. Incongruously, a young child totters down the aisle – the only moving entity in the dark space, lit only by the flicker of light on the screen. As the camera transitions to the reverse low angle, the child has now been replaced by a huge lumbering dog, and so the scene ends. This preamble, a strange mix of odd figures in anomalous spaces is the prelude for a series of elliptical juxtapositions forming a recurrent arrangement of side-by-side, but autonomous worlds (the hotel, the theatre, the port). Further, it annunciates the metanarrative on cinema itself, the first iteration of a nostalgic lament possibly suggesting that the communal experience of the 'movies' is dead for the spectator and with it the type of consensual affect thought to sweep through it, now stripped in the digital era of its relevance and superseded by newer technologies and platforms. Are these spectator-zombies the fortunate ones: the last to truly enjoy an innocent and collective experience of the movies? And are predictable enjoyments and candid characters no longer applicable to dramatic fiction? The backward undertow is unmistakable, but the wistful mood which permeates *Holy Motors* is contradicted by the affective power of the film itself, which

seems rather to augur and to generate the conditions for a new and more exciting aesthetics and ethics.

After this puzzling opening the hermeneutic challenge posed by the 'fake' story and characters is exacerbated when we are introduced to the main character, Monsieur Oscar (played by Denis Lavant). Oscar, whose very name invokes another ironic reflection on cinema's relevance, will take us in eccentric fashion through the film's disjointed sections to the final outlandish ending. It's early morning and M. Oscar salutes his young children as he leaves his modernist family Villa to go to work. Surrounded by body guards as he enters his stretch limousine, he is immediately coded as an important business executive or politician. Oscar has nine assignments waiting for him in dossiers laid out on the back seat as he is chauffeured around Paris to multiple locations, exiting the car each time as a new character. The extended vehicle itself takes on a central role in the director's thesis on life and power in a modern city, as Xan Brooks (2012) explains, "It all started with those white limousines, which he saw as a neat symbol of the virtual world, in that they are rented by the hour; in that they want to be seen but won't let you in; in that they are like living in a bubble." Within the car, Oscar communicates with his chauffeur via a video display which also doubles as a dashcam monitor affording a digital visual at all times. Presently, a cellphone conversation reveals that Oscar's life is in danger from an unspecified gunrunning activity preparing us for a genre outing: perhaps a Parisian version of *Wall Street*, or even a *Bourne* style Euro-action movie. The code of recognition is broken, however, after Oscar studies the first file and we see that the limousine interior is actually a mobile dressing room fitted with mirror, lights, wardrobe, and make-up. Without warning, Oscar begins his first transformation, methodically applying resin to his bald head in preparation for a prosthetic wig. Shortly afterwards a barely recognisable figure emerges from the limousine transfigured into an old beggar-woman dressed in rags, still flanked by bodyguards. Why this bizarre conversion? In an age when the computer can morph any image into any other perhaps the more pertinent question is, why not? The old lady, possibly of Roma origins, is bent double with age and sweat, the only part of Paris she sees is the stone pavement beneath her feet as the busy city folk walk briskly by, ignoring her alms-cup as she mumbles of her isolation and impoverishment. Then, dispassionately, we are back in the car where Oscar derobes from the old lady guise before consulting the dossier and preparing the garb and accoutrements for his next assignment. The bizarre eccentricity of the beggar lady episode is repeated in a series of equally disconnected vignettes defying cognate connections or overall explanation. Thus the initial expectations of

corporate malpractice, or 'dark globalization', as referenced in a glut of early-millennial films is jettisoned, and the 'truth-of-the-text' is put in question.[5] No less than eight separate scenarios follow where Oscar 'plays' a smorgasbord of oddball characters, stopping off at various Parisian destinations – some pre-assigned, some apparently opportunistic – as if passing each time into an entirely different yet strangely recognisable world. In between each world we observe M. Oscar in his limousine as he meticulously applies make-up and practical prosthetics, preparing to enter the next outlandish scene – a new *actualité* – as an entirely new character. Thus, after 'The Beggar-woman', Oscar transforms into 'The Motion-Capture artiste', and thereafter as 'Monsieur Merde', 'The Father', 'The Accordionist', 'The Doppelganger', 'The Banker's Assassin', 'The Dying Patirarch, 'The Serenading Ex', and finally back home to a his wife and daughter who are not the ones he left early in the morning, but actually chimpanzees living in a modest suburban home. Internal to the sections everything is 'in place', plausibly real within its particular configuration to fulfil, however bizarrely, a certain hodological reality. External to the scenes, however, we witness the 'theatre' of life as Oscar transforms into new personas in a reverse Brechtian move where we see the artifice but are never exposed to the cameras or the production, features which have become 'invisible.'

The strange dialectic of reality/falsity traverses the entirety of the film. For instance, in the 'Dying Patriarch' sequence (bearing the moniker of *Le Mourant* in the closing credits) Oscar lies literally on his death-bed uttering his final gasping laments to an adoring niece (another actress apparently hired to play the part). Both Oscar as the elderly uncle, and the interior of his expensive hotel room, are entirely persuasive, but moments after the emotional 'death' of the uncle the scene ends and the illusion is broken as the two actors exchange civilities and take leave of the space, afraid they will be late for their next appointment. Each scenario – a filmic nugget – is similarly bounded and meticulously drawn in its own autonomous terms. But taken together the nodal spaces are mutually exclusive and impossibly disjointed. How can the images of the Beggar Lady exist side by side, in the same world as that of the professional M. Oscar, or the Motion Capture artiste in the second section? How can the wretched M. Merde exist in the same world as the nostalgic lover effusing and bursting into song over a previous romance? What have these characters, and their sovereign milieus, have to do with each other? *Holy Motors* invites us to consider this string of aberrations together in a project that has a wider resonance than routine filmmaking. Clearly, the sum-of-parts has a mathematical relation to the Whole, and each part, destination or nodal point is a self-

contained world, that 'organic' reality given by the ordinary rules of cinematic narration and anchored by the specific persona commensurate with that world. In contrast, the 'whole' is organised in a 'crystalline' structure with jagged, discontinuous lines and blade-like boundaries.[6]

Within such a structure classical semiotics – where sense and understanding issues from the attribution of signifiers to distinct signifieds – is liable to break down. Conventional narratology can no longer be used in *Holy Motors* to understand and predict lines of action, character motive, or the unfolding of event, putting the truth of text into crisis. The combination of wild character and impossible combination provokes accusations of solipsism and irresolvable enigma. As Vincendeau (2012) says, although the individual characters are self-consciously 'mimetic', on another level "they are utterly opaque. Who and what they're for remains mysterious" (89). Against this charge of obfuscation, Carax himself lays claim to a transparency and far-reaching relevance of the film that few of his critics can sanction. In his antinomical reading the purpose of the project is to lay bare "the experience of being alive nowadays, alive in this world", an opportunity, if only we could grab it, "to see the entirety of life in one day."[7] To paraphrase Carax's intent, the film jolts the spectator into a delerious apperception of contemporary life in the metropolitan West, a kaleidoscopic vision in which both 'life' and 'cinema' can be recognised. Causal linkages and blending of experience are shunned to instead map out the jagged edges and the ill-fitting segments of 'life' that exist episodically like bubbles squashed together side-by-side.[8] These multiple genres that come together in one film or one life are known through on the one side cinematic and televisual programming, and on the other our familiarity with the vagaries of life – new modes of 'immaterial' labour and love in globalized digital societies.[9] In this light, the film now appears to be a generalised depiction of the milieus of the city and the typologies of character – the 'players' – forged in the mold of neoliberal capitalism. Carax's claims that *Holy Motors* provides just such a vision of being alive today implies that the structure of feeling at the heart of modern experience entails a radical discontinuity of being – a kind of 'falsity' or 'fakeness' that stems from such fracturing. The film's modular structure and its loose, if not non-existent connectivity between modules, suggests that this experience is characterised by individual and communal bewilderment with the contemporary moment, a semi-stunned and permanent reactivity to the contingent real. As mentioned previously, the term 'structure of feeling' was coined by Raymond Williams (1977) referring to a distinctive type of affect conjured in periodic epochs and particularly at moments of change. From his Marxist

perspective Williams was acutely aware that the curated archive provides us with the official characteristics of a period in terms of economic and social formations. But the question, 'what does it feel like' to live through a culturally and historically specific situation is another question altogether – one that Williams considers of central importance to art and literature as it is uniquely capable of registering the elusive and evanescent textures of reality before any definitive history is written. This attentiveness to the complex interplay of forces of the outside and inside which makes up the lived presence of an individual heralds a new focus on the *experience* of a participant: the myriad inflections and micro-events that accrue to fuel the passions and fears of a generation. These are not trivial or incidental affects that can be dismissed as 'merely' personalised response – they are truly social in nature if they form part of a new 'sense'. At the same time Williams rails against the promulgation of a fixity in social forms that he sees as the outcome of reductive analysis: "All the known complexities, the experienced tensions, shifts, and uncertainties, the intricate forms of unevenness and confusion, are against the terms of the reduction and soon, by extension, against social analysis itself" (129-30). What is at stake is the relationship between the general and the particular, the innumerable contacts and interactions within the social field and the development of a new qualitative structure of feeling in the lived experience of Western populations. If this processual condensation of present experience into communicable social forms is a general principle which predates digital modalities, then we may ponder whether this type of continuous production and development of culture into new assignable periods reached something of an impasse in the last decade. Journalist and historian, Andy Beckett (2019) speaks of the 2010s as the "age of perpetual crisis," one which "disrupted everything but resolved nothing."[10] Economically, politically, socially, culturally, and technologically, Beckett's assessment is that at the same time as politics and world events entered a new phase of unpredictability lived experience in the West suffered an unprecedented decline in terms of economic, social and mental wellbeing. With subsequent wars, pandemics, continued economic instability and increasing inequalities, the world since 2010 shows no signs of an escape from the *experiential* 'quagmire'. The extent to which art and culture responds to the obtuseness of the times is open to debate. A period which has seen, as Beckett maintains, "crises of democracy and the economy; of the climate and poverty; of international relations and national identity; of privacy and technology" may well be difficult to designate in an affirmative 'structure of feeling', resulting only in a kaleidoscopic mish mash of incidental experience.

Holy Motors is arguably one such attempt to provide an account of the disjunctive forms and motions that give our epoch the distinction and unevenness of a singular moment of change. Like the cut and paste logic of digital systems, this modular approach reflects quite well the structure of much cultural experience today, from the consumption of streamed TV series and social media use to scientific approaches to problem-solving. Nevertheless, the abandonment of synthesised storytelling (the past) in favour of the as yet unprocessed and uneven experience (the present) defies the rigid social analysis criticised by Raymond Williams, replacing it with the block-structure of *Holy Motors* which represents its structure of feeling as dissolution rather than fixity.

As Williams writes, "structures of feeling can be defined as social experiences in *solution*, as distinct from other social semantic formations which have been *precipitated* and are more evidently and more immediately available" (133-4). Perhaps this soluble moment is exactly what Italian philosopher Umberto Eco (2017) identifies in theorising the contemporary socius as a 'liquid society', spawning a subjectivism where the world has no common points of reference, "where everything dissolves into a sort of liquidity" (2). Although subsumed by an unbridled individualism, character action within such a state is only responsive rather than self-determined, any aegis or integrative function that previously guaranteed a sharing of values occurring now within only very limited slices of contingent movement. Replacing a world which is bent to the meaning-making of this or that hero, we have instead a 'semantic figure' in which all meaning, let alone absolute meaning, is elusive. In common with Beckett's lament above, this loss of direction in cinematic narrative, no less than in perceived social purpose, is commonly represented as a crisis. And yet it might also be seen differently as an opportunity in which new possibilities in culture as well as politics arise.[11] In the same way that the individual or 'character' loses purposeful quality, so too does space in general. Reflecting on *Holy Motors'* random jumping from one location to another we might even detect an updating of Marc Augé's idea of the 'non-place' – abstract architectural spaces, such as the airport lounge and shopping mall, defining the grandeur of international commerce. By locating its vignettes around more localised but equally distinct 'nodes' of contemporary capitalism, Carax's film shows how 'globalisation' has penetrated further into the multiple recesses and mini-spots that perform the flows of capital, information, and image making: the celebrity fashion shoot, the corrupt business deal, the motion-capture studio, the distribution warehouse, the 5-star hotel, the failed department store, etc. [12]

Incompossibility

Such a miscellaneous *assemblage* of location, character and event indicates not an impossible world, but a reality constituted out of 'incompossibles': contradictory environments that exist together in the real conditions of an economy defined by febrile globalization. We are talking about shocking experiences and impositions that buffet the subject from all sides. The travails of subjectivity are in this light not grounds for generic drama, they are symptoms resulting from processes set in motion far 'upstream' from their final landing ground: unnegotiable, hidden processes begun in corporate boardrooms or the closed meeting rooms of Davos where powerbrokers and business leaders discuss trends and futures, or in the research labs of big tech, AI and pharma companies, or on the digital finance and stock market floors in London, New York and Tokyo, where the effects of the virtual flows and instantaneous exchanges of capital transacted on bankers' screens finally filter down onto the streets of 'global cities' such as Paris. These brutalising contradictions of character and space are more than the expected inconsistencies or provisional problems thrown up by a complex socio-economic system. They form an irreconcilable field of overlapping experience best conceived as 'incompossible'. Leibniz solved the ancient paradox of contingent futures by conceiving that two mutually exclusive outcomes of 'possibility' are entirely realizable, but not in the same world: they are 'incompossible'. However, the philosophical manoeuvres by which Leibniz sought to recuperate the integrity of the relationship between temporality and Truth, or rather between time and reality, are now themselves anachronistic and 'false'. On the contrary, *Holy Motors* shows with uncompromising acuity how incompossible outcomes are not only present in the same world (our world!), but in the same 'character'. Incompossibility no longer puts Truth into crisis but becomes a core codification of the real. This reverses the usual cinematic expression of the world through the protagonist's movements and point-of-view, a world that coheres around character relations that Deleuze called the sensory-motor schema. Now it is the individual who is a function of the incompossible real, invented – more or less non-consensually – as 'the one' that fits the scene.

In terms of the individual, Carax uses the device of the 'actor' – if this is the right term – to enfold the mad experiences into the one. Oscar gives us the 'schizoanalytic': that Deleuze-Gurattarian figure who embodies the delirious and forever contingent response to an increasingly fraught and unstable present. If capitalism was always an incessant force of abstracting social codes and material value into quantitative units (money), then globalised capitalism increases ad infinitum the opportunities for decoding/recoding of goods, relations

and meanings: for the world to suddenly become unrecognisable.[13] Oscar is that figure who, rather than acting themselves, embodies the actors and forces that surround them. As an indicator of late capitalist logic, Oscar and his worlds provide a shock to thought: an image that vibrates within us, which is the essence of new art. As Deleuze writes, "the imagination suffers a shock which pushes it to the limit and forces thought to think the whole as intellectual totality which goes beyond the imagination" (1989, p.157). Clearly, by insisting that his film aims at the experience of "life", Carax is claiming the incompossible as a precise condition of the modern world, rendered in an existential reality of jagged and discontinuous experience rather than the one reflected in the smooth, harmonious narrative structures of conventional cinema – Vincendeau's "images and feelings over storytelling".

Recuperating *Holy Motors*

Before proceeding with the argument that the disorienting incompossibilites of *Holy Motors* are a function of an epochal 'digitality', are there other ways of comprehending the film? Is there a way to bring this madcap folly into line, into the fold of cinema 'proper'? Looking back at cinema history and the diverse critical discourses developed to understand it, three restorative approaches are possible: modernist alienation, postmodern bravado, and the 'auteur-plus' theory. Firstly the question: is *Holy Motors* 'modernist'? In some ways the detached array of vignettes which structure the film in a montage of snipped-out apparitions reminds us of the dialectical image of modernity theorized most effectively by Walter Benjamin. This is an image that only becomes legible in, and synchronic to, the 'now'.[14] For the moderns a montage aesthetic was enough to signify on the one hand the fragmentary alienation of modernity, but on the other, a dialectical condition promising a truth and a future. As an example, Walter Ruttmann's *Berlin: Symphony of a City* (1927), which also uses the structure of a 'day in the life' of a metropolis, revels in the increasingly frenetic and disorientating beat of urban existence, but imposes upon it a containing arc or structure of meaning in part given by reassuring images of 'old' Berlin. But in the case of *Holy Motors*, there is no temporal dialectic which can provide the lightning-rod of recognition. Carax resolutely sticks to an image-archive of the present. In other words, if there is a dialectic it is not of past and the now, but of incompossible presents, through which we are able to glimpse our future. Moreover, where the City Symphony films sought to programmatically 'represent' the city in ideational terms (in Ruttmann's case through symbol and metaphor), Carax's

insistence that *Holy Motors* captures a pure experience suggests that his film works from the other direction, which is to say, from sensation to idea. The bipolar critical response to the film would suggest that this journey – an invitation to hermeneutics – is not a smooth or untroubled one. *Holy Motors* is, then, neither that modernist intervention in the world, nor that modern representation of it.

Secondly, beyond the modernists, we could see the fractious debate on the meaning of *Holy Motors* as a version of the quirky narrations and characters of an earlier postmodern cinema, especially from the 1990s. This cinema brought with it relativism, irony, and recirculation – qualities also visible in *Holy Motors*. But to classify the film as postmodern – in the virtuoso styles made famous by, say, Quentin Tarantino and Robert Rodriguez (on the violent end of the spectrum) or Wes Anderson and Spike Jonze (on the decorous end) is inaccurate and misleading. Primarily, postmodern cinema of this type was only ever a rhetorical, cosmetic departure from classical narrative form, only encompassing temporal machination and eccentricity deriving its identity precisely in relation to previous ethical and aesthetical standards. The world of postmodern film has developed enough latitude to delight and intrigue with anomaly, contradiction and difference, but in the end the 'content relativism' is woven back into a reassuringly quiescent fabric of the world. As Fredric Jameson says, the pastiche of postmodern culture remains on a homogenous plane, never spilling over into parody, which has a critical function.[15] Despite its novelty, postmodern cinema no longer has the capacity (if it ever did) to debunk absolutely the principles of narratology – which is the accusation made in some reviews of *Holy Motors*; compared to the smart scripts and teasing entertainment of postmodern cinema the alienating strategies and banal estrangements of Carax's film offers a more primal, contingent and uncompromising spectacle which opens the door to a potentially new type of cinema.

Thirdly, before starting to delineate the features of this new cinema, we can hardly speak about critical frameworks in regard to Carax's filmmaking without first addressing the question of the auteur, a question which has historical connections with French cinephillia.[16] Is the 'singularity' of *Holy Motors* merely the output of a livewire director, expressing nothing more or less than a maverick artistry or consciousness? The film may lend itself in this regard for interpretation under the aegis of a peculiarly 'knowing' French auteurism.[17] In this vein Carax is defined (not least by himself) as something of an outsider, the visionary prodigal returned from an absence half enforced and half self-imposed, endowed with a special power to see beyond the clichés and set ways of the 'professional' filmmaker – in

other words the ‘auteur-plus’: perfect territory for the particular type of auteur criticism dedicated to the ‘enfant terrible’.[18] In one way Ginette Vincendeau, is right to point to the typical gamesmanship being played out in *Holy Motors* whereby “in the best auteur cinema tradition, Carax scorns the notion of narrative yet claims a grandiose project ...and denies authorial intentionality while reinforcing it” (2012: 89). But for my purposes the application of the classical model of the auteur is both too restrictive and too ‘all encompassing’. Too restrictive in that collapsing textual form to unique artistry (whether achieved or failed) tells us potentially nothing about the ‘outside’; and too all-encompassing in that everything ultimately has a personalised – whether conscious or unconscious – rationale and explanation. Whilst an authorship approach is one of the default positions in film criticism, incorporating the particularities of a mature filmmaker into the fold of cinema, it nevertheless misses an irrepressible ‘imprint’ from the outside, inadequate in revealing what we might call the ‘pre-personal’ affective: the virtual realm of intangible but real sets of forces that connect the outside to the individual before (re)cognition sets in. These buffeting forces are the phantom knots that lie at the root of the more visible, which is to say actualized markers of social, cultural and technological change. These dynamic fields that animate the complex areas of contradiction or incompossibility – entities that are usually hidden – are brought to the surface in *Holy Motors.*

Digitality

To cement the paradigmatic distinction between the possible interpretations above, and my own designation of *Holy Motors* as a film of the ‘digital interregnum’, we might propose that the separated-out vignettes of Carax’s film, with their internal ‘truths’ but external ‘falsities’, represents a more radical digital structure that interrrupts the analogue continuity-strategies of postmodern cinema. As James Moor (1978) writes of the differences between analogue and digital systems:

> in a digital computer information is represented by discrete elements and the computer progresses through a series of discrete states. In an analogue computer information is represented by continuous quantities and the computer processes information continuously. (Moor 1978: 217)

Set alongside one another, we see that the postmodern cinema’s exposition of uniqueness – of character, of situation – is transformed in the digital case into a ‘generality’, in accordance with the first stage in the digital process: stripping the analogue of its unique, continuous

quality in its conversion to uniform (binary) information. The conventional chains linking cause and effect, past, present and future are truncated; replaced by a lineage where, in theory, every instant is independent of that before it and after it, generating new connective and sequential potentials. In digital cinema this 'generality', which is a consequence of conversion, is not a bland uniformity. It is better called a 'singularity', referring to an impersonal power, removed from consciousness, that nevertheless connects with other singularities within an assemblage to engender transformation of a subject. As Deleuze (1991) writes: "it is a singularity in the mathematical sense. Knowledge and even belief have then a tendency to be replaced by notions like 'arrangement' or 'contrivance' (*agencement* and *dispositif*) that indicate an emission and a distribution of singularities" (94-5). A postmodern cinema that elevated the unique or the extreme within the logic of a closed narrative system is in a way surpassed by *Holy Motors'* 'digitality' that multiplies the extreme but sets it within the radically open. Not surprisingly, in such an open system the human sensorium is challenged in new ways to connect input with a 'correct' or systematic pathos. In watching the film we may ask: what are these scenarios that are halfway between cliché and the outrageous? Here we enter the realm of a 'pure' affect.

The brief comparison with postmodern cinema again suggests the emergence at this time of a new type of cinema that cannot be easily accommodated within existing frames of analysis, but which instead demands the development of new critical paradigms that assess film 'ontologically' in terms of two antinomical terms: digitality and affect. To acknowledge the key determinants, and in contradistinction to what it is usually deemed to constitute, I consider 'digital cinema' as a new category by virtue of the affective properties it 'carries'. To borrow from the media theory of Marshal McLuhan's (1964), this is not the 'hot' cinema of immediacy and immersion in CGI action and spectacle, and nor is it the 'cool' cinema of consciousness where digital images are mobilized as abstract objects for contemplation.[19] And neither is it a utilitarian digital cinema that synthesizes a Bazinian "aesthetic illusion of reality" by using digital post-production to exercise absolute control over every aspect of the visual field.[20] Steven Shaviro (2010) makes the distinction between *metamorphosis*, an ability to move laterally across categories, and *modulation*, which requires an underlying 'carrier wave' (13-14). The former obliterates fixed identity whereas in the latter alterations are contained within fixed parameters. In converting thing and event into data, Shaviro assumes that digital code operates under the auspices of modulation, bounded by strict algorithmic determinations, and at the same time subject to the commodifying force of globalised capital.

The film and televisual industries have deployed and developed digital technologies for largely instrumental purposes, reforging conventional film storytelling into a commercial digital register most successfully seen in the global brands such as the J.R.R. Tolkien adaptations in the *Lord of the Rings* trilogy (Peter Jackson, 2001-3), the *Harry Potter* saga, and Disney's 'Marvel Universe' franchise. As Shaviro (2010) says, the "blocs of affect" invested in the globalized moving image have a dual role: "they generate subjectivity, and they play a crucial role in the valorization of capital" (2). Such global brands work from generic prototype on the pre-configured emotions and cognitive patterns that have come to dominate a culture which trades on such 'blocs of affect'. On the contrary, 'digital cinema', in the way I have defined it, is a type that instigates a new affective regime eschewing the stupefied awe of both spectacle and existentialism, and instead implants digital aesthetics to invoke a pure or impersonal affect. In the case of *Holy Motors* this pre-individual affect – which is affect proper – exposes the shock of 'incompossible reality' and reinvigorates the power of the new – in thought, art and politics.

In replacing these previous approaches, which appear as more or less dead ends, I would instead take *Holy Motors* as an important instance of a new kind of *digital* film: not a programmed treatise of the contemporary city, nor an auteur indulgence, or playful enigma, but a vital cinematic sign of how a digitally inscribed cinema can interact at an imminent, or 'geneological' level with the socio-political forces of an epoch. Genealogy, after Nietzsche, is not merely an exhumation of distant origins, but an examination of how outward signs and events of the present are enfolded with a coexisting set of originary causes: a process in which cinema is uniquely qualified to participate. Simply put, this is film as a synthesis of 'life', as Carax calls it, on the level of pure affect or 'firstness'. Theorised in the semiology of C.S. Pierce, firstness is the primary imprint of sensory perception, an initiation which is followed by assimilation and response ('secondness') and finally by mediation and representation ('thirdness').[21] What I am calling a digital film, then, is not the 'representation' of a burgeoning digital world that was a feature of millennial works such as *The Matrix* (Lana and Lilly Wachowski, 1999) or *Timecode* (Mike Figgis, 2000) but rather the permeation of cinema with a digital logic. *Holy Motors* incorporates digitality into its 'algorithmic' structure in subtle but powerful ways. For example, the location of the second assignment, in which M. Oscar's travels to what looks like a high-security chemical plant, is actually a digital film studio where he outfits into a roto-scoping suit for converting live action to virtual computer simulation. This confusion of industrial spaces introduces yet another hanging segment,

unmotivated and disconnected with the others, yet bringing to the surface the theme of digital-cinema coupling. In the vast empty space of the studio, Oscar is given audio instructions, thereby showcasing the technology of motion capture by performing virtuoso feats of gymnastics, in the martial-arts style of the modern action genre. In its isolation of moving figure against a voided, blacked-out space, the image performs a cinematic synthesis of Muybridge's *Running Man* (c.1884) with Brett Leonard's *The Lawnmower Man* (1992), but more importantly it reveals the 'modular' abstractions of modern filmmaking – the fact that GCI-produced 'realism' is constructed in the most artificial of ways!

Although this section of *Holy Motors* is the most transparent application of computer generated imagery in the film, the imbrication of cinema, the digital, and globalization filters across the text in more clandestine forms. Indeed, the hidden and instinctive digital inscriptions (the level of firstness in Piercean terms) can be read in some of Carax's pronouncements on the film, rejecting any *conscious* theme: "I mean, it's not a film about cinema, or about digital. Who would go and see that, you know?"[22] The director's nonchalant denial about the standing of the film belies its cellular structure and recurrent concern with artificiality, and is extended in further ambivalent comments with regard to digital filmmaking, despite *Holy Motors* being his first feature originated on digital High Definition format:

> In a way, you can't say you're shooting films any more, right? The cameras are more like computers. What's the point of DP'ing? From what you shoot you can do anything after that in post-production. All of this is a big mess, and it's going to take time [to work out].[23]

At the same time, in a practical sense, Carax's outsider status vis-à-vis normative commercial filmmaking (a status he readily admits) demands an alternative approach which paradoxically depends on the very digital methods he questions: "I thought the only way I could make a film fast would be to shoot in Paris…which means a small budget, shooting digital, shooting fast, and never watching the dailies."[24] That this guerrilla-style filmmaking is a newly invigorated form inspired – practically and conceptually – by digital film technologies is indubitable. But there are more fundamental ways in which digitality transcends the technological question to become rooted into the film as a principle or condition. The strangely 'abstracted reality' and extreme 'incompossibility' are functions of both quotidian survival in advanced economies and the fundamental operations of all digital systems that sample and quantise physical phenomena and subsequently operationalise information. Notwithstanding Carax's disavowal of the digital the film purports to show what it feels like

to live in a milieu wrought from the vicissitudes of globalization, which are themselves synergetic by-products of digital systems and operations. This parallelism between content and form is an instance of Fredric Jameson's view that the cultural text is always in a dialectical relationship with the real, not in a simple 'reflection' of reality but in the sense that the real is woven into its own formal structures.[25] Coming back to the film's *dramatis personae*, considering the cheek-by-jowl existence of the vagrant beggar-lady and the motion-capture artiste, or the corporate sophisticate and the outrageously grotesque Monsieur Merde, these are at once the very textual expressions of the radical discontinuity of its 'digital' logic, and an insight into the identities at the opposite ends of the spectrum of what constitutes success or failure in the globalized West.

Reading Politics

Reading a politic into *Holy Motors* is not a straightforward task. It is not simply a matter of subscribing to Comolli and Narboni's maxim that "every film is political," thereby working to unveil the stamp of ideology.[26] Rather, following Mauro Resmini's strategy in his analysis of Italian political cinema of the 1960s, it takes the form of positing an aporia, a non-relation between the terms 'politics' and 'cinema'. Far from being blind to political engagement, films that on the surface proffer a distance between the figurations and events depicted, and the crises of their historical period, are better able to produce a political discourse which, for all its transversality, is potentially more critical and creative.[27] Taking this political perspective, each section of *Holy Motors* – corresponding to M. Oscar's various assignments – revolves around a reality subjected to the dual yokes of incompossibility and the digital code of globalization. Narrating the apparently innocuous vignettes in the film appears to divorce the experiences of life depicted from direct political discourse, and yet the behaviours, situations and ideologies, on closer inspection, map quite neatly onto paradigmatic disarticulations which are symptomatic of the economic models and global subjectivities of the now. One such segment is where M. Oscar is playing a doting father collecting his teenage daughter from a schoolfriend's party. At first sight, this section is far removed from any digital thematic imprint or discourse of globalization, but on closer inspection it bears the indelible hallmark of a powerful matrix of commerce, pop culture, and social media 'influence' which assign digitally driven nodes of contemporary reality making up the 'global teenager'. After driving to pick up his daughter in his vintage Peugeot, the

dishevelled, inquisitive father engages his daughter in small talk about the party, which the daughter duly claims to have been a great success on every level. From mobile phones calls, however, the father learns the 'truth' in an excruciating accumulation of embarrassing detail. In fact, the daughter has spent all night skulking in the bathroom, a social misfit in stark contrast to her best friend, the ever popular Sonia. Father chastises daughter and the scene ends in a sudden tantrum (from father, not daughter) and an unexpected parting of ways. How can this simple scenario be conceived of as in any way political, much less with a digital dimension? To convert a reading of this simple scene to a 'digital' commentary means to discover its underlying social investments and behaviours driven by international corporate capitalism and branded technologies. Firstly, of course, there is the fact of the incessant, immediate, and transparent flow of digital communications centred on the mobile phone. This information, perhaps neutral in itself, is invariably caught in webs of power and control, as in this case, where it is weaponised to 're-educate' the awkward teen. The father, himself under pressure at work, flagrantly turns to his mobile phone for the truth to challenge and annihilate the comparatively flawed and untrustworthy communication supplied by his daughter who sits right next to him. As an adjunct to this we have the arena of globally constituted 'teen' identity, socially and commercially empowered by a consumptive appetite generated by the internet and global media. The global sign of this is Kylie Minogue's crossover dance anthem from 2001, *I Can't Get You Out of My Head*, which is booming from the apartment block windows when the father arrives at the pick-up. Having 'gone viral', the tune is also the ringtone for the daughter's mobile phone, marking the synergetic, cross-platform force of digital entertainment culture. The daughter perfectly invites sympathy with her self-conscious admission of a familiar adolescent gaucheness, but this is summarily dismissed by the aggrieved father as he belligerently retorts "Shit, why can't you be popular like Sonia". Instead, the daughter has unplugged from the behaviours that could win her influence and advancement in her milieu, squandering her membership to a standard model of the consumptive, 'global' teenager. Her apparent rejection of this 'entitlement' takes on almost political overtones (how could anyone not aspire to it?) and the penalty in failing to fit into the social-consumptive matrix is to be left behind. The father illustrates this in a shocking 'punishment', abruptly ejecting the vulnerable daughter from his car in the middle of the night, in the middle of the city. Here, as before, the scene ends unceremoniously and we witness Oscar changing cars back into his limousine in preparation for the next job and his next character.

For all their rhetorical function the lunatic passages in *Holy Motors* are, for Carax, not the whims of an auteur or the incitement of art, but translate in an everyday form to the structure of reality, or, again, "the experience of being alive nowadays." Carax's warning against over interpretation of the film is no doubt sincere, but the formal innovation of the film cannot be perceived outside of the problem of a universal digital culture and its unpredictably dislocating affects. The disheveled and fatigued look of the father in the aforementioned episode, a state noticed by his daughter is, he says, due to overwork. But his own, and M. Oscar's increasingly weary transition from one scenario to the next is also indicative of a generalised subjectivity today: an over-pressurised and discombobulated response to the on/off, and/or, high-speed logic of digitalized globalization. What is the mechanism by which the film short-circuits the usual narration or dramatization of the stresses of an interconnected global value system, which after all has been the subject of many previous films? The way in which Carax describes his relation to cinema is interesting in this regard.[28] His method of conceiving the film in imaginative flashes and shooting more or less on-the-fly, open to a certain contingency at almost every point in its production, is an implicit rejection of 'industrial practice' and commercial filmmaking in all its guises. More than this, it expresses a different perspective on the artist's relationship to their art. In explaining this connection, Carax insists "I live in this place, in this island called cinema. I mean, you can inhabit cinema without making film. That's why cinephilia and cinema are two different things in my mind. I'm not a cinephile... I don't really know much, but, I still inhabit cinema — the way I see things, the way I think."[29]

Filmmaking the 'Carax way' is about seeing the world 'cinematically' – which is to say, in images and flashes of recognition, not as cinematic storytelling. Conventional auteurism reads this as the enfant terrible who conveys a particular intensity or 'mad vision' which can spill over into indulgence and arrogance, as mentioned by Vincendeau. Nietzsche's formulation of the 'Overman' has something to say in defining the contours and significance of this extreme type. In his oblique reading of Nietzsche, Deleuze shows how the question of the Overman is shifted away from the unique individual and the self-obsessed personality, transforming the ontological question 'what is?' into 'which one is...capable of uttering, doing' etc. This shifts the classical notion of the sovereign agent who bends the world to his/her vision towards another dynamic. As Deleuze writes, the 'one' that acts or creates "...does not refer to an individual, to a person, but rather to an event, that is, to the forces in their various relationships in a proposition or a phenomenon, and to the genetic relationship

which determines these forces (power)".[30] In this reinvention the Overman is not the centre of the world, but rather a contingent node, a catalyst or attractor in a self-organising system. Using such a formulation we can put to one side the question of the individualised creative spark or 'auteur subjectivity' and regard the creative process as less a 'will-to-power' than a serendipitous convergence that cracks open a new pathway out of conventional practice and institutionalised thought. The aporia between cinema and politics, which defies the programmed relation of conventionally 'political' cinema, becomes clearer when viewed against Carax's adoption of a 'flash-image' method. But the non-relation also derives a strange, circuitous concurrence whereby the randomness and discontinuity of images accurately connects to the structure of contemporary experience, a correlation paradoxically made stronger by the gap between them. As we have seen, set against the self-reflexive auteur or the virtuoso filmmaker, Carax advances the idea of a kind of organic connection to cinema-as-life, life-as-cinema. He carries on in a similar vein about *Holy Motors*: "it was probably the most unconscious film I've made. I think that watching no dailies also helped, which meant that I was not reacting to what was done, I would just do it. So, I was doing it. I was not aware."[31] In relation to political cinema, this is not kino-eye, nor kino-fist, but 'kino-life': an automatic filmmaking involving the connection of brain, body and apparatus in immediate series: an attitude and a consciousness which, whilst possible before, has reached full synchronisation with digital methods. Such methods render experience in one-to-one conversion to digital data, 'unmediated' and more or less stripped of signification or ready-made formula. What does it mean to adopt such an 'unconscious' or digital mode of filmmaking? To summarise: for the phenomenologists, as for auteur critics, it would entail a demotion of the human subjective centre and a reconfiguration of ethical as well as artistic codes. For the modernists it is closer to the automatic art inaugurated by the machine, but crucially devoid (at the level of 'thirdness') of utopian promise. For Carax, and for a 'digital consciousness' it is the realization that conventional narratology, or the 'truth of text', breaks down in the face of contemporary incompossibilities, or rather, a deeper, more provisional truth prepares to take over, as suggested in Carax's rhetorical question: "Is the film telling a story? No, it is narrating a life. The story of a life? No, the experience of being alive."[32] Despite Carax's own ambivalence about the digital turn, it has undoubtedly afforded the immediacy and flexibility that corresponds to his preferred methodology as well as shaping the characteristics of contemporary experience which he portrays.

Digital Affect

To be clear, then, the digitality of *Holy Motors* does not reside solely, or even principally, in the fact that it was shot and edited with digital equipment.[33] Rather, as I explain above, the more significant change is the translation of a digital principle – abstract yet real – into the body of the film both in terms of a digital structure and in the generation of a 'digital affect'. This affect, schizophrenic in nature, is an abstract and explosive impulse, registering in each hodological space the overwrought and unpredictable response to the contingency of the event. In lieu of the auteur, Carax conjures in M. Oscar an image of Deleuze's 'quasi-causal operator' – that figure in any given assemblage that can catalyse from a set of events a totally different outcome through a kind of vital affection: a figure (in being the 'wrong' one at the wrong time) whose creativity – if that is the word – vibrates like an antenna attuned to the imperceptible micro-currents of the event existent at an *a priori* level of reality. These incorporeal events, through their cumulative interference patterns, agglomerate and in turn enact a phase transition giving rise to corporeal interaction – sequences which are at the same time completely recognisable and entirely outrageous (such as the caring father who transforms into a punitive popularity policeman, or the weary worker who finally returns home late at night to a loving family of…chimpanzees!). The resultant imagery is achieved not through the domineering consciousness of the auteur but, on the contrary, by giving free reign to digital logic. To be clear, this is not an 'imposition' of a digital structure on to reality, it is more that reality, in its discombobulation, has already acquired digital form. A truly digital consciousness thus fails to cognate the 'correct' structure of meaning based on organic connections, as the digital object leads us back to a 'firstness' where perception is divorced from recognition, affect is unpredictable and new images freed up. In this sense, the discrete series and feedback loops of digital culture are inseparable from the disjunctive incompossibilities that define social experience in globalization.

At this point we ask the question: Is knowledge ever to be found in digital chains? What if the calculations in digital machines never end and meaning is left hanging like an endless buffering circle? Is political traction elusive or even possible under this episteme? Insofar as it is M. Oscar's 'job' to live by and through the incompossible scenarios of *Holy Motors* he takes us on an astonishing zig-zag through just such an experience of metropolitan life. The extent to which this life is digitalised is best exemplified in another bizarre encounter between Oscar and his digital copy. This is a particularly violent episode set in a dispatch warehouse (now a defining location for globalized commerce and the 'gig economy') where

Oscar confronts a worker in the logistics depot over some unknown dispute. In revenge Oscar stabs the other in the neck and, as life ebbs away from the man, proceeds to prosthetically swap their identities. We see Oscar shaving the man's head, adding a false moustache, and even scarring the man's face to mirror his own disfigurement. As Oscar is clothing the body of the other in similar attire to his own, the moribund worker takes a final lunge at Oscar and stabs him in a perfect copy of the original event. The two dying men, every inch doppelgangers, lay sprawling side by side in a perfect digital copy which sardonically preludes the subsequent discourse on art and credibility. Back in his limousine, there is a surprisingly frank dialogue between Oscar and his superior on the significance of cinema, truth and meaning today. Before this Oscar cleans up but finds that a company executive has entered unknowingly, hidden amongst the multitude of props, costumes and make-up cases. This anonymous figure, a cameo role played by French stalwart Michel Piccoli (whom we will have cause to mention again later), challenges Oscar on his recent performances, suggesting that some no longer find it convincing. Irritated by the suggestion, Oscar retorts that the cameras are now practically invisible: "I used to love the cameras…" The enigmatic dialogue, set in the darkened bubble of the motor car, itself a condensed factory of make-believe, is clearly yet another coded lament on the "death of cinema" as a mass media, and a corresponding loss of consensus. Asked what keeps him going, Oscar replies "The same thing that made me start, the beauty of the act." *Holy Motors* heralds 'cinema' as no longer credible. Now, audio-visual 'content' is paradoxically emblematic of the "experience of life", entailing a disconcerting journey, alongside M. Oscar, into these disconnected and 'unbelievable' scenarios – like switching between a hundred TV channels. Together with this a number of other 'cinematic' questions are being posed: the role of the actor, the location of the spectator, the nature of realism. If these are fundamental challenges for the 'political' future of film and visual media more generally then it's not surprising that they can hardly be answered here. And yet in its experimental form the film suggests that cinema will be at the forefront of discovering a new episteme and aesthetics of the digital.

The exchange between the two aging actors leaves the prospect of beauty as a last bastion against the homogenising and dematerialising tendencies of the digital techne. If this seems to be a nostalgic sentiment it need not mean a return to the same contemplative beauty of bygone ages, as the film partakes itself in a restless search for new aesthetic permutations and combinations appearing as exquisite but always changing arrangements of space, figures and colours. After the man disappears from the car (we don't need to ask "where has he gone?"),

the chauffeur, Celine, played by Edith Scob (yet another iconic star of French cinema[34]), turns to Oscar imploring him to regard something special. "Look how beautiful Paris is tonight", she remarks. Oscar looks up at the video monitor where the image on the screen, captured by the car's external video cameras, slowly transforms into a digitally rasterised vision of the city, imaged in a spectral green colouration. Even in this hallucinatory 'phantasmagoria' the specific locality of Paris – its unique splendour – scintillates on screen. But is its beauty compromised, reduced or subsumed into the uniformity of the digital screen?[35] In one sense, Paris is just another 'node' in the networks of images, data, and investment capital, its 'hodological realism', once an emblem of a quite unique convergence of social, cultural, and geopolitical relations, now eroded by the competitive rubrics of globalization. And still, digitally reconfigured through the binary translation of data into form and colour, a haunting, primitive beauty of Paris is emitted through the monitor.

A Return to the Primitive

For all its contemporary sensibilities, *Holy Motors* advocates that the only response to the digital turn is the primitive one. More than simply a recognition of how digitality itself is an invocation to a primitive state of ones and zeros, this constitutes a barely acceptable retreat from the 'progress' of twenty-first century living expressed as a cultural shock of the now. Put another way, what pertains in the execution of Oscar's bizarre assignments is a kind of affective confusion or neurosis which is precisely the "experience of life", as Carax calls it, a shocking initiation into the intolerable of globalisation. Such a vision calls for an acknowledgment of the savage incompossibles that surround us, whilst at the same time being stripped of the ability for a 'proper' response. We are talking on the one hand about the searing shame of the social inequities and discords that are in plain sight. And on the other we are talking of a return to the 'primitive' moment at the dawn of cinema involving the erasure of story and its replacement with a sequence of self-contained episodes or attractions that offer no hope of redemption (in *Holy Motors* there is no post-hoc reconstruction of an episodic life, as in *Citizen Kane*, for instance). Edwin Panofsky writes in his *Three Essays on Style* that the new technology of the moving image at the end of the nineteenth century shunned existing traditions in fine art narration to start afresh on a new journey in representing the modern world.[36] More than anything Carax echoes such a return to a 'ground zero', now inflecting a 'digitalised' experience of life – a radical translation of the transversal

forces of contemporary reality into beguiling vignettes, primary recordings divorced from any unifying tale. This is not inert or lifeless data, though – the startling images and often excruciating scenarios produce digital affect that is immediate and raw, devoid of the reflective interval, generic emotion or prescribed feeling. The image thus captured by the digital cinema I am describing is, potentially, of another order altogether: resistant to easy interpretation as political cinema, but nevertheless generative of manifold shocks that return us to an open, contestable, and 'primitive' terrain.

In lamenting cinema's decline into a dying institution, Carax envisions its renewal in a return to the primitive, not an escape from it. How is this primitive manifested in *Holy Motors*? A first iteration flashes into view during the opening titles of the film which are interrupted by several flickering inserts of an Etienne-Jules Marey short film of a man darting across the frame in the stuttering style so typical of early cinema. This is a type of moving image, curiosities of late nineteenth century chronophotography, that more correctly form part of the 'pre-cinematic' movement pioneered by the likes of Edweard Muybridge, Marey and others who conducted visual experiments of human and animal movement with newly developed photographic techniques of sequential capture. These 'primitive' locomotion studies are an early example of studio-based imaging, an attempt to isolate and 'crystalise' an element of universal movement ostensibly for scientific purposes.[37] There can be little doubt that these experiments by Marey and others are reprised in the already mentioned second sequence of the motion-capture studio. Replicating this early running-man iconography, Oscar's motion-capture suit is fitted with reflective nodes that are perfectly able to quantify and transcode his movements into the mathematical data required for 3D computer graphics. We see Oscar perform various acrobatics including complex martial arts moves which are almost obligatory in contemporary action movies, whilst an unseen handler demands ever greater feats of physical speed and power. Eventually Oscar lies in a heap on the floor, defeated by the exhaustive labour of the virtuoso display. However, this analogue-digital refrain, placing twenty-first century image-making alongside that of the nineteenth, is not principally intended to vindicate the advancement of cinematic technology, much less of pure scientific knowledge. On the contrary, in lamenting cinema's decline into a dying institution, Carax envisions its renewal in a return to the primitive, not an escape from it. In this sense the digital turn, which is not only a cinematic phenomenon, lays down a gauntlet. The problem, says Carax, "is to find again that primitive power of cinema, that first shot of the train in *La Ciotat*.... a mystical power, a magical power...We need more courage and more effort to

reinvent cinema differently."[38] Correspondingly, as the motion-capture sequence shows, the most breathtaking feasts of visuality that digital cinema has to offer are often-times based on a reapplication of the same chronophotographic principles and techniques of the nineteenth century pioneers.[39] Turning to Sean Cubitt, the value of such a paradoxical return to the primitive is more pronounced. Like Panofsky, Cubitt maintains that the cinematographe itself was born from the legacy of freed-up vision given by the Impressionist painters leading, in the machine age, to the mechanical renewal of perception. First realized through the *actualités* of the Lumière brothers, Cubitt sees this 'primitive' epoch of flickering images and random vistas as issuing from "a medium... liberated from formal composition, theatrical staging and the unifying and artificially coherent vision of technocratic and academic visuality."[40] Like Balázs, Cubitt connects this new machinic vision to a utopian future of social and artistic liberation, an optical and political dream seemingly impossible to replicate in the age of globalization. Nonetheless, in the absence of revolutionary intention or effect – indeed, in a time where the 'commodification' of affect is a defining condition – Carax's reinvention returns us to the radical openness of a moment: a digital reassertion of images over narrative by way of this odd conjuncture of truth and falsity in the incompossibles of life.

Monsieur Merde: the magical and the political

The motion capture section of the film dutifully summons an originary magic of a digital 'cinema of attractions,' ready to transform the physical bodies into every conceivable caprice of the imagination (any-fancies-whatever, we might call them). Appropriately, M. Oscar is presently joined by another mocap artiste – a female one – which sets forth a ludicrously random 'cybersex' sequence where virtual avatars of the cavorting bodies are projected onto a screen, digitally morphed into fantastical creatures .[41] Capturing the primal imagery of many fantasy epics, this sequence manifests a primitive power in its signs and references. The next assignment, however, is arguably where an indigenous power of the primitive is most heavily invested into one of Oscar's roles or figures. Here in this third vignette we see Oscar transforming himself prosthetically into an irredeemably feral, urban-primitive character called 'Monsieur Merde'.[42] Carax has used the Merde character before in his section of the portmanteau film *Tokyo* (2009), in which Merde emerges from the sewers of the Japanese capital to shock and terrorise its citizens with his anti-social antics.[43] Resurrected in *Holy*

Motors, the leprechaun-like figure of Merde, with whispy red hair and soiled green clothes, is similarly a creature of the Parisian sewer system, part of an army of underground vagrants who shuffle along the drainage ducts, hidden from the city's elegant facades and tourist spots. The extravagantly ominous score from *Godzilla* (Ishiro Honda, 1954) accompanies the monstrous Merde as he crawls from a manhole cover to surface in the location of the Parisian cemetery of *Pere Lachaise*: a Mecca for perambulating groups of tourists and day-trippers. Merde's body, scrawny and unkempt like that of the beggar lady at the start, provides a salutary corrective to the well-presented sightseer 'clones.' They are the two sides of global citizenry – winners and losers – created from decades of neoliberal economics and as such inheritors of the class dynamics of earlier epochs. Decrepit in dress, shoeless, with a glazed over eye and signs of dystrophy, Merde's spasmodic, fitful movements also evoke a backward glance at Marey's juddering man as well as the freakish monsters of German expressionism. The mourners and tourists around him recoil in disgust and fear upon catching sight of him – and with good reason as he proceeds to desecrate the cemetery by eating the floral offerings and attacking the most vulnerable with gleeful abandon (kicking the white stick from underneath a blind man). Yet despite his volatility and 'primitive' cultivation, is it possible that this Gremlin-like creature is actually a digital cyborg-of-sorts? In outward attendance Merde is all flesh and bone, a jumble of raw nervous energy and unpredictable reaction – a being who can teach us what pure affect is! But in this, are the workings of his cerebral organs not similar to those of artificial neural networks of today: the archetypal AI with no ethics, no aesthetics, and no history? His hot schizoid behaviour is the converse of the cool calculation that dominates our presuppositions of the 'digital' cyborg. With seemingly no social awareness of his surroundings and no human empathy to show, Merde is a human being gone haywire, opposed to the rational operation of the computer brain. And yet in this evacuation of human learning he performs the basic operation of analogue-to-digital conversion. Which is to say the removal of contexts in the translation of one set of codes into another. Merde's anti-social disposition is undoubted, but a component of his rage is also a carnivalesque rejection of the laws of comportment in the contemporary order. [44]

Making no concession to the consecrated ground of the cemetery, Merde's reckless aggression is the most obvious performative sign of desecration, but it is not the only one. As he stomps over the graves with epitaphs already marked with signs of the competitive 'me-culture' of today ("Visit my website"), Merde stumbles across another violation of the consecrated ground in the form of a magazine photoshoot featuring a glamour model (named

as ‘Kay-M’ in the film and played by real-life movie star and model Eva Mendes). The stark contrast between Merde and supermodel, placed literally on a pedestal in flowing haute-couture clothes, hides the parallels between their flagrant defilement of the hallowed space and the strange connection that links the figures at the extremes of the social spectrum. It appears, from the flash-mob that has gathered around the media event, that the expenditure on the photoshoot justifies the sacrilege and outweighs centuries of social custom: the vapid celebrity show that drives desire and consumption within high neoliberalism. The supermodel, the spectacle, the production staff, the delighted onlookers, and of course, the security cabal, all laying claim to a hallowed space which was once out of bounds to monetisation – now a perfect exemplar of globalized image-making. What Carax calls the “experience of life” is precisely such encounters of incompossible worlds that reveal, or rather force us to confront, the structure of reality within the globalized West.

Advertising, art, business, celebrity – and mortality – are all incorporated into a ‘plane of immanence’, as are the wildly differentiated worlds of the jet-set and the destitute. Jean Baudrillard’s thesis in his essay ‘The System of Objects’ (1968) is an early attempt at theorising a universal language, or better code, instigated by consumerism and corporate advertising.[45] This code was, in Baudrillard’s day, increasingly constituted out of desire for branded consumer objects (Baudrillard remarks sardonically, “There is no real responsibility without a Rolex watch!”). Consequentially, as previous markers of inequality, such as education, occupation, birth status, and residence apparently recede in the face of the code, one could recognize the potentially ‘democratic’ benefit of rendering obsolete the rituals of caste or of class. But Baudrillard reminds us that “while the barriers of morality, of stereotypes, and of language collapse, new barriers and new exclusions are erected in the field of objects: a new morality of class, or caste, can now invest itself in the most material and most undeniable of things.” (23-4). In the end, for Baudrillard, “the code is totalitarian; no one escapes it” (23). The physical code of the brand theorized by Baudrillard is replaced in the digital era less by recourse to individual consumer items than by the consumer principle *per se*: an enhanced and ‘democratic’ world of consumerism motored by networked accessibility and achieved through new fluidity in global value and supply chains.

The role of the image in servicing and proliferating global consumerism is of course central and Carax presents us with a sardonic interpretation of the ethical inconsistencies – obscenities even – that underpin the highly visualised nexus of advertising, image-making and commerce. As the camera slowly tracks in to Merde who, having caught the eye of the

photographer has by now become the photographed object himself, we bear witness to the mesmerised look of the rogue, entirely unaware of the commotion he is causing. At this point the two 'opposites' – Merde and supermodel – are strangely united in their fixed stare and petrified posture; on one side the supermodel, fully codified into an image of jet-set glamour, on the other, standing behind the security cordon, the desperate 'desire' of Merde. The contrasts of "fear and phobia" and "erotic and robotic," as described by Carax. [46] Now, in turning his camera onto the creature, the fashion photographer is delighted at this new opportunity given by happenstance. "He's so weird!" repeats the photographer over and over, ordering his assistant to hire Merde. This imbrication of two polarized bodies – a modern take on the beauty and the beast myth – provides the synergetic frisson at the heart of this episode, a differentiation from which an image, an ideology, and money can be made.[47] Digital tools have normalised the once specialized and exceptional technique of image-matting (the conjoining and blending of pictorial components) into a now common procedure of image production – the cultural equivalent of "frictionless capitalism" as described in the mid-1990s by the co-founder of Microsoft, Bill Gates. What Gates in fact highlighted was the supposition that digital network technologies would 'save' capitalism by dissolving the barriers to commerce in a Utopia of free markets, instant communication, and universal access.[48] Moreover, even in the period of the Internet 1.0 Gates is well aware that within an info-capitalist world it is the function of the image to elicit attention and to monetise affect. In an extraordinary passage which places the image at the centre of nascent predictive algorithms and bespoke advertising Gates writes of a future in which personalized online "agents" prompt and entice the consumer with imagery in the form of a questionnaire pretending to provide relevant information to the customer:

> The questionnaire might include all sorts of images in an effort to draw subtle reactions out of you. Your agent might make the process fun by giving you feedback on how you compare with other people (Gates 1996, 191)

The prescience of this early vision of a seductive and controlling presence existing at the heart of online interactions is chilling, but what is absent in Gates' dream is any recognition of the unpredictability of affect in the digital context, an excess which in certain circumstances negates the co-opting of the image. Brian Massumi takes up the point that the image has achieved the status and role of 'commodity' in globalization, as the instantaneous exchange and adaptability opened up by digital communications and audio-visual technologies have boosted capital's incessant expansive tendencies and are now an essential

adjunct to consumerism.[49] In creating the worldwide consumer it is the job of marketing professionals to produce 'global' meanings and to harness a panoramic interpretation, but there is a side of the image that remains 'untamed' and this is doubly so in the context of a digitality and hyperconnectivity that augments the protean forms and significations of the image. In *Holy Motors* the photo-assistant contextualises the shoot by referring to the art-photograher Diane Arbus and her capturing of "dwarves, giants and monsters…to make them 'human.'" Merde, for his part, is impervious to 'consumerisation'. The image being created before his eyes is not one of high-fashion, celebrity myth-making, or art-photography but a strange alien ritual that stirs a primary and fluid desire. As the other bystanders gape and coo, Merde's fixated glare suggests a deeper, more unstable affect. In an explosive moment, seizing on the assistant's annoying habit of making air-quotation signs, the repulsive imp grabs one of her offending fingers and bites it off, causing mayhem in the crowd. In a further affront to culture and commerce, Merde scales the plinth, licks the model's armpit and promptly abducts her in 'caveman' style over his shoulder, thereby fatally interrupting the photoshoot's global value chain. This uncultured reaction to a situation, replicated across many of the scenarios in the film, testifies to an inability to recognise a state of affairs and find an adequate affective response. This, we understand, is similar to the condition of the 'seer' character identified by Deleuze in Italian Neorealist cinema of the postwar period. But where this seer occupies the sentimental space of disjuncture between perception and failed action, Carax describes more fully an 'executable' affect which results not in pacification or withdrawal, but in mistaken or confused action. In Merde's intense and deranged eye, we can almost see the workings of a 'digital' relay: an electrical switch with a set number of inputs and outputs, that follows no empathetic convention based on recognition and excitation of memory, and no preprogrammed response to a set of prescribed inputs. Historically, sci-fi cinema has used the trope of 'incorrect' response in robot narratives as a failure of software – we can think of *Westworld* (Michael Crichton, 1973) where, due to a malfunction, the robot cowboy pursues the hapless humans in their Wild West theme park; or *RoboCop* (Paul Verhoeven, 1987), where the prototype law enforcement machine annihilates a rookie manager due to a failure to recognise a 'training exercise'. Merde, though, is not like these robot automatons whose breakdown is caused by a digital glitch. Neither is he like the mad or psychotic subject that affords no creative production (Norman Bates!). Instead Merde's actions or outputs present an almost totally open field constantly in the process of remaking itself (similar to the primary layers of neural learning in an AI). Far from being a fanciful

creature displaying an abnormal condition in the face of globalised capitalism's incompossibilities, Merde is rather the one whose delirium is entirely symptomatic.

Notwithstanding the aforementioned importance of visual communication for a globalized economy, the plasticity, accessibility and immediacy of the networked digital image makes of it something of an interchangeable husk from which it is difficult to bequeath contexts or guarantee social meanings. This abstraction and malleability is showcased presently as the location changes from the cemetery photoshoot to Merde's underground lair which resembles a cave. In an extraordinary passage of transfiguration he proceeds to transform the strangely placid model, whom he has kidnapped, into a series of globalized icons or religious caricatures of womanhood. The transformation, from supermodel to 'Arab-woman' to 'Madonna', is as reductive as it is ingenious involving the careful tearing of the model's robe and re-applying strips of fabric onto her head and body. Creating in this way a makeshift burqa for the model, Merde compels her via yelps and snarls to perform an exhibitionist catwalk through the shadowy reaches of the cavern. Within the context of cultural sensitivities towards religious identity, as well as real-world social misogyny, these actions are highly provocative.[50] Not content, Merde amplifies the affront by again rearranging the garments and posture of the model to concoct a bastardised image this time of 'Madonna-woman' with veil. In this final violation we see Merde meticulously replicating the tableau of Michelangelo's *Pietà* by posing Kay-M on an outcrop and lying naked on her lap with a prosthetically added erection. The classical harmony of the chiaroscuro composition cannot hide the absurdity of the shenanigans and the challenge to liberal sensibilities around gender, religion and representation. But above all, this scene must be viewed as a conversion event, for Merde is seemingly more curious about the symbolic aspects of womanhood than in the flesh or in religion. This being so, what type of conversion is this series: fashion model-Muhajaaba-Madonna? If his careful remodeling of the garments is a continuous modification from A to B then we could describe it, however grotesque, as a classically 'analogue' operation. However, contrary to the natural and physical connection which characterizes analogue change, the maneuvers seem more like step changes or nodal jumps from one discrete cliché of female imagery to another. Stemming from his work on Francis Bacon, an artist similarly working with iconoclasm, Deleuze finds digital coding in twentieth century abstract art that functions precisely by such a reduction of reality's complexity to the simplest possible symbolic arrangements. In relation to Kandinsky, for instance, "'Digits' are the units that group together visually the terms in opposition. Thus…vertical-white-activity,

horizontal-black-inertia, and so on" (Deleuze, 2004: 104). In this light, Merde's literal abstraction of the woman into the void of the cave, and his conversion-translation of her into trenchant oppositions points towards a digital methodology in its simple, binary choices and sequencing of modular images.[51]

These very images, bringing into communication incompossible worlds of religion, commerce, high-art, and pornography, seem calculated to transgress standards of acceptability in the sensitive arena of globalized representation, dismantling the carefully balanced ethical framings of neoliberalism and sparking a 'pure' affect. This strange scenario of a 'primitive' creature transforming woman into a signifying chain outside of acceptable boundaries undermines the political correctness so essential in an age of online marketing and finely calibrated public relations. And yet, as I mention above, are Merde's actions not founded on a 'digital' logic by virtue of the binary reductions and arbitrary juxtapositioning of the symbolic series? In stripping out contextual meanings from the images he creates, the transfigurations become an entirely false or irrational movement. This falsity, however, is not to be confused with nihilism or negation. Deleuze confers to the "powers of the false" an ability to create new forms of affect and to break the circuits of automatism produced by continuous systems of transmission, a power also important politically in challenging precisely the complacent linearity and acquiescence of majoritarian thought. The arbitrary and insensitive 'untruth' of the model/Muslim/Christian chain provides a disconcerting jolt, a 'shock to thought' that is more profoundly provocative than the overdetermined spectacle of most CGI cinema classified as 'digital'. If, therefore, we take *Holy Motors* on its own 'schizoanalytic' terms, then the scene is suggestive of a new relation between the digital and affect that interrupts and goes beyond the purely instrumental function of computer generated imagery.

This is where Merde's primal sensibility, or the turn to the primitive, becomes indicative of the diagnostic power of the digital, a power that has specifically political overtones. Deleuze and Guattari's (1988) numerous nominations of primitive societies in *A Thousand Plateaus* can be considered within a framework of becoming to ascribe a new methodology for critically perceiving the contemporary, 'becoming-primitive'. This is not about mimicking 'primitive' thought, ethnographical expressions, or reverting to an earlier state, but can be used to engage with elemental aspects of existence, replacing our normal signifying practices with *a priori* circuits of intensity. José Gil (1998) understands this process of becoming-primitive as necessarily theoretical and diagnostic, leading us to begin to connect with forces

of social exchange – forces, that is, as "floating energies that are not yet fixed or invested in techniques and signs" (ix). As Deleuze and Guattari (1988) argue, these forces are subsequently captured by capitalism and reterritorialized into apparatuses of power and profit, even more so, it would seem, in the immediacy of conversion by the digital networks marshalled by globalization. But Gil's focus in becoming-primitive is that space in between the established structures of power and another where "this balance is upset, where energies escape and forces are worked upon by particular mechanisms – especially magical and political" (x), in short a domain of 'underpower' and one of 'overpower' (x). In Merde we have the extraordinary combination of just such a 'magical and political' mechanism with a digital technique of creation: where the primitive disposition or subjectivity reacts immediately and unpredictably to the energy, or affect, passing through it. The 'magic' of Merde emanates from a failure to have learned or to fully believe in the living code of the globalized image, and in replacing it with his own radical outcomes. To understand the artistry of this process we can deploy Gil's methodology for treating force conceptually, which involves privileging affective relations over traditional aesthetics and hermeneutics. This means "stop giving prime attention to the *meaning* of signs, to their representational contents, and to focus instead on their *practical effects*...to cease interrogating the semantic charge of forces, but rather to interrogate the energetic power of signs" (xii). If we ask, therefore, what this recourse to the figure of the 'caveman' *does*, instead of what it *means*, we can see that it performs a particular type of diagnostic function, triggering automatic, 'schizophrenic' connections in the global image thereby challenging, if not completely ridding oneself of its tyranny. Instead of succumbing to the authority of the codified image, we can, alongside Merde, mobilise its affective impulse, and engage in some kind of 'magical' reconstruction or remastering of the incompossibles contained therein. This is not to ignore the meanings and effects of misogyny or religious ignorance in our society, but to discover the forces behind these and other intolerables. The perplexed and censorious response to this segment by some film reviewers is, beyond an avowal of feminist values, also an indication of the resistance and the risks involved – including ethical ones – in an opening out to affect-in-itself, the interval, that anticipates re-creation. The question of the caveman can therefore be answered as being precisely the figure that is immune to the seductive, commodified desire of globalization, the figure that is instead able to be 'purely' affected.

Can we relate the digital to the question of the primitive, however counterintuitive it may seem? José Gil has distilled Deleuze and Guattari's concept of 'becoming-primitive' from *A Thousand Plateaus*, a term which does not entail mimicking 'primitive' thought or cultural expressions, but instead describes a process of sidestepping the domain of signs to engage with pure forces, a process of submitting to a singular form of power indicative of tribal societies.[52] In this, becoming-primitive approximates to the basic process of digitization in converting and assimilating 'input' from life's vicissitudes into a unitary form. In the case of tribal organisation this involves deferring new problems and threats to the relatively static forms of rite and folklore, and in the case of modern societies it involves conversion of new objects, information, and images into binary data for processing and problem-solving. To illuminate how this 'digital-primitive' effect functions we might recall that French cinema has turned to the figure of the primitive before as a means of social critique prior to the high reaches of globalization and the widespread use of digital technologies. In the wake of the socio-political upheavals of 1968 Claude Faraldo's *Themroc* (1973) posits 'the caveman' as an incensed and surreal response to the 'revolution that failed'. The eponymous Themroc, played by Michel Piccoli (again!), is the archetypical proletariat, a low-skilled factory worker living in a small Parisian apartment with his mother and sister. After losing his job precipitously, he revolts from being just one more alienated worker to reinvent himself as the 'liberated' caveman-in-the-city. Bricking up the front door, and knocking a large hole in the outer wall, Themroc transforms his apartment into a grotto and regresses into a primal being of instinctual drives and desires, adopting a language of grunts and growls in the process. Rejecting the triple yolks of family, work and the "repressive-state-apparatus", to use Althusser's term, Themroc's politically inflected transformation frees himself from subservience to bourgeois sexuality, capitalism, and the power of state authority. Thus we see him throw out the accoutrements of domesticated 'civilisation': his bed, his wardrobe; and, poignantly, his TV set, which is launched unceremoniously from the cave entrance, to smash into smithereens into the communal courtyard below. In an even more provocative assault on bourgeois mores, we witness Themroc destroy the nuclear family and defile the taboos of (hetero)sexuality by taking his sister as 'concubine' and creating a harem of free-love with other alienated women in the vicinity. Finally, to attack the notion and legitimacy of the state, Themroc embarks on a night-time predatory hunt for policemen (who have already been characterised as racist brutes), dragging them back to his lair to be roasted on a spit and eaten. Between the depictions of the two primitives, Themroc and Merde, we note a number of similarities: their rejection of the contemporary and retreat into the hodological space of the

cave; their use of pre-linguistic gibberish in verbal communication; their attack on normative codes of social behaviour, particularly in relation to gender. Just as Themroc is the paterfamilias of his 'free love' cavern, Merde indulges in patriarchal 'ownership' of the woman, but this time the scrutiny has changed from her sexualized body to her globally sanctified image. Ultimately, for all its radicalism, the meaning of *Themroc* is clear, understood along the tramlines of 1960s political and critical paradigms: Althuserian Marxism, structuralism, and sexual politics. In this sense it is a sign to be read, a late modernist work whose purpose and legitimation depends upon its relation to, and integration with, a prevailing semiosis. Here the primitive rests solely on an act of regression: a distillation of the complexity of social relations through the unitary subjectivity of a mythic caveman, implying a rejection and denial of the Baudrillardian 'code' and a return to the prehistoric code of sexuality and clan rivalry filtered through the radical politics of the time.[53] But does this attack on the institutions of the state tell us anything about the forces operating in the social field, or, more affirmatively, given the film's obvious address to the socio-political upheavals of the time, does it catalyse a power that can potentially be harnessed into a new politics? The answer must be 'no': *Themroc* contains a violent rejection of the code, but the caveman's manoeuvre is a 'semiotic' one insofar as the signs of the contemporary are supplanted by their 'pre-ideological' antecedents. Thus, the nuclear family is replaced by incest; the habitus by the cave; wage labour by the hunter-gatherer; and the police replaced by meat. This sensationalises the sign from the 'outside' but does not restructure it.

With Gil's challenge to replace semiotics with a concentration on forces, or an 'analytics of affect' we see how *Holy Motors* surpasses the politics of *Themroc* by going beyond a simple rejection of the code, defying the latter's straightforward meanings and confronting us with what Deleuze and Guattari termed the 'schizophrenia' of the present. This is not an attack from a transcendent and oppositional position, but a 'delirium' based on an immanent station within power, or the sign, itself. Played out in *Holy Motors*, digital affect is deployed as a set of disjunctive sensations generating a recognisable 'structure of feeling' of what it's like to be alive in this world. Specifically, Carax gives us 'the world' in a recognisable form, but puts us radically at odds with it, enhancing the instability and affective alienation that lies just underneath the apparently 'frictionless' ecosphere of globalized images and capital. Despite this evocation of otherness, however, the primitive this time is not a simple withdrawal from, or destruction of the world, but an active recreation – the first experimental steps in a dissolution of the consolidated image, and the search for a new paradigm. Before asking

"what can it mean" to combine the culturally sensitive figure of the burqa-woman with the catwalk? Or to recreate *La pieta* as pornographic grotesquery, we reverberate with the shock. The ecstatic visions of Merde, who acts as a kind of auteur for the whole film, point to a crisis in the deployment of the digital image. Far from the 'globalized' solution offered by digital commerce and social media, Merde, the digital automaton we could call him, resists the incompossible synthesis of religion with commerce, or even art with reality; instead it sends us reeling from the pure affect emanating from this 'digital' act of reordering of the consolidated image.

Themroc's 1970s is indeed a different epoch from the new millennial reality of *Holy Motors*. Viewing the two primitives, Themroc and Merde side by side, what becomes apparent is their differing textualities: relations between text and world, and the different affective reactions generated therefrom. *Themroc* is the more political film in the 'macro'-sense, but *Holy Motors* also feels like a political film 'deep down', in the micro-sense. Where the former is a contraction or synthesis, indicative of a type of intellectual understanding which is actually a form of indulgence and retreat, the latter leads to a reaching out – a more productive curiosity, experimentation and reconstruction from within. The details of Merde's 'connection' with Kay M is illustrative of this difference. Notwithstanding Merde's crude manhandling of the model, they are both products (we might even call them 'victims') of the same neoliberal code. The model's gesture of solidarity in lighting the cigarette of her assailant, the delicate transformation of dress to bring fashion into dialogue with sacred 'orientalism', and the final accommodation of the 'corpus filthy' into the classical pose of the *Pietá*. These aberrations of the image-cliché are more than nihilistic stunts; they are recombinations born of a 'recoding' impulse, demonstrating a modus operandi for the digital era that invites new connections between social, cultural and economic incompossibilities. The allusion to the primitive, then, enables the digital connectivity, unshackling the image and bringing us to a realization of the powerful and violently oppositional forces generated by the globalisation. This recoding is a totally novel aesthetic where the digital is not a technological category, but an affective one, a methodology able to provoke the unthought of globalised reality. Comparatively, therefore, *Themroc* appears to us now as an 'inauthentic' experiment, isolated and in retreat from the reality of a post-'68 reconsolidation, where *Holy Motors*, with all its 'fakeness' is the more coinvolved in the flux of its times. In that sense it is the more authentically embodied expression of revulsion and re-vision, thoroughly engaged with our future.

Conclusion

Finally, this assertive engagement can be verified by recourse to Benjamin's concept of the dialectical image. To remind us, Benjamin talks of the "now of recognisability": the fact that the present throws new light on the past, at the same time that the past helps to interpret the present. The conditions of the present – social, cultural, technological – consummate the image of the past to make it precisely and uniquely legible. Adopting this precept we can perhaps see how the early cinematic experiments, included in *Holy Motors* like 'ticks' from the past, now seem like apparitions taking the form of prophecies. It is not only that we can now recognise the analysis of human movement made in Muybridge and Marey's 'primitive' cinema as the original motion capture; much more than this, reversing the timelines, the case of *Holy Motors* shows how what I am calling digital cinema becomes legible as 'primitive' in itself, as capable of drawing out the aspect of 'firstness' in our signs. This not only opens up a field and a technique that is substantially immune to the 'tyranny' of a globalized code, it also leads us potentially to that pioneering endeavour of discovery locatable in early cinema. The reverberations between Marey's and Carax's mocap experiment – separated by over 100 years – unites the two in a technologically defined analysis and exposition of human/animal movement, and more importantly, a creative act of life and experience that pushes the boundaries of both. The utopian dimension, which may or may not have animated the very earliest cinema, is of course absent today. But to echo Spinoza's claim "we do not know what the body can do": digital motion capture is a technology par excellence that displaces the lines of 'cognition' and meaning in favour of the body (conceived in Spinoza's terms) and 'the world'. It takes a figure like Merde, the digital automaton who is 'all body' and no 'intellect', to reveal this secret connection to the primitive, to a firstness that 'decodes' the global, releasing the capacity to respond improperly *and* creatively – which is to say authentically – to our world of incompossibles. Celebrity becomes weirdness, religion becomes fashion, global networks are short-circuited by human touch. It is as if the digitization has enabled a return to affect; the digital automaton *is* the 'field of affect'. This thought marries the modernists with Deleuze in that we discover, finally, the virtual convergences – digital in nature – that reveal the affective power of the now.

[1] Susan Buck-Morss suggests that Benjamin was "counting on the shock of this recognition to jolt the dreaming collective into a political 'awakening.'" See Buck Morss (1991) *The Dialectics of Seeing: Walter Benjamin and the Arcades Projects*, Cambridge (MA), The MIT Press, p. 219

[2] Bela Balázs (1924, 1930) *Early Film Theory* ('Visible Man' and 'The Spirit of Film') (ed. Erica Carter; trans. Rodney Livingstone), New York and Oxford: Berghahn Books, p.81

[3] ? Balázs' early writings certainly align the great potential of cinema with a 'revolutionary' purpose (as intimated by his association with Luckács and Lenin). This revolutionary purpose has perhaps manifested at certain intensive periods of artistic fervour, for instance during the explosion of avant-garde film practice in Balázs's own time, or in the 'anti-Hollywood' style of postwar Italian neorealism, or in the 'Third Cinema' movement of the 1960s and 70s.

[4] Ginette Vincendeau, *Sight and Sound* review of *Holy Motors*, Vol.22:10, Oct 2012, p.89

[5] This new genre of 'limousine misanthropy' is indicated by recent films such as *The Wolf of Wall Street* (Scorsese, 2013) and *Cosmopolis* (Cronenberg, 2013).

[6] Deleuze refers to Kurt Lewin's concept of 'hodological space' in a section of *Cinema 2* on the passage from 'organic' narration to 'crystalline' narrations. Hodological space operates in the organic regime as an actual space given by character that is dependent on both cinematic and psychological conventions such as goal orientation and the resolution of problems. Crystalline narration, on the other hand, sees the collapse of the sensory motor schema and the 'proper' response to sensory perception. Vision becomes the new condition rather than action: the cinema of the seer where anomalous movement "is the essential point rather than being accidental or contingent...In other words crystalline narration will fracture the complementarity of a lived hodological space and a represented Euclidean space" (128).

[7] A Conversation with Leos Carax (Holy Motors) in *Hammer to Nail* online magazine (Oct 17, 2012) by Tom Hall. http://www.hammertonail.com/interviews/a-conversation-with-leos-carax-holy-motors/ [accessed 15/07/2014]

[8] Other recent examples of this new type of cinema consisting of absurdist episodes not at all, or only tenuously connected are *A Pigeon Sat on a Branch Reflecting on Existence* (Roy Andersson, 2014) and *Wild Tales* [*Relatos Salvajes*] (Damián Szifron, Arg/Sp/Fr/UK, 2014).

[9] 'Immaterial labour' has long been a strand in Classical Marxist theory which identifies production directed at non-physical outputs. Hardt and Negri point out that In twenty-first century globalised economies the term has come to describe huge swaths of the labour force that operates not only in the information and computational sectors but also in the *affective labour* of service, communication and entertainment industries. The authors state categorically that what is really essential to this mode is "the creation and manipulation of affect," and its subsequent commodification into currency (Hardt and Negri [2000], p.293).

[10] See Beckett, Andy (2019) 'The age of perpetual crisis: how the 2010s disrupted everything but resolved nothing' in *The Guardian* 17 December 2019

[11] The positive (critical) appreciation of the 'New Hollywood' cinema of the 1970s, mentioned previously, is one such designation of the opening up of the film text to the novel possibilities that emerge from a rejection of convention and archetype in character and narrative.

[12] The concept of the 'non-place' derives from Marc Augé's anthropological analysis of the repetitive, affectless new spaces of what he terms 'supermodernity' such as airports and the shopping mall. Since the initial coining of the 'non-place' in the 1990s it would be fair to say that the parameters of 'supermodernity' have taken on a more globalised and accelerated form, the exponential growth of which has arguably propelled the abstraction of the non-place into many more areas of the city. Marc Augé (1995) *Non-Places: Introduction to an Anthropology of Supermodernity*. (Trans. by John Howe), London and NY: Verso Press

[13] For a brief exposition of the relationship between capitalism, schizophrenia and desire in Deleuze and Guattari's writing see Domizio (2011) 'Digital Cinema and the "Schizophrenic" Image: The Case of Michael Haneke's *Hidden*' in Ben McCann and David Sorfa (eds.) *The Cinema of Michael Haneke*, NY: Columbia University Press

[14] "The dialectical image is one that flashes up. In such a manner, the past must be held like an image flashing in the now moment of recognition" (*Arcades*, 591-2)

[15] Fredric Jameson (1991) *Postmodernism, or The Cultural Logic of Late Capitalism*, Duke University Press

[16] Famously, French critics writing for *Cahiers du Cinema* effectively invented the term 'auteur', not only linguistically but as a philosophical *and* practical idea.

[17] For an 'auteurist' reading of Holy Motors see Robert Koehler's review in *Sight and Sound* Vol.22:10, Oct 2012, p.66-7

[18] Carax's last feature film before *Holy Motors* was *Pola-X* released in 1999.

[19] McLuhan set forth his distinction between hot and cool media in *Understanding Media: The Extensions of Man* (NY: McGraw Hill, 1964), p.23

[20] Stephen Prince (2012), *Digital Visual Effects in Cinema: The Seduction of Reality*, Rutgers University Press. Prince recounts how the producers of *The Children of Men*, for instance, use digital post-production methods to 'stitch' together independent shots into the seamless sequence shot favoured by Bazin for its quality of approaching phenomenological reality. p.96-7
[21] Charles Sanders Peirce, 'The Principles of Phenomenology' in Justus Buchler (ed.), *The Philosophy of Peirce: Selected Writings* (New York: Harcourt, Brace, 1950)
[22] Ginette Vincendeau, *Sight and Sound* review of *Holy Motors*, Vol.22:10, Oct 2012, p.89.
[23] Interview with Leo Carax by Scott Macaulay (*Filmmaker* magazine, Oct 22, 2012). "DP'ing" is the job done by the Director of Photography, which is to light the set. What Carax is referring to here is the relatively new stage of 'colour grading', where the entire look of the film, from luminance levels to colour hue and saturation can be altered in the digital post-production. http://filmmakermagazine.com/54957-leos-carax-holy-motors/ [accessed 15/07/2014]
[24] Ibid.
[25] Fredric Jameson (1981) *The Political Unconscious: Narrative as a Socially Symbolic Act*, Cornell University
[26] The famous claim by Jean-Louis Comolli and Jean Narboni relating politics and film was made in the editorial of *Cahiers du Cinema* in October 1969
[27] Mauro Resmini (2023) *Italian Political Cinema: Figures of the Long '68*, Minneapolis: University of Minnesota Press
[28] "I stopped watching films after my second film. I thought I paid my dues for my love of the cinema and I needed to go my own way. People see lots of [filmic] references in the film but I don't. I just live on this island called cinema. I just want it to be seen as it was imagined, not with some cinephile's hat on." Interview for Twitch magazine by Dustin Chang, http://twitchfilm.com/2012/10/i-live-on-an-island-called-cinema-leos-carax-interview-holy-motors.html [accessed 15/07/2014]
[29] *Filmmaker* magazine interview, op. cit.
[30] Deleuze (1983) *Nietzsche and Philosophy* (trans. by Hugh Tomlinson) N.Y.: Columbia University Press, p. xi
[31] A Conversation with Leos Carax (Holy Motors) in *Hammer to Nail* online magazine (Oct 17, 2012) by Tom Hall. Op. cit.
[32] Ibid, p.89
[33] As mentioned in the introduction, not all of my case studies were shot using digital cameras, although all of the principal photography will certainly have been converted to digital format for post-production purposes.
[34] Scob starred in the landmark psychological horror film, *Eyes without a Face* (Georges Franju, 1960).
[35] The role of the image in contemporary neoliberalist economies extends well beyond the traditional sectors of corporate capitalist marketing and advertising. With the outlay of Net 2.0 in the early new millennium, the networked image arguably became the very language of globalisation, contributing to the development of entirely new relations between the global and the local. As Mitsuhiro Yoshimoto suggests, "the entanglement of the global and the local, and the problematic position of the nation states in globalization must not be examined only as political questions. They are first and foremost questions of image and technologies of representation." Mitsuhiro Yoshimoto (1996), 'Real Virtuality' in Rob Wilson and Wimal Dissanayake (eds.) *Global/Local: Cultural Production and the Transnational Imaginary*, Durham and London: Duke University Press
[36] In his *Three essays on style*, Panofsky argues that cinematic art stems from folkloristic traditions rather than as a development from existing 'high-art' tradition. "Instead of imitating a theatrical performance already endowed with a certain amount of motion, the earliest films added movement to works of art originally stationary, so that the dazzling technical invention might achieve a triumph of its own without intruding upon the sphere of higher culture." Erwin Panofsky (1995 [1936]), *Three essays on style*, Massachusetts: MIT Press (p.95)
[37] I say ostensibly as the prevalence of the naked human body in these pre-cinema and early cinema scenarios is notable, suggesting that an element of titillation was also a function of this genre.
[38] Interview with Leo Carax by Scott Macaulay (*Filmmaker* magazine, Oct 22, 2012) Op. cit.
[39] This is true of the 'bullet-time' sequences in *The Matrix* (Lana and Lily Wachowski, US/Australia, 1999) which replicates and re-animates Muybridge's still-frame analyses of movement.
[40] Sean Cubitt, 'Perceptual Anarchism: Impressionism and the Invention of Cinema' from http://www.ucl.ac.uk/slade/digita/pcptanarch.html (accessed 27/06/2015)
[41] This primal scene of cybersex reminisces from a similar scene from *The Lawnmower Man* (Brett Leonard, 1992), an early film to capitalise on the sensationalist potential of CGI animation. The latter film predates motion capture technology but in its fully animated vision it depicts a set of sexual encounters in a remarkably similar virtual 'space' in which the couple float and embrace pleasurably, only for the encounter to turn violent as the 'male' partner's body morphs into a grotesque serpentine form, becoming increasingly domineering and aggressive.

[42] In some ways the M. Merde sequence has acted as a lightning rod for critics of the film's bizarre and unwieldy expressions. As Claire Perkins writes, "many commentators on *Holy Motors* locate the wildness of the film in Denis Lavant's embodiment of 'Monsieur Merde', the mute, strident, and sewer-dwelling gremlin created by Carax for the 'Merde' episode of the triptych *Tokyo!*" Claire Perkins, Constantine Verevis (eds) (2014) *B is for Bad Cinema: Aesthetics, Politics, and Cultural Value* , Albany: State University of New York Press (2).

[43] There have been a few (mostly online) comparisons of the outward appearance of Merde and one of the disguises adopted by Dr. Mabuse in Fritz Lang's expressionist classic of 1922. Despite their outward similarity, though, Mabuse and Merde are mental incompatibles. Where the former is the all-seeing modernist megalomaniac, a mastermind whose perception and intelligence spreads out into a socius infected by his criminal schemes, the latter is a synchronic animal confused and buffeted by the present, incapable of 'processing' the complexities of the modern world.

[44] We might compare Merde's relations with his environment with those of the most famous cinematic cyborg of all, Arnold Schwarzenegger's *The Terminator* (James Cameron, 1984). In this film, we remember, the cyborg 'perceives' the world through technical interfaces and calculates a response to the pure input data within the bounds of probability-matching.

[45] Jean Baudrillard (1968), 'The System of Objects' in Mark Poster (2001), *Jean Baudrillard: Selected Writings*, California: Stanford University Press (p.13-31).

[46] Frodon, Jean-Michel (2012), Interview with Leo Carax, available in the *Holy Motors* Press Pack https://cdn-medias.festival-cannes.com/uploads/2023/03/76897.pdf , p. 15 and p. 29 respectively. Accessed 27 September 2023

[47] The vignette acts as the confrontation of two important signifiers of globalization: the celebrity glitz and glamour providing the 'desiring-image' which drives the consumerist engine of the neoliberal capitalist machine and, opposed to this, the image of the debased 'other': dispossessed, migratory and homeless. Shot to the margins of visible social space, this is a demographic representing the 'collateral damage' of the economic system: the invisible, but desperately real community in any 'global city'.

[48]Bill Gates (1996). *The Road Ahead*, London: Penguin. For a critique of Gates' evangelism for the internet and the digital economy see Jens Schröter, 'The Internet and "Frictionless Capitalism"' in *Triple C: Communication, Capitalism and Critique*, Vol 10, No.2 (2012)

[49] Brian Massumi (1992), *A User's Guide to Capitalism and Schizophrenia,* Cambridge, Massachusetts: MIT Press, p. 200: "The value of commodity images (defined broadly this time, to encompass objects, bodies, representations and information: decoded sites of force conversion) is attached more to their exchange and inclusive disjunction...than to their material production."

[50] The act of physically sequestrating the female, of fashioning her image, and more or less imprisoning her in his decrepit grotto, naturally raises serious political questions about commodity, phallocentric representation, and its connection to misogyny and real-world effects.

[51] We might also refer to Merde's predilection for straight lines (the catwalk, his linear traversing of space across the cemetery and through the underground sewers of Paris) as further evidence of his coding as digital automaton.

[52] Whilst Deleuze and Guattari's *A Thousand Plataeus* rarely mentions 'becoming-primitive' directly, the concept of primitive societies crops up numerous times, contrasted with modern societies and allied with other concepts of becoming such as becoming-animal and becoming-woman, themselves associated with a "primitive, presignifying semiotic" (Deleuze and Guattari, 117). Whilst there is no doubt that the whole edifice of ethnographic writing from which the concept derives stems from a historiography of colonisation Deleuze and Guattari utilise the terms of becomings for the politics of deterritorialization (or anti-colonialism). For a critique of Deleuze and Guattari's 'Africa in *A Thousand Plateaus*' see Christopher L. Miller (2001) 'The postidentitarian predicament in the footnotes of *A Thousand Plateaus*: nomadology, anthology, and authority' in *Deleuze and Guattari: Critical Assessments of Leading Philosophers Vol. 3* Edited by Gary Gensoko, London and NY: Routledge

[53] In the case of *Themroc*, the code is constituted more in terms of Althusser's 'Repressive State Apparatuses' (RSAs) and Ideological State Apparatuses (ISAs).

Chapter 3: The Body and Digital Aesthetics

The body is a key node of contention for both Deleuzian theory and digital media praxis. It is also a central concern for the aforementioned critical approaches of materialism and embodied phenomenology, in whose name the body is set to produce, and to feel respectively. In Deleuze-Guattarian thought, no less than in the dematerialisation occurring in analogue-to-digital conversion, the body becomes less a determinate, self-identical entity than a set of relations and internal coherences with respect to its environment and other bodies. Moreover, in the whole discussion of affect, the body, in whatever conceptual or physical form, is the essential point of convergence of an action and reaction, opening it up in theory to a potential for radical change. In everyday parlance 'the body' is commonly taken to mean the human body but we shall see how, subject to both Deleuzian and digital qualification, the notion stretches from a purely anthropomorphic definition to encompass, at the very least, collective, non-human, and even incorporeal manifestations. Cinema's fascination with bodies in movement has been mentioned previously. For this chapter I look at two genres which have evolved centrally in terms of the human body and its multiple relations, capacities, and limits: namely horror and the love film. Briefly, the two popular and enduring genres commonly speak to opposite poles in Spinozian concepts of affection: that related to pain and destruction, and that related to joy and renewal. The entry into this equation of the digital Idea of molecular change both deconstructs these polarities and points towards a critical and creative reconstruction of bodies in general.

3.1 Symptomatologies and the Superfold: The Case of Horror

"Horror is like a serpent; always shedding its skin, always changing.
And it will always come back" - Dario Argento

This section identifies horror as a major genre where the human body acts as the object through which affective flows passage with especial vigour and intensity. Moreover, horror's investment in the 'impossible' worlds of ghosts, monsters and the macabre, appeals to a virtuality precisely defined against the quotidian notion of the 'possible'. In revolving around dreadful desires horror cinema presents its sensations in 'pure' terms: as affections wrought

from a pre-perceptual existence that only slowly reveals itself as fully real. That the effects of horror's virtuality are corporeally transformative lends itself to the digital Idea of mutability, explaining the explosion of low and medium-budget horror filmmaking since the digital turn both theoretically (as monstrous transformation) and practically (in decreased production costs). Furthermore, that these effects usually lead to destruction of the body makes it a particularly fruitful genre in terms of a 'symptomatology', or cultural expression of social critique at times of historical crisis.[1] I select as case studies two Italian films from the early post-millennial period which are both sensitised to bodily attack envisaged in microbiological terms, showcasing the affect that consequently reverberates outwards into a wider community. Italy, as we know, has a strong heritage in the horror genre and, similarly to other national cine-hubs, the growth of digital film production in the early 2000s initiated something of a revival in the genre. Iconic screen figures such as the random slasher and the zombie, which Italian directors helped to establish and popularise in the 'video nasty' period, have long since been absorbed into global horror brands.[2] But as technology has widened access to new generations of filmmakers, so too has the digital *per se* created new expressive opportunities for dreadful affect. This chapter focuses on two post-millennial examples of Italian *orrore digitale* to explore how digital aesthetics capture the transformation of both individual and social bodies in extremely affected states. I examine how these films articulate horror in renewed socio-cultural contexts in Italy and beyond, and how the 'ontology' of the digital can be considered as – paradoxically – a material ground for affect in the horror film. As mentioned in Chapter 1, affect was defined by Baruch Spinoza as the reciprocal change in state of interacting bodies, and is adopted in the philosophy of Gilles Deleuze (1988b) to describe changed bodily potentials or the "unknown of the body" which, when caught in a digital assemblage forms a new object of enquiry: 'digital affect'. In question is how the idea of the digital as a numerical and abstract dimension forms a sensuous and terrifying connection with bodies, fundamentally affecting how we act and how we think. I take 'digital horror', then, not simply as referring to films shot on digital cameras or produced with the aid of computers, but to a sub-genre 'inscribed' with digitality, which is to say, a digital Idea linked to the terror of the virtual – an ontogenetic realm that is both abstract and real in which the body becomes newly vulnerable to threats unseen and 'unthought'. Connected to the 'unknown body', I highlight a popular trope in contemporary culture associated with the technologies of digital medical imaging and the microbiological which visualise the hidden interactions and transformations occurring beneath the skin. What is often overlooked in the analysis of digital cinema is its competence in imaging the microscopic realm: the miniscule,

submerged movements that lie at the heart of bodily transmutation. Images of cellular, genetic and neurological processes have now crossed into common circulation in movies, art, and TV news prompting a 'symptomatological' understanding of outward bodily change as commencing at a pre-personal, sub-cutaneous level of cellular and molecular interaction. This order of corporeal microscopic activity is also, I argue, an incipient visualization of Spinozian 'affect'. It is precisely the cellular and pixellated constitution of the digital image which creates a new terrain of digital horror to explore this 'unknown' of the body in microbiological terms, assaulted by the novel 'virtual' threats of viruses and genetic mutation, which in turn can be abstracted and extrapolated further outside of the body (for instance, the 'precariousness' caused by chronic economic instabilities, rapid technological change, and social division).[3]

This chapter is organised in three parts, moving from a critical discussion of 'digital affect' to an examination of post-millennial Italian horror, focussing on Alex Infascelli's 2006 film, *H_2Odio* (*$Hate_2O$*) and Maxì Dejoie's *The Gerber Syndrome: il contagio* (*The Gerber Syndrome: the Contagion*, 2012). I will show how these digital films present a 'cellular' idea of the organic and the digital, instigating a nuanced microbiological vision of body-horror, and further, how they act as a symptomatology for today's 'biopolitics'.[4] Finally I propose Deleuze's notion of the superfold to theorise the wider cultural and epistemological developments underpinning the form of digital affect and its connection with the microbiological. The new wave of 'Made in Italy' horror is no doubt spawned from the cost-benefits of digital film production. But it is also true to say that digital aesthetics have delivered a vastly expanded potential for the 'expressivity' of horror.[5] Against arguments regarding the essential flatness and sterility of the digital order, the 'molecular' reading I propose is, on the contrary, an analytical move that ultimately argues for a vital creativity and affective power of the digital even in the face of homogenising social forces.

How, then, is affect implicated in such overarching discussions of the digital? Against the personalised and privatised categories of 'feeling' or 'emotion', affect encompasses a sensuous corporeality and embodiment that is prior to the subject and language, resistant to binary overcoding and 'narrativization'. Popular culture today is characterised by a supercharged 'synaesthetics', constant incitations for attention, expenditure, and emotional discharge linked to the barely comprehensible speeds, scales and forms of digital media and communications, which are themselves the indices of global capitalism. To reiterate, Steven

Shaviro (2010) considers that these articulations amount to 'blocs of affect' commensurate with the complex social processes of which they are part. Specifically, digital media invokes a malleability of form, a protean nature linked to the inherent constructivity of the digital, seemingly adaptable at every point to capitalization. In the case of film, Shaviro contends that the computer has yielded a 'post-cinematic affect' that shatters the reliable codifications of cognition and emotion operating in the era of classical Hollywood (2010: 2). Unquestionably, then, technology plays a central role in the creation and 'control' of affective flows in the digital age, but it has also provided new 'ways of seeing', analytical tools which go beyond technocratic management, quantification, and monetization. One such example is the aforementioned shift of viewpoint from the macro to the microscopic enabled by digital imaging. This scalar change has provoked a detectable consciousness of 'process', which is to say, a new emphasis on molecular movement and change, the infinitesimal in-between points, that complicates and challenges the 'finality' of forms. These final forms, which in the horror genre typically translate into the actualization of the monster and/or bodily assault, are not at all erased in the new schema of the microscopic, but rather, as I will show, placed within the context of 'cellular' or genetic origin. In other words, what emerges into view is a new 'mechanics of affect', a hybridisation of materialist and virtual explanations of bodily change, amounting to a science, or rather a metaphysics of efficient causes.[6] Medical imaging's capacity to permeate bodily surfaces and visualize real-time biological and neurological processes – the pathology of disease, or the workings of the brain, for example – affords something approaching a 'molecular' comprehension of changes of state and, to an extent, answers Spinoza's call for an understanding of affect.[7]

The growth in the importance and visibility of medical imaging for both understanding disease pathology and for communicating medical knowledge to a wider public is several decades in the making, involving a variety of technologies from 3-D ultrasound to MRI (magnetic resonance imaging) and CT (computerised tomography) scans – non-invasive technologies that typically penetrate bodily surfaces to better reveal the relation between macro and micro-biological processes occurring in the body. Historically speaking, the popularization of medical imaging today is actually a reprise of a much earlier public fascination with microscopic phenomena encouraged by the new vistas opened up by the cinema machine in the early 1900s. The birth of bacteriology in the late nineteenth century coincided with burgeoning moving-image technology to become features of the variegated and often sensationalist content of early cinema, a concurrency leading to some startling

public health-scare stories propagated by the so-called 'cinema of attractions'.[8] Later, F.W. Murnau's *Nosferatu* (1922) provides an early indication of germ microscopy's potential affinity with the nascent genre of film horror in an enigmatic scene where the proto-vampire hunter, professor Bulmer, demonstrates 'dangerous nature' through the microscope. Bulmer invites his astonished students to witness a polyp engulfing and devouring another micro-organism, prefiguring the predatory instincts of the vampire, Count Orlok, also acting as an oblique reference to the 1919 Spanish Flu pandemic which devastated European populations after the First World War. Aside from the usage of microscopic imagery in the dramaturgy of film, the use of microscopy in the life-sciences arguably contributed to one of the earliest theories of the filmic close-up developed by Béla Balázs (1930).[9] In arguing that "close-ups are the film's true terrain" Balázs is also referring to the revelatory capacity of the molecular order, or focusing on the "little things in life" that in turn coalesce and aggregate into the visible and sensory order of the material world (Balázs, p. 38). Today news bulletins abound with reports of putative medical advances, often based on new genetic and biotechnological techniques, and illustrated by graphics denoting the microscopic view.[10] Whilst public fascination with these stories is no doubt related to a general and long standing marvel at the wonders of science, their appeal to the popular imagination rests precisely on new methods of data visualisation – that is, not so much in exhibiting the human physique as such, but rather in the often abstracted infographical display itself. These coded maps of the flesh – abstracted, and digitally 'aestheticized' to show a physical process, organ or region often deep beneath the skin – are arguably more 'exhibitions' than representations of the body. In this sense the spectacle of computer processing power in body-imaging is deployed like an 'affective diagram', often aimed at revealing – and indeed aestheticizing – the 'abnormal', in a strange game of mystification/demystification of the human organism.[11]

But how can we consider 'the digital' as not just the technical method of display but as the very conceptual basis wherein a molecular view of a corporeal process is mapped and 'potentialised'? I argue that digitalisation in itself instigates a 'thinking-molecular', where molar properties and macroscopic form is atomized through quantification and data-conversion, thereby introducing an imperative of experimentation and change. To use Deleuze and Guattari's (1984, 1987) spatial vocabulary, this amounts to a 'deterritorialization' of analogue form, an irresistible impetus to alter, to process, to disseminate, and in the case of the media image, to unanchor pre-set meanings, combinations, and symbolic associations.[12]

It is not surprising, therefore, that this move to the microscopic is visible in a range of popular film genres where CGI is most commonly used. From contemporary sci-fi to the superhero film to a slew of neozombie movies such as Danny Boyle's *28 Days Later* (2002) or Francis Lawrence's *I Am Legend* (2007), we are now witness to frequent sequences of lab microscopy that graphically show the cellular or molecular changes involved in the superpower or zombie mutation. The scenes of microbiology contained in these films are 'digital' expressions not only because of the computer processing typically necessary for their rendering but more fundamentally because of their crossing into an abstract cellular domain, a flat plane of interaction that is an intensive zone prior to identifiable 'symptom'.[13] Cells, genes and neurons act 'algorithmically' to the extent that discrete units of 'picture-cells' (pixels) merge and differentiate according to rules (given by physics or code) to produce qualitative change – Spinoza's definition of affect.

To explore in more detail the issue of digital cinema, affect and the microbiological I select the aforementioned Italian horror films: *H_2Odio* and *The Gerber Syndrome: il contagio*, both shot on digital format, both revolving around a microbiological 'threat', and both exemplary of a 'digital affect' spawned from a formal deployment of a digital Idea. In this way the digital techniques are an iteration, symptom, or a 'nested instance' (Pisters 2012) of more fundamental microscopic processes occurring either in the body or in the digital image per se. These case studies are not intended to prove a universal tendency in Italian horror or digital cinema generally. Rather, in an Italian *filone* noted for its high-concept fusion of invention and cliché, the analyses aim to create a symptomatology, which is to say, a 'molecular' mapping of affect and aesthetics onto a political present.

Discordant sisterhood in *H_2Odio*

Alex Infascelli's *H_2Odio* is a 'post-feminist' update on the giallo-horror form where a women-only retreat from the modern world eventually leads to a monstrous take on sisterhood. The film retains many of the traditional stylistic tropes of the giallo, including lurid colourisation, salacious violence, and loose plotting. Furthermore, the melancholic and perturbing mood of the film is often conveyed in distorted extreme close-ups and in lurid half-dissolves and superimposed images more reminiscent of the videographic mixing techniques of the 1970s

and 80s. Yet beyond its insular setting and generic recitations, the vision of subjectivation through 'lifestyle' messages is a direct attack on the construction of the female consumer orientated through body-image. This 'biopolitical' construction plays out in the story of a group of girlfriends who travel to an isolated island retreat to embark on a week of water-fasting and solitude, escaping from both the dietary temptations and the frivolous distractions of the outside world – no cellphones allowed![14] The adventure has attracted women from a range of backgrounds from the world of business to more artistic and eco-conscious outlooks, symbolizing a variegated 'post-feminism', united by experience rather than politics. The hostess is the genial but psychologically troubled Olivia, who has invited the others to her secluded childhood holiday villa on a hideaway island, the classic *giallo* microcosm traversed by the menace of a mysterious stalker. Notwithstanding the differences between them, the friends are initially united in this sorority of minimal subsistence, taking their instruction from a 'self-help' book, *Fasting to Freedom*, which rejects the consumerist lifestyle said to damage physical and mental wellbeing.[15] The women thus enact a form of voluntary self-constraint, reminiscent of the constant modulations typical in the 'control society', thereby internalising a 'virtuous' discipline whose regulatory function is often disguised through indoctrinating messages such as 'healthy living', 'emotional wellbeing', etc. Initially, the women focus on themselves and their life goals, but tensions surface as the fast begins to bite generating a kind of 'withdrawal symptom' in everyone but the hostess. Olivia, it seems, has an ulterior motive expressed through a secret diary addressed to her unseen sister, Helena, whose absence within the group has a macabre implication. Through fragmented flashbacks we learn that the sisters' mother committed suicide years earlier. But far from exorcising the past, the return to the house provokes a sense of gothic foreboding and a powerful psychotic reaction as Olivia has now reached the same age as her deceased mother. This is just one intimation of a number of genetic repetitions and hauntings that convert into a violent rampage that cuts through the female sorority representing, narratively, a modification to the traditional 'slasher' film and aesthetically, the adoption of a sensuous and innervating film style which will be explored further below.

In terms of corporeal affect, Olivia is susceptible to two invisible forces that are working inexorably in the background: one pharmacological, derived from anxiety medication that she secretly imbibes; the other a possessive power exerted by her unseen sister who becomes her confidant and ally in the developing tensions with the other women. *H_2Odio* envisages a ground zero of the ascetic body partaking no material ingestion, or modern day diversions.

But this purification and abstinence – undertaken to elicit the spiritual and the transcendent – only foregrounds the physical and the immanent at the most basic, cellular level. I say 'physical' because of the hormonal and neurological imbalance induced by the fast itself (the women feel sick, bored, and constantly prone to headaches); and 'immanent' because the genetic trace of sister Helena begins to manifest itself invisibly, microscopically, in the interstitial tissues of Olivia's body. In the bathroom, which becomes Olivia's inner sanctum, the mirror reflects a bruise she has developed on her shoulder, gradually developing into a painful keratinous 'tooth' which she pulls out from under her collar bone. This is a sign of Helena, the immaterial being, budding literally 'under the skin' of her sister.

In a hallucinogenic flashback, triggered when the group of women meet to celebrate Olivia's birthday, we learn that sister Helena is an 'evanescent twin' – one that was never actually born into the world, ingested as a foetus by the dominant sibling whilst still in the mother's womb. The subcutaneous tooth is all that physically remains of Helena, the outcome of a genetic remnant, but one that exerts an inexorable pull. This materialization of the unborn sister is a replication which at a narrative level catapults Olivia into a frenzy of schizophrenic violence as the psyches of the two sisters vie for power in one body. The evil Helena is now the more powerful, a symptom of the real genetic and neurological 'interference' taking place at cellular and synaptic levels, signifying the microbiological affect that turns a body 'monstrous'.

The figure of the 'monstrous feminine' was coined by Barbara Creed (1993) who claims that the female body is structurally configured as abject and monstrous precisely in its reproductive, sexually castrating and maternal articulations. This intriguing suggestion not only initiated a retrospective analysis of women in horror, it also opened up new avenues for considering the body more generally as a site of material, organic, and ultimately cellular differentiation and change. Creed was part of a wave of feminist film theorists of the 1990s who used psychoanalysis to identify and critique the cultural trope of the female victim in mainly American horror movies. This corpus of work, emerging around the same time as a new interest in embodied phenomenology from the likes of Vivian Sobchack and others, provided a distinctive focus on affective spectatorship anchored in the female body and bodily processes. Creed's own work develops an earlier designation of 'body-genres' developed by Linda Williams in her article, 'Film Bodies: Gender, Genre, and Excess' (1991). In this latter work, Williams cites three popular genres which significantly adopt the

body as its central locus of action and sensibility: pornography, horror and melodrama. Furthermore, these genres, each of which are differently classified as having low cultural status, activate their own set of concepts and aesthetics that can be characterised as 'excessive', aimed at eliciting visceral bodily responses. In the case of horror, the sadomasochistic relations that dominate the interactions are excessive to the extent that they lead to violence and are defined as 'perversions' by psychoanalytic discourse. Challenging this assumption, Williams notes that associated terms like 'fetishism', 'voyeurism' and 'sadism' are (since at least Hitchcock's 1963 film, *Psycho*) somewhat normalised aspects of horror, if not all, cinematic pleasure.

In contrast to many lay criticisms of the supposedly 'low-status' genres which regard the sex, violence, and affective intensities depicted in horror as sensationalist and gratuitous conceits, Williams insists that the excesses commonly visible in the body-genres need to be analysed in terms of formal structures and effects on the bodies of spectators. One such structure is the 'body spectacle' which takes specific forms in the different body-genres, for instance the incitement to weep in melodrama, or in horror the portrayal of violence and terror. Another structure of sensationalist excess is 'ecstasy' which again takes diverse forms but in the genre of horror features as an affective relay, an "uncontrollable convulsion or spasm - of the body 'beside itself' in the grips of...terror" (3). And a final organising principle is the gendered/codified body of the female as the embodiment of pain and fear. To catalogue these structural features is not just a descriptive exercise but also a kind of symptomatology which asserts precise socio-cultural functions in the body-genres. As Williams emphasises, "each deployment of sex, violence and emotion is a cultural form of problem solving...In horror a violence related to sexual difference is the problem; more violence related to sexual difference is also the solution" (8). Here, the impasse of the problem-solution dynamic appears as an intractable circularity, but it may also be an outcome of the psychoanalytic method itself, which imposes its own structural binarisms onto the question of gender. As Williams says, "Horror is the genre that has seemed to endlessly repeat the trauma of castration, as if to 'explain,' by repetitious mastery, the original problem of sexual difference." (155). In *H_2Odio* the motive force for the excessive violence does not appear to be sexual difference per se, as the group is female-only, indicating that the deadlock of interminable binary-gender violence is arguably reframed in the contemporary, if not entirely overcome. However, in common with the symptomatological imperative to get at the causes rather than to be beholden to just effects, the film reformulates the question in terms of the

origins of difference ‘in itself’: even though the plot's focus on genetic ‘error’ or embryonic mutation (which causes one foetus to ‘absorb’ the other in the womb) conforms with Creed’s notion of the ‘monstrous feminine’, the catalyst is altogether other than binary sexuality and gender, requiring a whole other theoretical approach and style which can reconfigure our understanding of the violence. This is where we can turn productively to the ‘glitch aesthetic’, not solely as an emblem of digital workings (as Shane Denson would have it), but more critically as an important limit of digital efficacy and, equally important, a principle of digital creativity.

The glitch aesthetic

In rendering the bodily transformation, *H2Odio* posits the question of the monster not as a thing that comes from the outside but as having an immanent source in a genetic or developmental ‘glitch’ in the primal cell division that forms an embryo.[16] This important thematic feature is replicated at the level of film form through the adoption of a digital glitch aesthetic whereby Infascelli’s languid style is interrupted at fraught moments by a picture-jitter technique associated with the computer glitch. The disturbance is initially introduced as Olivia confronts her reflection in the bathroom mirror, the frequency increasing towards the film’s final denouement in the cellar in which the evil twin’s enterprise of repossession is finally concluded. In these moments the image track stutters and glitches (complimented by a synchronous audio-hiccup), as if offering a glimpse of another order of reality or double-identity beneath the surface of this one.

As a new aesthetic in film and media art the glitch is a wholly digital technique. A catastrophic failure of ‘seamless’ digital processing, the computer glitch mercilessly reveals the technologised image in crisis, usually manifesting in the form of gross pixilation or other aberrations which destroy the internal consistency of the image. The glitch also disrupts human perception per se, tripping phenomenological coherence, producing a snap affective shock in its wake. In their article ‘Notes on Glitch’, Hugh Manon and Daniel Temkin (2011) describe an artistic practice that embraces the glitch as an antidote to the myth of digital perfection. “What otherwise would have been passively received—for instance a video feed,

online photograph, or musical recording—now unexpectedly coughs up a tumorous blob of digital distortion."[17] The allusion to tumors and mutation as having a digital origin corresponds precisely to its adoption in Infascelli's film to signify the genetic 'error' in the sister-sister dyad. In a sense what we have is the corruption of the file-name 'Olivia' by the rogue data emanating from 'Helena'. This is not to claim that the digital and the genetic operate via a unified code, but an acknowledgment of the correlation of the two orders at a primary level of organization.

True to its genre, *H2Odio* invokes the full horror of the digital/genetic glitch, a glimpse into the abyss of another order of reality – material as well as psychological. But far from merely a destructive force, Manon and Temkin argue that the glitch also manifests a "provocative, strange and beautiful" affective power that is inherently creative in its power to 'reconfigure' thought. In relation to language, the glitch would translate as a kind of stammer or stutter, which Deleuze suggests should not be seen as a defect in the speech act, but rather as a creative opening, a movement from within, that interjects official grammar to generate a new syntax, even a 'style' (Deleuze 1987:4).

Supplementary to the traditional style of the *giallo*-horror *H_2Odio* adds the digital glitch, which reveals a virtual realm that flickers through to visibility at various intensive-transformative moments. How the digital glitch fits into a discourse of the microbiological is easy to see once we note that the glitch is both a model for the synaptic workings of the brain, and the operative term in triggering divergent series, or genetic 'mutation' so to speak, through what Henri Bergson (1998) termed *élan vital*.[18] Relating to the molecular biology of the brain, Patricia Pisters (2012) is the foremost film scholar who has theorised the characteristics of a contemporary 'neuro-image' where the relationship between brain, perception and world is at issue cinematically. She examines several films where the brain-screen dialectic works via a power of 'schizoanalysis' – an analytical method developed by Deleuze and Guattari (1987) to discover the driving forces of desire and resistance in the socius. In *H_2Odio* the corporeal transformations appear at first privatised or individuated but as I will suggest, using the schizoanalytic method can draw out a line from the personal to the political involving transversal movements of thought. The glitch helps us to rethink the mechanism of thought not as developing out of a rational synaptic sequence, or mechanistic firing of 'logic gates', but rather as an uncertain system that works through 'irrational breaks'. This endows the glitch and other digital aesthetics a special role in facilitating new contacts in the brain by way of what Deleuze calls a 'shock to thought', refreshing perception

and dissolving conditioned reflexes at a point prior to reterritorialisation. Insofar as affect is precisely the gap or interstice of the irrational break, the hiatus between perception and action, the synaptic glitch – unpredictable, instantaneous, and productive – acts as a model for digital affect. The affect can be termed 'digital' precisely in the origins of the glitch as a principle of complex algorithmic operations. Writing of the malfunctioning of HAL, the computer 'brain' in Kubric's *2001: A Space Odyssey*, Deleuze says:

> If the calculation fails, if the computer breaks down, it is because the brain is no more reasonable a system than the world is a rational one. The identity of world and brain, the automaton, does not form a whole but rather a limit, a membrane which puts an outside and an inside in contact, makes them present to each other, confronts them or makes them clash… (Deleuze 1989: 206)

The computer fails as a computer precisely at the point where it simulates the brain. Accident and contingency infects the digital just as it does the analogue world, and the realm where this is most visible is in the genetic and the molecular. Infascelli's film alludes to this concern with genetics and the microbiological in the theme of the evanescent twin, who shares primary genetic material with the born twin, Olivia, but who exists only in the affective trace left behind. This trace which starts off as a purely 'psychological' pathology (the guilt inscribed in Olivia's diary entries), but transforms into a 'material' bodily appropriation, much like a speeded up process of viral infection or in evolutionary terms, 'genetic selection'. This bodily takeover is in fact the source of the horror, as we experience Olivia's increasingly aberrant behaviour, culminating in the gruesome murder of her female friends. *H_2Odio* therefore proposes that the pressures and stresses of the living organism come not only from the 'outside' in the realm of life and love, or even in the conscious and unconscious drives of ambition, desire, and fate. Rather they are equally derived 'internally', and materially, at the level of cellular interactions and genetic mutation.

How will the body react? How will the mind be affected by the glitch? True to type, *H_2Odio* answers the question in a crescendo of 'slasher' violence as Olivia/Helena dispatches her erstwhile friends one by one.[19] But beyond the generic expectation, the fascination of Infascelli's film is in its translation of outside forces and signs to the microscopic realm where the accident and contingency seen in the physical world of molecular and genetic interaction also distinguishes the digital order. Moreover, from the usual understanding of genetic transmission as hierarchical and generational we have in the Olivia/Helena dyad the alternative of an intra-generational subversion of the supposedly 'inviable' code. This is a

radically ‘digital’ methodology of genetic transfer to the extent that data transmission is not limited to ‘vertical’ genetic events such as the meeting of sperm and egg, but rather pertains to the ‘horizontal’ plane of the recombinant gene. If this is ultimately a body-horror narrative about the vengeful twin, updated with a genetic theme and digital aesthetic, its ‘social’ challenge is also directed at the industry of personalised ‘healthy living’ and ‘lifestyle’. Fasting, retreating, and self-discovery – these form part of the ‘biopolitics’ of today, arguably targeted mostly at the urban female consumer. Ultimately the affective power of the film emerges, in a sense, from the, a combination of health concerns and body-consciousness, whose surface sheen is corrupted in unexpected ways.

Zombie community in *The Gerber Syndrome: il contagio*

In contrast to *H_2Odio*’s flamboyant style and individualised focus, *The Gerber Syndrome: il contagio* adopts a more social frame and a contemporary ‘mediality’ taken from the tropes of documentary, reality-TV and ‘imperfect cinema’. As the ‘contagion’ moniker suggests, Dejoie’s film is a pre-COVID-19 virus epidemic thriller feeding off the post-SARS anxiety and ‘bird flu’ scares of the early millennium. The film is set in the modern Italian city-suburbs of Torino which reels from a highly infectious flu virus causing neurological breakdown, disjointed movement and aggressive tendencies in its victims. Misunderstood and feared, the sufferers of the syndrome roam the streets and spaces of the metropolis, in a discombobulated state resembling ‘zombies’. But in their disorientated condition they are pitiful rather than lethal, suffering not only from their untreatable condition but also from ostracization and oppressive intervention by the state as it seeks to quarantine the infected. In keeping with the microbiological motif, the pathology of the disease is shown in an early clip from the medical lab as we witness the pathogen, described by a medic as an ‘evil’, attacking and destroying healthy brain cells. However, in *The Gerber Syndrome* the microscopic virus is only the primary cause, the trigger event which spreads to affect in equally devastating ways the ‘higher’ orders of the body and society: the individual, the family, and eventually the entire socius. In terms of biopolitics, the film invites a view of the zombie as a ‘growth’ in the body-politic, or a symptom that articulates the flows of destructive social desire in the populace as a whole. Furthermore, despite its concrete and restricted setting, the narrative

makes clear that the syndrome is a transnational crisis, causing the same social upheaval and waves of intolerance across the continent of Europe.

Strategically, the film dissects the affected orders of society along three axes, following the respective protagonists with a mixture of prurience and intrusive zeal which largely defines modern televisual media. Firstly we have the individual victim of the syndrome, Melissa, whose developing illness corrodes and eventually destroys her family unit. Then there is the security state, embodied in Luigi, part of the privatised 'zombie-catcher' security service. Lastly we have the public health servant, whose impotence and contradictory position is personified in a family medic, Dr. Riccardi, caught between Hippocratic duty and civic informant. The invasive and voyeuristic scenes of the documentary crew barging their way into the bedroom of the young woman, are particularly disturbing, as the microbiological attack breaks out on the surface of her body and face in the form of lesions and convulsions. But despite the manifest traumas invoked in Melissa's hopeless degeneration, Dejoie shuns the mawkish emotion of Hollywood storytelling, substituting a more distracted and distanced 'digital affect': a flat and coldly vibrating composition that is nevertheless able to shock with the revelations of its roving eye. This digital-collage form, which includes clip-inserts of government spots-ads, medical explanations, law enforcer body-cameras, social media posts and vox-pops, finally evokes the feeling of a society cut loose from traditional values and emotional responses, at the mercy of a dangerous blend of extreme cynicism, populism, and conspiracy theory. A new type of radically 'uncoded' affect sweeping through society and captured fittingly by the fragmentary, recombinant form.

The microbiological vision of *The Gerber Syndrome* is therefore supplemented on a different level by the full panoply of disenchanted citizens as a molecular force, a deterritorialized space charged with deep currents of intolerance and controlling impulses. A prime example is the aforementioned Luigi, a front-line operative of the shadowy para-state agency, CS or 'Central Security', set up to intercept and detain infected individuals in secretive quarantine centres. The camera tracks Luigi's movements closely, identifying his multifaceted and flexible work patterns as pertaining to the increasingly outsourced service and security sectors of the current labour market, demanding target-driven job roles often in high-stress situations. True to the erasure of the boundaries between public and private in reality television, Luigi allows the documentary crew into his home space, where interviews paint him as a more or less 'regular guy' who nevertheless harbours some disturbingly dark social

prejudices pertaining to fear of the 'other'. Controlled by such discourses, as much as by his labour, Luigi says simply "It's my job" when asked about the ethics of what he does. In fact Luigi's role only makes official what is already 'the intolerable': a de-humanising discourse that penetrates the social field, serving to marginalize and divide sectors of the community, opening a space for crass populism and xenophobia.

As the virus takes a grip on its victim the individual 'subject' is lost to the networks previously integrating them into 'life'. But this contagion is more than just a personal bodily trauma. *The Gerber Syndrome* translates the microbiology of viral disease onto a social scale, showing how the corporeal 'tissue' of a populace becomes 'cellular' at the point of infection, resulting in corrosive antisocial waves of affect sweeping across a community. In *A Thousand Plateaus*, Deleuze and Guattari already present a micropolitics based not on institutions and macro-political organization, but on the infectious force of everyday 'imitative' practices and micro-relationships.[20] The important thing here is how actions and reactions catch on to form an unstoppable chain reaction in crisis situations. The digital methods of Dejoie's mobile and furtive camera perfectly disclose this very level of affect and contagion at the cellular level: the seed of fear, confusion and distrust is repeated and reiterated, begetting an irresistible malaise at the societal level, of which the 'zombie' is the unmentionable sign. The 'documentary' interlaces its 'institutional' interviews with salacious forays into Melissa's personal spaces and revealing vox-pops on the streets of Turin. Later, the leader of an ultra-right vigilante group is quizzed on his extreme xenophobic views, intercut with social media footage of his gang attacking infected individuals in the street and burning their bodies on wasteland. Far from the mortal threat of earlier film progenitors, the zombie in *The Gerber Syndrome* is now the target of a dangerously divided social order, caught in an unstoppable 'contagion' of fear and intolerance.

Despite its nominal focus on three individuals, the affective flows pictured in the film are pre-subjective and communal before they are subsumed and actualised in any given person. At times Dejoie gives us the wracked and tortured faces of the affected in close up – that is, as affect captured and 'written' onto the face. But the camera is never still enough to indulge the pre-packaged emotional refrains and the 'poignant portraitures' typical of high-end commercial cinema. In an 'imperfect' style the camera instead flits around keeping a febrile yet distanced positioning from its subjects. Clearly, the viral infection is an abstract flow that can be interpreted as a metaphor – or better diagram – of a 'generalised' contemporary

affliction that permeates and destabilizes the social and institutional infrastructure of neoliberal Western countries. Exactly what name should be given to this malaise is left open but the socially inscribed intolerance together with the figure of the 'victim-zombie', points towards a political critique of the governance of difference and in particular the mass phobias stoked and harnessed by 'populism'. Arising from this structure of ostracization and regulation of difference is the emergence of what Deleuze calls a 'control society'.[21] Of relevance here is the film's depiction of information management, data networks, and new state agencies set up to police the medico-social crisis. Power in the control society is retained at a macro-level by the organs of the state, but it is also dispersed and distributed – handed implicitly to 'non-state players' and individuals to self-police on a micro-level. As Phillip Roberts argues, 'Control presents a variable and modulating system where organization is maintained by managing the virtual components of matter, manipulating possibility and risk to successfully control everyday life' (2017: 72). In *H_2Odio* the 'possibility and risk' subsists in the barely understood processes and limits of the body, brought to light by the self-imposed, supposedly 'natural healing' effects of the water fast. In *The Gerber Syndrome*, control of the viral infection is equally delegated to everyday actors, seen in the atrocity of a mother informing on her own diseased daughter, a parish priest who uses the fear of contagion to reinforce Catholic doctrine on sexuality, and the murderous violence meted out to the zombie 'community' by so called ordinary citizens. By the film's end the social fabric, as reflected in the three ostensible documentary subjects, is in a state of severe crisis. The CS agent is dead, shot in a skirmish as he sought to detain a suspected Gerber patient; Melissa's middle class family is ripped apart as a consequence of her medicinally induced catatonic state, and finally Dr Riccardi dispairs about his impossible job, and is likely now infected himself. Unlike its more mainstream counterparts that work on marketable and individualised emotions, the affective regime of *The Gerber Syndrome* is more abstract, ambiguous, and social. Yet in this dislocated, digital form, its impact is more immediate and vital, expressing more precisely the composition of forces that shape the now.

The Superfold

Having noted how *H_2Odio* and *The Gerber Syndrome* are marked by the dual discourses of the microbiological and the digital, the final question for this chapter is to ask how affect at

the microbiological level and the digital logic of informatic exchange are in fact intimately connected through wider epistemological contexts. This is discernible from Deleuze's account of the passage from 'fold' to 'superfold', a development pertaining to the creation of the new in the context of pervasive digital technologies. These information societies, as mentioned, harbour new contours of control revealed through the concept of biopolitics. But they also contain new social potentialities yet to be realised, for as Deleuze mentions in 'Postcript on the Societies of Control', contemporary informatics-based societies enact a confrontation between enslaving and liberating forces. The notion of the superfold stems from Michel Foucault's analysis of the great explosion in scientific, economic and social thought in the modern epoch (Deleuze 1988). In Deleuze's reckoning, this professionalisation of research led to the development of discrete 'folds' in thought and action producing epistemes such as 'Labour' (the discipline of capitalist production), 'Language' (the discipline of linguistics) and even 'Life' (the discipline of biology and the catalogue of species). In the contemporary condition, however, the move to the 'superfold' manifests completely new forces of the 'outside' asserting "an unlimited finity, thereby evoking every situation of force in which a finite number of components yields a practically unlimited diversity of combinations" (Deleuze 1988: 131). The new superfolds pertain to the fields of genetics (engendering new forms of 'life'); digital technologies (new forms of production and control); and asignifying expression (giving rise to new forms of language). In the phylum of 'life', for example, genetics enables a 'deconstructed' understanding of life that displaces the integrity of the organism from the body to a set permutation or codification of genes. All of life, which is a potential infinity of beings, can be derived from the intensive relation between the small number of proteins from which DNA is constituted. This provides the genetic superfold with an immense potential or creative power that supersedes the previously assumed sovereignty of genera and species. In a parallel step, the pervasiveness of digital technics in contemporary superfolds is beyond question: when 'man' is taken out of the equation, no longer a limiting factor or determining 'fold', then the silicon superfold runs amok. In *The Gerber Syndrome*, the digital superfold expands proportionally with the biological pandemic: crisis management by the state means a mixture of 'disciplinary' confinement but also an internalised social control enabled by a specific digital connectivity that activates the separate nodes – the information and security networks of the state, media platforms, health authorities and even human 'informers'. In terms of film form, the mix of documentary filming with surveillance footage, 'infographics', interviews, vox-pops, and

other digital resources is likewise an indication of the silicon superfold at work, the recombinant construction acting as an equivalent of the genetic superfold.

Within *H_2Odio* the genetic superfold takes precedence in the suggestion of a 'mental echo' of the mother's psychological disturbance which persists in the daughter, Olivia. This intergenerational trauma is typical of the gothic horror tale. But more unusually, and more powerfully, we have the cellular-protozoan growth of the unborn sister inside the body of her twin. Helena actualizes the superfold of the gene challenging the physiological (not to mention psychological) sovereignty of the embodied individual. To be clear, this is not a malignant destruction at a cellular level, but the auto-genesis of a 'new' tissue, organ, corpus within an 'old' one. At the end of *H_2Odio* Helena has fully taken over the body of Olivia and a new calm has been restored to the villa, even if at the literal expense of Olivia's erstwhile friends, their cadavers cocooned in sleeping bags and laid out in a neat formation on the floor. This of course is the expected fulfilment of the horror genre, but in the wider frame of cultural trends the denouement signifies a microbiological resolution to the problem of the monster double: at the level of the cellular, the reductive purification of the privatised body intended by Olivia through the water fast is superseded by the superfold of genetic 'horizontal' permutation and possibility.

Conclusion

In my analysis of *H_2Odio* and *The Gerber Syndrome* I have shown how both horror films embed two important features of contemporary culture into their strategems: namely microbiological framings and digital aesthetics. The understanding of microbiological processes is mobilized for horror when conceived as primal matter vulnerable to pathogenetic mutation, lying at the root of bodily change. In the above films, a terrible virus and a genetic 'malfunction', invests their respective 'arcs of affect' with a disturbing raw energy by combining the cellular and the digital into one machine. Even though both case studies emanate from Italy's low-budget independent horror scene, digital production has prompted new possibilities for an *auteurist* cinema characterised by an acute, singular perception and, arguably, more social relevance than that achievable by higher budgeted productions searching for more saccharine pleasures. In this way, despite their different aesthetic approaches and affective strategies, each film references a virtual world both sinister and

close by. That this sinister and morbid image is the very business of horror should not detract from the significant cultural messages contained within. The new superfolds of genetic manipulation and social control alluded to across the two films may indeed manifest as dark 'warnings', but the films' imbrication of the digital and the microbiological is in the first instance the revelation of a zone of virtual intensity or 'primary causes' reminding us that we are not necessarily paralyzed or blinded in a society of 'effects'. Both the microbiological and the digital open out a primary ground of creative and unpredictable connection which exposes matter and image to experiment.[22] In other words, in the shift to the micro, the films enable a 'Spinozian' micro-analysis of the infinitesimal corporeal interactions that in turn transform the individual and social body of the contemporary.

The connection between the microbiological, the digital, and the multiplicity of virtual worlds that exist on the plane of immanence is demonstrated especially in Infascelli's film. As I have argued, *H_2Odio* deploys digital affect in the form of the glitch – simply put, an interrupted perception motivating thought and hinting at this immanent level of 'creative disorder'. The aforementioned schizoanalytic method used by Pisters in her positing of the 'neuro-image' can be used to untangle the knot of personal, social and capitalist pressures that bear on Olivia and her troupe. In Deleuze and Guattari's (1984) account, 'schizophrenia' – the loss of material, cognitive, and ethical 'anchors' to the world – is produced by the awesome productive energy of capitalism, which is both its irresistible recipe and its limit. A schizoanalysis of *H_2Odio* sees the dietary, beauty and body-image industries targeted mainly at female consumers as producing the very combination of schizophrenic acceptance and rejection witnessed in the film (the housemates have secretly stashed snacks in their rucksacks which, upon their discovery enrages Olivia). In his notion of the 'Liquid Society', Umberto Eco (2017) maintains that a confluence of factors (including a crisis in state institutions, and a 'bulimic' consumerism) has led to this condition in which 'indignation' replaces a forlorn faith in the state, religion or revolution. "Such indignation knows what it doesn't want, but not what it does" (2). Indeed the explosion of indignation, or lethal violence at the end is as much a destruction of the 'beauty myth' (Naomi Wolf 1991) as it is a rupture of social and personal bonds as instigated by the glitch.

Cinema is, according to Deleuze, a privileged instrument plugging directly into sensory perception and creating a circuit between world and brain. The concept of the superfold at the microscopic, cellular, or pixelated scale conjoins digital creation to the synaptic level of

affect, a connection shown in *The Gerber Syndrome* where digital control is as much a corrupter of the 'social brain' as viral infection. The value of Dejoie's film lies precisely in revealing this destructive societal effect at what seems like a pivotal political moment in globalized Western societies vulnerable to populism, conspiracy theory, and demagogues. An analysis of these two films shows that the microbiological urge is not an end in itself but rather a symptom of a wider inclination towards the micro-analyses and the micro-technics of affect, a trend which is intimately connected to the unavoidable 'contagion' of digital technologies, practices and thought. Digital aesthetics are the modus operandi of this new trajectory, its logics and features able to capture imaginative drives, perfectly attuned to a social and cultural pathology which, the films show us, can be far from progressive. In the 'Five Star Movement', Italy has given us perhaps the first Western instance of digital populism, a new political force that not only utilizes the affective power of social media, but which seems grounded in, and attuned to, the realization of a 'molecular' population.[23] Yet it is by no means inevitable that these 'biopolitical' developments will lead to intolerance and creeping authoritarianism, which is the warning of *The Gerber Syndrome*. Neither is it the case that salvation means withdrawing from life into an illusory state of privatised bodily sanctity, which is the warning of *H_2Odio*. If it is true that neoliberalism's atomised populations and digital flows have contributed to the growth of populism and control, then a 'microbiological' critique suggests that affect cannot ultimately be tamed, channelled or commodified. *The Gerber Syndrome* and *H_2Odio* are examples of film's essential role in expressing a barely tangible mood, feeling, or affective trace before-the-fact. More than merely representing a zeitgeist, however, they also remind us, beneath and between the mayhem of their visions, of the power of the digital superfold, not for control but for reaching towards the virtual in the creation of the new.

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[1] See Fahy (ed) (2010) *The Philosophy of Horror*, especially the chapters: 'Horror and the Idea of Everyday Life' pp.14-32; 'Ideological Formations of the Nuclear Family in *The Hills Have Eyes*' pp.102-120

[2] Among the Italian produced zombie-horror films which gained considerable notoriety as 'video nasties' are *Zombie Flesh Eaters* (Lucio Fulci, 1979), *Zombie Creeping Flesh* [aka *Night of the Zombies*] (Bruno Mattei, 1980) and *The Living Dead* (Jorge Grau, 1974).

[3] Mathias Clasen (2021) discusses how horror films seem to thrive in periods of cultural and social unrest. For instance he suggests that the huge impact of the digital horror film *Paranormal Activity* (Oren Peli, US, 2007) was partly due to how "the film resonated with a widespread sense of financial and personal insecurity in the wake of 9/11 and the economic recession of 2008" See Clasen, Mathias (2021), "'I'm Nervous about What the Popularity of Horror Says about Society'", *A Very Nervous Person's Guide to Horror Movies*, New York, 2021; online edn, Oxford Academic, 19 Aug. 2021, https://doi.org/10.1093/oso/9780197535899.003.0008, accessed 21 Sept. 2023.

[4] Stemming from Michel Foucault's research on the so-called history of sexuality, 'biopolitics' is a socio-political schema for defining and controlling populations based on 'subjectivity', an internalised self-knowledge and self-regulation which is in turn founded on pseudo-scientific principles and epistemologies. The main field of operation of biopolitics is not the institutional locations of old like the prison or school (the disciplinary regime), but everyday life itself.

[5] According to Simone Starace (2010), recent Italian horror has been benefitted from the liberating effects of digital 'auto-production' outside of the traditional finances of the TV and media industry. For his part, Alex Infascelli claims that the novel distribution model for *H2Odio* (released as a complementary DVD with a weekly magazine) provided a newfound freedom from commercial interference, whilst at the same time inflecting his work with a distinctive digital style.

[6] When Spinoza (2001) said we know nothing of 'causes', he intended that the human individual mistakes the signs registered in and on our bodies as the actual causes of our dis-ease, thereby calling for a discipline not of the symptom, but of the source, a 'symptomatology' which refocuses onto the 'hidden' realm of affect.

[7] Gilles Deleuze makes the connection explicit between affect and its causation in his monogram on Spinoza (1988b)

[8] For a survey on microbiological images and themes in popular cinema see David A. Kirby (2013), 'Movie Microbes Under the Microscope' in *Microbiologist*, Dec 2013, Vol. 14, No. 4. To illustrate the power of the new relation between film and microscope, Kirby reveals that one of the first calls for film censorship came in 1903 from British cheesemakers angered at a short film called *The Cheese Mites* which revealed with alarming alacrity the microscopic organisms dwelling within Stilton cheese. Other film titles fuelled a new public anxiety regarding unseen menaces with examples such as *The Dread of Microbes* (1911) and Edison's anti-tuberculosis propaganda film, *The White Terror* (1915). The 'cinema of attractions' is a term introduced by film scholar Tom Gunning (1986) to describe a mode of pre-narrative films that used spectacle to invoke an active and excited spectatorship.

[9] Balázs, whose brother was a microbiologist working on cellular energy production, argues that the cinematic close-up is a new aesthetic that not only reveals the modern world in its minute detail, but also to an extent redeems the capitalist effect of alienation and distance. Béla Balázs (1930) 'The Close Up' in *Spirit of Film* (see Erica Carter (ed, 2010), pp. 100-112.

[10] The public understanding of the COVID-19 pandemic, including infection mechanisms at the cellular level , depended to an extent on a level of microbial information provided by the state and news broadcasters, and explained using computer graphics. Arguably, this order of health information eased public acceptance of the social distancing and lockdown measures instigated in the wake of national outbreaks.

[11] The *diagram*, for Deleuze, and Foucault before him, is more than a simplified graphical representation of a process or relationship, it signifies the transformation from a certain chaos to a certain order, and emanates from the sometimes violent exertion of thought in the face of the unthought, from the infinite to finitude. For a further elaboration on the diagram, in relation to Deleuze's concept of the fold and superfold, see Hélène Frichot (2011).

[12] Deleuze and Guattari employ 'deterritorialization' as a key concept in their accounts of transformation and creativity. In *Anti-Oedipus*, for instance, they see it as a 'coming undone' (354) whereby fixed forms and relations undergo a decoding process that in *A Thousand Plateaus* releases 'lines of flight' (10) from fixity and convention.

[13] Manuel De Landa uses the oppositional terms 'topological' and 'metric' spaces to define how extensive forms are engendered from intensive situations: "As if the metric space which we inhabit and that physicists study and measure was born from a nonmetric, topological continuum as the latter differentiated and acquired structure following a series of symmetry-breaking transitions" (2002: 26)

[14] Although the film predates the era of the 'smartphone' (Apple's first I-phone iteration was released in 2007), the standard cellphone was already ubiquitous in the developed world, and the explosion in digital communications was well under way.

[15] The 'self-help' culture, which seeks to personalise and privatise the responsibility for physical and mental health, abounds in the network culture. Fasts, including water fasts, are often subtly addressed to women in terms of losing weight and other health benefits achieved in a 'natural' and 'healthy' way. See for instance, www.thelifeco.com or 'Wellness Mama', self-advertised as "the most trusted online source for naturally minded moms" https://wellnessmama.com (accessed 21 September 2023).

[16] In Deleuzian philosophy and theories of affect intensive situations or events are distinguished from extensive forms that are said to be their results. Intensive situations are nodes where specific forces converge to produce qualitative change – transitions from one state to another, as in the change from liquid to gas, or from regular cellular growth to mutational growth.

[17] Manon, H., and Temkin, D. (2011). Notes on Glitch. *World Picture*, *6*, 1–15. Critical enquiry into the glitch art aesthetic started gaining momentum in the new millennium and the first symposium dedicated to its practice and theory (called GLI.TC/H) took place in Chicago in September 2010.

[18] Strictly speaking, Bergson's concept of *élan vital*, or spontaneous morphogenesis, was based upon a semi-mystical 'life force'. This is replaced in modern genetics by the generative power of the combinatorial matrix of genes themselves.

[19] Part of the notoriety of the Italian giallo-horror are the innovative and graphic death-scenes. Arguably, Infascelli is less interested in showing the actual bloodletting than in the bodily takeover of Olivia by Helena.

[20] See especially the chapter '1933: Micropolitics and Segmentarity', *A Thousand Plateaus: Capitalism and Schizophrenia* p.208

[21] In 'Postscript on Control Societies' Deleuze refers to the new forms of subjectivation replacing Foucault's disciplinary societies. Rather than physical enclosure, or institutional imprisonment the control society operates through continuous, 'free-floating' control that appears like freedom but disguises a more subtle, subterranean form of control "as rigorous as the harshest confinement" (Deleuze, 1995:178)

[22] To reiterate a point made in the methodological chapter of this thesis, there is no ontological distinction between matter and image in the philosophy of Deleuze and, before him, Bergson. See Deleuze (1986: 56ff), and Bergson (1991).

[23] Many political commentators see Italy's embrace of the 'Movimento Cinque Stelle' (M5S) in the 2013 national elections as an unprecedented political earthquake in Europe (Tronconi, 2016). To expand on *'digital populism'*, see *The Birth of Digital Populism: Crowd, Power, and Postdemocracy in the Twenty-first Century*, Edited by Obsolete Capitalism Free Press. (Paolo Davoli et.al, 2014).

3.2 Molecular Love: the Case of *Upstream Color*

> "I've fallen in love...I didn't think such violent things could happen to ordinary people."
> Celia Johnson in *Brief Encounter*

There is a sequence in Godard's *Pierrot Le Fou* (1965) where an American director, played by Samuel Fuller describes cinema as "Like a battleground…Love, hate, action, violence, death. In a word, emotions." Godard's film takes love in the form of *amour fou* as the point of convergence in the dizzying assemblage of hate, violence, death, and so on. Love, in other words, is the catalyst, the attractor, and the connector. Along similar lines, Deleuze and Guattari (1983) regard literature or cinema as a 'machine' capable of connecting actions, emotions and events. Within a universe of incalculable material connections they ask: "what measurable relationship does this [cinema] machine have in turn with a war machine, a love machine, a revolutionary machine, etc." (1983: 4). Updating Fuller's dialogue, this chapter introduces a new question in the battleground of cinema and love, a problem based not on its 'hot' internal connections with the other emotions, but rather in its encounter with digital technology. What new relations, we might now ask, does the digital machine have with a love machine? Which is to say, how does a digitally constituted cinema deal with loving relations and the complex emotions which feed into it, and which emanate from it? A century of silver salt based film stock was eminently capable of capturing an 'alchemy' of intimate human emotion, transcribing the joy and the devastation of love to a mass audience.[1] But can a mathematically based logic ever in principle harness the texture and the luminosity of a human romance? Even more, can cold computation go beyond the language and the look of love to manifest a potential for affirmative ethics and aesthetic innovation? These are important questions that clearly go beyond the question of cinema's generic renewal into the wider territory of human relations in the personal and political sphere.

Philosophically speaking, love is the transcendental theme par excellence, played out in countless narratives in the space between the elevated Platonic ideal form and the messy reality of human worlds. Consequently, for the Greeks love divided into the branches of *Eros* (acquisitive desire), *Agape* (Platonic, selfless love), and *Philia* (affection towards family and friends). But as Bennett Helm (2017) argues, maintaining these ancient distinctions becomes difficult when analysing contemporary love, especially of the romantic vein. The notion of 'depth' seems critical here in distinguishing between selfless and instrumentalist forms, and

between love and mere liking. The problem, then, is to "elucidate the kind of 'depth' we intuitively find love to have" (Helm 2017). Narratively speaking, we might take this notion of 'depth' to also be the fundamental issue at hand for analysing affect in the love film. In essence, the cinema-love machine, as Deleuze and Guattari call it, channels contingent 'life-events' and unorganised flows of desire into a story of the one, the lover, circumscribed by the world of the beloved. This, the romance film suggests, is the perfect combination of *Eros* and *Agape*, the ultimate consummation of affect in the world and the answer to the question of existential depth and meaning. But the picture was already more complex and nuanced than this. For if cinema is in part a love machine then it also connects with a social machine that traditionally mediates, codifies and promotes certain models of emotionally and physically intimate relations, whilst excluding or ignoring others. Can the digital image, or more properly the digital Idea, with its properties of abstraction and transmutability, cut through the cliché and ideology of love? Here I am not referring to the more inclusive image of sexual identity and relationships emerging in recent years, for this has not displaced the dominance of the hetero-dyadic narrative of the loving couple on the rocky path towards union. I am talking more generally about the possibility of a digital image of love which has been 'pixilated', pared down to the level of cells and molecules, and built up again from there. This is indeed a radical proposition, for if falling in love is the ultimate example of embodiment and self-discovery – proof of a human 'spirit' – then is this not incompatible with the incorporeality and abstraction that lies at the heart of digital calculations? It would seem that a computerised love in the form of the digital Idea is the ultimate affront to a world of human intimacy and dignity.[2] On the contrary, in this chapter I aim to show how the digital Idea, in relation to its characteristics of molecularisation and aggregation, modulation and production, is expressive of a new treatment of the 'battleground' of love – an intensive zone of creativity revealing a hidden affect of the digital order. In the first section I situate the affective and creative force of love within the boundaries of the traditional romance movie. Secondly I analyse a film that alternatively presents the moment of love as a radically connective event of biochemistry, one that traverses the boundaries of the body, and which I take to be an exemplar of a new image of love in the age of digitalisation. Finally, this leads to an evaluation of the deterritorialising force of the digital which is capable of moving the ethics and politics of love to new limits beyond the human domain.

Talking of affect one can hardly escape the exemplar of love and desire. A momentous event in the life of a human being, the loving encounter is where a change of state in body and mind

becomes a defining but elusive experience for the subject, opening the door to a 'pure' potentiality of joy and risk, where the vitality of life is affirmed. On the other hand, love's primal power to move (emotionally and behaviourally) concomitantly activates the commodifying and normalising components of a cinema's 'machinic' nature. Not surprisingly, therefore, the realm of romance is subject to the most recalcitrant cultural codifications and reductive territorializations, rendering a complex singularity into generic formulae ready for the market. Classical Hollywood film, known for its machinic perfection, incorporated the motive force of romantic love as an almost universal line of action spanning all genres and plot configurations. David Bordwell et al. (1988) divulges how even in a maturing industry of the early twentieth century "[s]creenplay manuals stress love as the theme with the greatest human appeal." (16). Later on, 1950s Hollywood melodrama exploited the genre's 'weepie' potential in an era of change, providing feminist scholars with a platform to attack oppressive social forms elaborated in the film text that restricts and channels women's desire according to 'patriarchal' norms. In more recent times, the 'rom-com' has become a staple Hollywood genre, arguably stamping a more female-orientated, if not feminist perspective on the popular romance, whilst still pertaining to an overarching 'binary' conception of gender and sexuality. But whilst the filmic treatment of loving and sexual relations has to some extent entered a period of diversification, with non-heteronormative couplings becoming more visible, those examples rarely extend to a questioning, much less dismantling, of the baked-in categories of individual, social, and sexual identities. That is, however 'conservative' or 'progressive', the loving individual's journey is one of completion of a pre-existing essence, the actualisation of a 'deep' human nature and meaning. But what image of love can exist outside of the personalised desires and majoritarian practices reproduced in the romance film? Or put another way, how can the openness and possibility existing at love's surface lead to genuinely new formations of intimate human^{+} relations?

We could say that the filmic love story has lagged behind posthumanist domains of critical thinking that has long heralded a transcendence of bound identities, a connection to non-human forces, and a concomitant appeal to the openness of nomadic practices in the myriad interactions of human and world. The grounds of 'posthumanism', were laid in the late twentieth century through writers such as Michel Foucault, Donna Haraway and Katherine N. Hayles and it is probably fair to say that the types of challenges laid down by such thinkers to human sexuality, identity and subjectivity were firstly applied to science fiction cinema rather

than the romance movie. In this light, Haraway's famous 'cyborg manifesto' (1991) was highly applicable to 1980s Hollywood Sci Fi such as the original *Blade Runner* (Ridley Scott, 1982) and *The Terminator* (James Cameron, 1984). However, posthuman thought developed into a vital area *per se* in the new millennium period in the work of writers such as Cary Wolfe (2010), Stefan Herbrechter (2014), and Rosi Braidotti. In studies such as *Transpositions: On Nomadic Ethics* (2006) and *The Posthuman* (2013), Braidotti in particular has championed an expansive philosophy constructing a critical framework that tangentially touches on love as an affirmative ethics, rooted in feminism and nomadism. For Braidotti and other posthumanist theorists, the conventional humanist idea of the unified subject is entirely bankrupt at a time of political retrenchment and environmental degradation. More of a straitjacket than a guarantor of human exceptionalism, the self-identical, orthodox subject disallows for the sense of flexible and multiple identities and capabilities attainable when the fallacies of anthropocentism are shaken off, that is in the posthuman condition. This critique of anthropocentrism prompts us to rethink our relationship with ourselves, the environment and other living beings.

Upstream Color is an articulation of some aspects of posthuman thought in contributing to a more holistic, inclusive and diverse understanding of the mutual constitution of human agency and subjectivity within a dynamic but fragile ecosystem. Furthermore, the embracing of fluidity and diversity which is a feature of posthumanism can be seen as a form of love for multiplicity and difference. Braidotti's call for sustainable affects and passions, can be read as emphasising love as a mode of action that reorients systems.

Upstream Color, made by American independent director Shane Carruth, shows us that love at first sight is not just the stuff of teenage romance, but can be rendered from the point of view of intensive force fields, vibrating matter, and molecular interactions. If this sounds abstract or boring then the reality is more searing and deeply affecting. Digitally made, using a flexible and fast track production mode, *Upstream Color*,has been variously described as a Sci-Fi film, a thriller, a love story, or simply as 'unclassifiable'[3] To see the film as a love story is both bizarre and entirely accurate as beyond the usual narrative arc of the romance genre we have the pairing of the loving couple not as desire born of fate or providence, but as a 'resonance', a synchronous hum describing the ineffable affective coupling that takes place prior to human cognition or will. Moreover, we have a 'branching out' of perception, affect, and even love, from the purely human story to other life forms: flora and fauna. The film opens the way to a new 'scientific' definition of love as interference pattern, an affective

event governed by chemical, hormonal and psychological exchanges occurring between organisms at the microscopic level.

Treating love 'scientifically', it may be argued, would threaten to unseat the irrepressible and the imaginative, for there is surely a way of regarding love as an inherently creative moment, and a progressive one at that, where ethics are (at least momentarily) open to experimentation, difference is celebrated, and the world is re-imagined in a positive light. The writings of Gilles Deleuze (and his collaboration with Felix Guattari) offers a way into the subject that emphasizes the ethical and political dimensions of love and a kind of 'authentic' involvement with the world, which is to say, a tentative and inquisitive vision that supplants the more usual egotistical rites of romance and desire as served up by popular culture and commercial codifications. Deleuze's work in fact focuses on situations and expressions that reveal the genesis of forms prior to codification, prior, that is, to fixed subjective positions and relations. Turning to my case study, *Upstream Color* provides a brilliant and extraordinary vision of love in its elemental form, and a way of seeing Deleuze and Guattari's theories of 'depersonalised' love played out on screen.

Going upstream

The film's elusive approach to narrative instigates a radical depersonalisation of character as well as a 'serial' organisation of events that confounds any teleological hierarchy. Thus we have character names replaced by labels ('the Thief', 'the Sampler'), and an aleatory plotline where events are linked by a thin line of 'surface' association and repetition replacing the more deeply integral causality of plot structure. Carruth, who was trained as a mathematician and software developer before turning to filmmaking, mentions these factors himself in an interview given after the film's premiere at the Sundance film festival:

> the idea [is] that I'm going to take some characters and break them down and bring them low, and I'm going to erase what they thought they knew about themselves and have them build it back up. Then there's just the how and the why. That led to the rigid plot elements that are swimming around these characters, the cycle of events that would be happening just out of their ability to know about, or even name or speak about. I guess one thing leads to another.[4]

Carruth's proposition of the unravelling of the self also opens out an important vista in the understandings of corporeal affect. To what new forces is this raw, erased subject exposed? Who or what will enter the scene, and how will this pure susceptibility, respond? To provide

a brief synopsis of the audacious plot: initially the Thief cultivates a larval parasite from the roots of wild orchids to implant into unsuspecting victims. He stalks the nightclubs of the unnamed city looking for female hosts and eventually comes across Kris (Amy Seimetz) who he assaults, forcing her to ingest the worm.[5] Traversing the body through the host's circulatory system, the worm affects its endocrinology, releasing a soporific and transforming the subject into a hypnotised being, an automaton that can be controlled and manipulated through suggestion. To consolidate the erasure of self, the Thief imposes a regime of banal and repetitive tasks on his victim, encouraging her to make endless paperchains, maintain a strict water fast, and transcribe tracts from a book, Henry David Thoreau's *Walden and Civil Disobedience*. Inasmuch as this famous work from Thoreau is a manual for a return to natural living and self-sufficiency, entirely divorced from modern technology, it complements the work of the hypnotic drug, not so much in promulgating a retreat into the self, or into the past, as in 'blanking out' the subject all together.[6] The narcotic effect of the worm has coaxed Kris back into an embryonic subjectivity devoid of memory or cognitive ability to perceive. Here we have one of a number of instances through which Carruth's film takes us 'upstream' to the place of primal causes and 'pure affect'. A kind of starting from scratch or rebirth in which the Thief extricates Kris from her stratified bourgeois existence. No longer going to work, seeing her friends, or indeed leaving her home, Kris is completely entranced and isolated, uprooted from her life like a node yanked from its constitutive matrix. Finally, the thief robs her of funds and vacates the scene, leaving her in a semi-catatonic state.

In parallel with Kris's traumatic ordeal we see the mysterious Sampler, a solitary and enigmatic audio technician and pig-farmer who traverses the landscape in a mobile studio searching for abstract natural sounds to record and mix together into commercial CDs. The Sampler is both a corporeal and incorporeal entity: seen integrated into the world of livestock dealing and sound recording, but also roaming the city suburbs, witnessing other people's silent sufferings, apparently invisible to others. The sampler inhabits an in-between world connecting the natural and the technical – whether he is a 'presence' or a physical 'character' is less important than his role in enabling connections and initiating transformations. In this way he can be seen as a 'digital operator' – not only in his mixing and modulation of natural sounds, but one that that connects and combines already atomised units (pixels) into new formations.[7] From his field studio he has perfected a sonorous call, a resonant soundscape that attracts the parasitic worms and their human hosts, instinctively, like moths to a flame. Kris, still stunned after her abandonment by the Thief, is drawn to the booming electronic

waveforms that the Sampler blasts from his trailer speakers, and in a makeshift field-clinic he performs a blood transfusion to siphon the parasite from her body into a sow-surrogate. From that point on, the intertwined lives and emotions of the human and the pig is suggested by parallel editing, evoking an ineffable affective – almost telepathic – connection between the two. In this incorporeal, virtual connection, when one suffers the other feels.

Having lost her job and most of her life-savings, Kris wanders the city metro in a semi-trance, and comes to the attention of finance broker Jeff (played by Carruth) who sees her each morning, or late at night, to and from his way to work. From the beginning it is clear that the two have some kind of connection, an intangible bond or associative sense between them, indicated by half-stolen glances on the empty train carriages – subtle looks that are more inquisitive and curious than suggestive of any sexual attraction. The cathexis that draws the two inexorably together, operates as if in a magnetic field of attraction/repulsion. As Carruth explains, "…then they meet and we have this, hopefully, personal, subjective experience as they contend with the fact that they're being thrown together. Something is doing it, and they don't necessarily want it. It doesn't seem like they want it, but it's happening. I really enjoy that."[8]

Carruth, who also photographed the film digitally, renders the mysterious forces that surround his characters in a fragmentary and elliptical design, often shot in an incandescent sunlight that blurs the contours of the close-up bodies. Gradually and tentatively Kris and Jeff are drawn into a kind of uncertain romance, played out on coffee dates and punctuated with false starts and awkward revelations. Part of the refreshing novelty of the film is the multiple, non-specific form of the relationship between Kris and Jeff, their attraction to one another not codified as 'visual pleasure' of the type theorised by Laura Mulvey (1989) but rather a magnetism founded on unseen and barely understood energies and histories.[9] There is the heavy implication that Jeff too has been unknowingly subjected to the parasite drug in the past and subsequently exploited. Is there a subtle energy field based on a recurring suffering, a vibrating force that brings them together? The film doesn't establish this as a fact, instead becoming a story of individuals trying to make sense of an event on the other side of consciousness: an enigma of intimate relationships that has no ready-made answer. In this way the film supplants the usual plot causality that motivates popular genre with a logic more akin to quasi-causality, where events and affects which are in themselves quasi-causal, combine to create a new zone of influence, a new typology of affect founded on the infinitesimal workings and uncertainty of 'vibrant matter'. Some spectators may question the

idea of *Upstream Color* as a love film because, amongst other things, there is simply not enough saccharine sentiment, broken-hearted suffering, and sex (although there is quite a lot of emotional suffering, and some sex). In fact, the ecstasies and travails of courtship are of a different order in this film. Where the traditional *film d'amour* makes sex (or the kind of sex) a signifier of the 'depth' of a relationship, *Upstream Color* unanchors physical passion from this symptomatic function and makes it rather a question of surface or 'breadth' – a serial quest for understanding and knowledge generated from the coupling. Sex is therefore just one intensive nodal point amongst others in the intertwined causeways of their relationship. In one scene, Kris and Jeff wake up after coitus to find themselves lying in bed in the middle of the pig corral owned by the Sampler. This surreal juxtaposition redisplays the associative montage technique of the film, generating powerful reverberations that are usually hidden in natural flows and life-cycles, such as that of the hallucinogenic worm: orchids-human-pig.

In another scene Kris and Jeff are in an outside suburban space recounting an anecdote that they both claim as their own. As they banter about the 'stolen' memory they look up at a shapeshifting murmation of starlings in the twilight sky. The birds are of course singular entities but in their ebb and flow they appear as a mutating nebula, guided inexorably by a self-organising force that unifies their individual movements and energies. The swarm event is a backdrop to the lovers' fused memories, acting as a contrapuntal moment of mystery, an acknowledgement of an affective force that constantly acts on the molecular body to produce reality out of possibility. Kris and Jeff's stuttering romance is actually a kind of 'whodunnit', an attempt to understand what accidental force has ripped them from the mould of their previous lives, and an attempt to apprehend the subtle but inescapable undertow that is pulling them together. In this mission they find solace in each other's emptied beings, a repetition of their histories causing a confusion of memory, and the gradual realisation that there are other hidden sufferers of the debilitating experience.

In fact the Sampler has intervened in the lives of dozens of the Thief's victims, each paired with their own pig-surrogate, which is the virtual conduit used by the Sampler to access and surveil the sufferers, each one left in a state of dislocation and confusion with respect to life-connections and relationships. In one sequence we see the Sampler as an invisible onlooker, observing a woman being taken to hospital, accompanied by her partner. The event is supplemented by a set of recurring scenes from earlier on in the couple's day. In a fraught exchange we hear repeated segments of awkward dialogue cut together, repeating exactly the same altercation except with slight differences. It is as if the repeated series are drawn from

compossible worlds, alternative versions of reality from which the Sampler is somehow implicated in the convergence of a singular outcome. This forensic exposition of divergence and 'selection' in loving relations is replicated at various levels and scales of 'nested instancing' in the affair between Kris and Jeff.

Molecular interactions

That this love story is more than anything a matter of molecules and particles, micro-events rather than the macro-tropes of traditional courtship, is emphasized throughout the film in extraordinary scenes of microscopic 'trysts' at the level of the cellular. The first of these occurs near the start of the film as the Thief trains two young acolytes to brew an infusion made from the hallucinogenic worms. In close-up the liquid swirls in a kind of Brownian motion as the active ingredients diffuse and intermingle, a slow-motion analogue to the starling swarm mentioned above. Following on, we observe a microscopic view of cellular interaction – the apparent engulfing of several translucent corpuscles by another dominating microbial organism. This establishes a pathogenesis and a first indication of micro-affect: the molecular, cellular and hormonal changes caused by the worm's secretions. After imbibing the tea, the Thief's assistants appear psychically connected as they spar together, each one able to predict the other's movements. Similarly, in *Upstream Color*, the inference is of a spiritual connection between Kris and Jeff, invoked by some pharma-neurological mechanism in the ingested nematode, a process that causes miniscule changes in behaviour and mood that may be detected by the correspondingly 'primed' partner. If we chart the 'molecular affection' as a series or chain of cause and effect through the nodal points of transmission, firstly we have the maggots, nurtured in the roots of a wild orchid, absorbing the active agent from the plant, and transferring it to the human host (Kris). Through some unknowable emission or interference pattern, Jeff is then attuned to the bodily signature of Kris, which would presumably encompass the minutiae of pharmacological, hormonal, and neurological systems. At the same time there is the even more unknowable chain of connection to the surrogate piglets, which share some blood with their human 'congenators' by virtue of the transfusion that evacuated the worms from the human hosts. Lastly we have the molecular affect on a social scale seen in the community of human 'survivors' who converge at the end of the film to form an extraordinary human-pig commune. This tale of love is opened up by the series worm-human-pig-commune into a 'universe' of affective

charge where bodies – human and otherwise – attain a molecular potential to conjoin and communicate. But aside from this 'new materialist' invocation of interaction on an infinitesimal level of connection and affection, we have an incorporeal 'excess', a virtual field of affect which is more to do with spirit and telepathy. Elizabeth Grosz investigates the limits of new materialism in her book *The Incorporeal* (2017) arguing that it is "the incorporeal conditions of corporeality, the excesses beyond and within corporeality that frame, orient and direct material things and processes…so that they occupy space and time, [and] have possible meanings and directions that exceed their corporeality" (2017: 5). This is not an anti-materialist argument, but one that explores the extra-material, an immanent genesis or process of difference that is not beholden to transcendent conditions of identity or teleological destinations.

Theorising love: the molar

I have already elaborated in the previous section the pronounced public appetite for microscopic knowledge which was born in the early years of cinema and appears accelerated in today's culture. For now I want to chart the implications of this molecular turn, as I see them, for the love story, and in particular, from two different philosophical approaches in Deleuze and Guattari's writings. Deleuze, in his monographs as well as in his collaboration with Guattari, was interested in the concept of love and desire for a number of reasons. Firstly, as mentioned above, eros has an obvious connection to the key concept of affect, coinvolved as it is in the process of individuation and subjectivation. This notion of love as a particular form of affect is explored in various Deleuzian works from *Proust and Signs* to *The Logic of Sense*. On the other hand, 'desire', whilst related to love, has a more destabilising potential in the writings of Deleuze and Guattari. Beyond a force of integration animating the subject, desire acts as a defining characteristic of all living beings. One could even say, following Brian Massumi's (2002) reading of Deleuze, that love is to desire as emotion is to affect, which is to say, love is the actualised, or corporeal form of desire, the latter coming rather as an undifferentiated force from the outside that attaches incessantly and 'serially' to objects.[10] But like the relation between affect and emotion, the connection between love and desire is more complex than a simple conjunctive synthesis. For Lauren Berlant (2012), the cathexis of desire introduces a 'gap' between the object-in-itself and the fantasies projected upon it, producing a complex of affect that feeds back 'internally' to cement individual

identity. By contrast, love is the "embracing dream" of desire reciprocated. Beyond any isolating function, love is an “image of an expanded self” deriving concrete form in the normative models of social acceptance such as the couple structure (Berlant 2012: 6). The desire/love paradox is that it is “a primary relay to individuated social identity, as in coupling, family, reproduction, and other sites of personal history; yet it is also the impulse that most destabilises people, putting them into plots beyond their control” (13).

Unsurprisingly, most popular textual romances focus on 'love' and its travails, that is, the articulation of desire through recognisable (audio-visual) signs, such as the gilded look, the ruffled bed, and the spoken words ‘I love you’. Deleuze and Guattari, as the title of their work *Anti-Oedipus* testifies, are radically opposed to the Oedipalisation of love, which is to say the reduction of the singularity and openness of love to the pre-determined forms of sexual development and desire derived from Freudian theory. Rather than fixing the territory of love into its binary formations of gender, sexuality, and so forth, from their perspective, love is a deterritorialising moment that both affirms and dissolves corporeality. For Deleuze, the love story can firstly be approached from the standpoint of the encounter between singular (subjective) viewpoints or 'worlds'. These would be the worlds of the two lovers, imbricated as they are with layer upon layer of different history and experience. The initial meeting of the lovers, so alluring at first, is also the clash of these two worlds. In fact, the multiplicity of difference between the worlds of the lovers, and their gradual convergence, represents the cinematic potential of the story.

In his book, *Proust and Signs* (2008), Deleuze pursues this argument mainly on a ‘molar’ level of corporeal expression, communication and subjectivity. Consequently, the attraction between the lovers derives initially from the face and the parts of the lover's body, love's signs, as it were, that “express the origin of the unknown world” (9). This translates to the moment of the upward curve of ecstatic romance where every foreign signal is imbued with the allure of an enigmatic glow. Gradually, though, the incommensurability of the two worlds, or better the opportunities for misinterpretations, stands in the way of the romantic attraction, and this would constitute the film’s central problem or dilemma to be worked out through the course of the text. If we take a popular love story of recent decades, like Richard Linklater’s *Before Sunrise* (1995), we can see that this model initially works quite well, as the two lovers from different worlds (played by Julie Delphy and Ethan Hawke – in this case from different continents) meet on a train, are intrigued and attracted to each other, but must work through their incompatible ‘world views’ (crudely put, European versus American), a

task which is never actually achieved before the bitter-sweet ending.[11] Perhaps Linklater's postmodernism could never countenance the classical Hollywood final kiss, but Deleuze's pessimism goes one step further, arguing that love at the molar level is 'doomed' to the disappointment and resentment of finally realising the impossibility of inhabiting the world of the lover. We can note here how the diagram of love in *Upstream Color* departs from this model of 'worlding' due to the erasure of the lovers' worlds, which is to say, a rupture in the deeply formed identities and connections in their previous lives, replaced by a surface existence of repetition and ordering (the Thief's hypnotic power makes his victims consume only iced water and glue endless paper chains together). By comparison, the classical romance fiction is just that: a fiction, 'inauthentic' in its happy end because despite their nominal unity, the two lovers maintain their histories, their secrets, their 'faces'. The 'face' here is intended to mean a disposition to an indurate self-identity and, where it is maintained, the chances of love diminish. In this light the ending of Linklater's *Before Sunrise* retains a certain truth according to Deleuze's reasoning because the lovers' refusal to abandon their 'face' makes for an impossible future together. By contrast, in *Upstream Color* the lovers' faces are already only half-drawn, turning, if anything into masks which protect from unbearable vulnerability. In this particular account of love, Deleuze extrapolates from Proust's famous novel, *In Search of Lost Time,* which although poses final disappointments at the level of the molar, works also on a plane of memory and inscrutable choice that is prior to final forms of love, and hints at Deleuze's later collaboration with Guattari. As Chantelle Gray (2018) argues, love in Deleuze and Guattari is a "passage where we 'no longer have any secrets', having finally lost our faces, having become-imperceptible" (476). Deleuze's critique of love outlined in *Proust and Signs* has the aim of cutting through the popular definitions of romantic love, ultimately attaining a quite negative connotation of a pathway to cynicism.

Theorising love: the molecular

This leads precisely to the second critical approach to love developed by Deleuze and Guattari – one that is much more applicable to *Upstream Color* in its insistence on depersonalisation, multiplicity and experiment. It also brings us back to the question of creativity in the world. In their manual for schizoanalytic thought and resistance, *A Thousand*

Plateaus, Deleuze and Guattari argue that essentially, love arises from the dismantling of fixed identities and the potential for creative connections thereby released. This involves finding the multiplicities that the lover encloses within themselves, which may be of an entirely different nature to their outward 'character', which is the focus of the traditional love story. The lover herself, himself, themselves – 'selves' may in this scenario be a misnomer as it implies a locked-in relation to the 'face'. In effect, in *Upstream Color* the face is often shot against a bright luminous source, the back-lighting lending it a translucent, ethereal and indistinct aspect, as per Chantelle Gray's contention above. Rather than 'selves', then, 'multiplicity' is the better operative term here: a discrete element (a set of gestures, of part objects, or organs) approached and analyzed in itself, not as predicates of a subject. The multiplicity must be depersonalised, freed from bondage to the organism and to the person (Deleuze and Guattari call this the BwO: the Body-without-Organs, liberated for novel, creative interactions). How to find this multiplicity usually involves a kind of violent rupture, a resetting of all that is known through habit and experience. In *Upstream Color* this translates to what we see happening to Kris in the film, and presumably replicated for all of the other victims or 'seers' in the film. In fact, this gestural, epigrammatical style where objects and parts of bodies are strung together to construct the story 'impressionistically' abounds in *Upstream Color*, the realisation of what I called previously a 'digital' image of love which is built up from immanent fragments and 'pixels' to create a new image and a new body demanding faith and mutual investment to hold it together.

A new body, a new subject

How does this new body come about in the first place? How does desubjectification work? In *Upstream Color* it is not a voluntary thing – it is a painful process involving, as mentioned above, an enforced uprooting of the subject from the matrix of life. And yet it provides a necessary step in redrawing connections with others, which can be loving ones, antagonistic ones, and communal ones. In terms of lifestyle, Kris enjoyed a comfortable and typically bourgeois life before her 'molecular love', as it were, drew her together with Jeff, and changed the surface patterns, the new reality of her life which exists mostly in the reconfigured parameters of her world, rather than in any transcendental change in 'character'. In some ways, Kris has been extricated from her bourgeois existence and undergone an enforced encounter with nature at its limits. Subjected to pharmacological and psychological

extremes in the nematodal drug together with the water fast and inanely repetitive tasks imposed upon her by the Thief have reduced her to a *tabula rasa*, removing proprietary sense and cognition, and inducing in her an ultra-sensitivity to the ambient forces that surround us. A.N. Whitehead's (1978) notion of 'prehension', or the process whereby both animate and inanimate beings in semi-conscious states become ensnared in surrounding systems with their own autonomous trajectories, amply describes this raw, sensitised attitude, or 'pure' state of affect:

> An inhibition of familiar sensa is very apt to leave us a prey to vague terrors respecting a circumambient world of causal operations. In the dark there are vague presences, doubtfully feared; in the silence, the irresistible causal efficacy of nature presses itself upon us; in the vagueness of the low hum of insects in an August woodland, the inflow into ourselves of feelings from enveloping nature overwhelms us; in the dim consciousness of half-sleep, the presentations of sense fade away, and we are left with the vague feeling of influences from vague things around us. (Whitehead, 1978: 176)

In *A Thousand Plateaus*, love forms part of a cosmology suggested by Whitehead, but also of an experimental practice that is connected explicitly to the BwO, the 'Body-without-Organs', similarly removed of its proprietorial subjectivity.[12] This is where Deleuze's ontology of 'becoming' over ready-formed bodies (corporeal and non-corporeal) can aid in an analysis of love. We are talking not of the 'depth of love' but of the movement from depth to surface. The figure of C.S. Lewis' Alice and her journey into the rabbit warren, and back out again, is used by Deleuze (1990) to describe this transformation or 'release' of the body into the incorporeal. The succession of nonsensical happenings experienced by Alice relates to the series and…and…and…, rather than 'how' or 'why'. This is what Deleuze means when he writes: "Alice is no longer able to make her way through to the depths. Instead, she releases her incorporeal double. It is by following the border, by skirting the surface, that one passes from bodies to the incorporeal" (1990: 12). In *Upstream Color*, the series which traverses the BwO is seen in the sequence traced by the parasite: worm-human-pig-orchid. At every point, the usual romantic exchanges and deepening affections of the love film are replaced with provisional happenings: thwarted drives and 'meaningless' repetitions – Chris diving down to the depths of a swimming pool to gather rocks; Jeff collecting blue coloured candy. Against a presupposed depth in the words 'I love you', these random but repeated acts signify the growth of love at the edge or border of relationships, like the lateral growth of a crystal. But they are also 'digital' in the sense of 'surface' happenings, connections made from abstract codification, without reference to deep structures of form or favour. Just as digitalisation has

released an unprecedented power of visualisation, the breakdown of love into what Deleuze and Guattari (1988) call a 'thousand tiny sexes' (213), has the potential to explode the restrictive bonds of human relations. As prefaced above, the molecularisation of biology is a given: life's very foundation in species and filia is being translated by genetics and digitalisation into code. Michael Dillon's (2003) approach to biopolitics is one of a number of methodologies that connects the fields of life and the digital by establishing the informational status of both. As Dillon argues, "According to the ontology of code shared by the digital and molecular sciences, 'bodies' comprised of information and informational exchange mechanisms are bodies-in-formation" (531). Furthermore, to the extent that these 'becoming-bodies' express a virtual potential, they represent distinct new challenges for state security that harbours the revolutionary promise of the BwO.

Indeed, for Hannah Stark (2012), who has made a study of the political potential of the loving subject, the transformation of the BwO "signals the moment when governing—and thus transcendent—modes of subjectivity are abandoned in order to maximise implication and explication of the world." (7). Although this experimentation and deterritorialization is part of 'becoming imperceptible', it does not imply a dissipation of the individual or a randomness to love. On the contrary, Deleuze and Guattari insist on the individual's ability, even in this raw, invisible state, to connect to the 'right one', as they write in a famous passage: "I have become capable of loving, not with an abstract, universal love, but a love I shall choose, and that shall choose me, blindly, my double, just as selfless as I. One has been saved by and for love, by abandoning love and self. Now one is no more than an abstract line, like an arrow crossing the void. Absolute deterritorialization" (1988: 199-200). But this is not a retreat from politics. Far from a dissipated and inert condition, Stark sees this contradiction between abstraction and singularity, selflessness and 'choice', as the moment of emergence of an ethics and politics of love.

> A Deleuzian politics is rooted in critique, as what gives rise to imagining and creating the world differently, and is therefore explicitly tied to becoming and valuing difference positively. Positioned as the articulation, or even the creation of difference, love can be seen to facilitate this process-orientated politics. It does so because love and the expression of the world relate to one another through explication and involvement. Love, then, is constitutive and productive of both the subject and the world. For Deleuze, love is emphatically both creation and 'worlding' (9).

Politically, then, Stark sees love as facilitating a process-oriented politics that "gives rise to imagining and creating the world differently" (9). This due to its centrality in constituting

and producing subject and world. The 'becoming imperceptible' of which Stark speaks is envisaged in *Upstream Color* by the fracturing of space and the dematerialisation of the body mentioned above. Narratologically, it is reinforced by diminished dialogue between the two and an uncertain forward momentum where figures are not trying to determine the other's true essence as good or bad partners, but rather enter or interlace into each other's lives 'incorporeally' and without judgment (there is constant cross-cutting between the spaces traversed by the two lovers).

The end, which is a new beginning

Upstream Color converts the model of the romance story from a generic, sentimental mould into a tale of singularity and imperceptibility to the point where a politics becomes visible. In the extremely enigmatic ending of the film we see the Sampler, who we initially regarded as a benign saviour, now recast as a controlling figure having performed ad hoc medical procedures on dozens of people, able to 'access' them through their surrogate piglets. As previously mentioned, through telepathic contact the Sampler wanders through the lives of his 'patients', observing, but unseen, as if in a phase-altered space right next to ours. It is clear that throughout the film Kris senses his presence, just as she senses a connection with Jeff and with her 'paired' pig. When he is finally revealed in this world, when Kris 'atunes' to his spirit enough that she is able to see him, he is doomed. Kris takes revenge on the Sampler, after which she and Jeff contact all of the other victims, sending them a copy of 'Walden', thus sparking the faintest memory of their own ordeal. Eventually, all of the sufferers congregate at the pig farm where they received their blood transfusions. The lives of these people are not exactly transformed but it is as much their molecular, pharmacological or hormonal connection, as much as their past histories, that casts a net of communality amongst the human and non-human assemblage. This ineffable connection, or pre-signifying love, finally enables the collective to join in the ethical project of looking after the community of pigs that suffered with them, and that were to be sacrificed on their behalf.

In terms of the loving couple, the focus on Kris and Jeff as a romantic pair somewhat recedes at the end of the film. There is no final romantic clinch or eternal kiss, which would represent the territorialised, 'inauthentic' denouement mentioned above. Nor is there a final speech or poetic line that can sum up this abnormal tale of passion. In fact Carruth seems singularly uninterested in the kind of verbal sparring that lovers in traditional romance films undertake,

where the intricacies of partners and their worlds, and the gaps into which the other can insert themselves, are largely forged through purposeful dialogue and language: will the initial awkward silence be surpassed by free flowing discourse? Will phatic conversation be converted into a date? Certainly Linklater's *Before Sunrise* saga was famous for its meandering long-takes which delighted audiences with virtuoso cat-and-mouse dialogue set pieces. In *Upstream Color*, on the other hand, the final third of the film is practically mute with only intermittent and erratic dialogue used to foster the sense of alienation from the world. But as the human utterances gradually dissipate, the visual field conversely becomes more richly punctuated with imagery and soundscapes from the living world beyond the human. River banks, orchids, bird-flocks, pig communities – all begin to take on a distinctive presence in the 'democratisation' of the cast list to non-human life-forms. In a section of her study labelled 'The Posthuman as Becoming-animal', Rosi Braidotti (2013) comments on the language of the unified subject of anthropocentric thought:

> Post-anthropocentrism displaces the notion of species hierarchy and of a single, common standard for 'Man' as the measure of all things. In the ontological gap thus opened, other species come galloping in. This is easier done than said in the language and methodological conventions of critical theory. Is language not the anthropological tool *par excellence*? (57)

Even though Braidotti's point is specifically aimed at the language of theory, the argument is easily applicable to human language *per se*. Ever since synchronised sound the 'movies' have become the 'soundies', meaning that a new concentration on the precious content of the human voice was established and codified into film form. In *Upstream Color*, over and above the retrenchment of the loving couple reintegrated into the 'human family', what we see in the final sequences of the film is the collective work of the victims as they join together to build a pig corral-cum-commune based on the welfare and dignity of sentient creatures. To cement this idea, one of the final images in the film is the extraordinary sight of Kris as she holds a piglet up to her face against the scintillating sunlight. In this moment of dyadic unity that we are more used to seeing in relation to the exclusively human child-mother bond, we understand the connective power of the BwO. As for the human couple, Kris and Jeff, we comprehend that through the subtle insight that each has for the other, and through the vulnerabilities they share, they have made an ethical choice – a 'posthuman' one – to join their futures in a life 'outside' of their previous bourgeois entrapments. The 'digital' workings of *Upstream Color*, which transforms the intensive cellular interactions into affective becomings, sensitises us to this different way of thinking and acting. In this light,

love introduces to life something of the infinite creativity and connectivity of art. As Braidotti notes in relating Deleuze and Guattarian thought with the perspective of posthumanism, "[b]y transposing us beyond the confines of bound identities, art becomes necessarily inhuman in the sense of non-human in that it connects to the animal, the vegetable, earthy and planetary forces that surround us" (2013: 107). As I have argued, then, digital molecularisation, aggregation, and recombination imply an intensive zone of creativity that can join in love even the unlikely couple of human and swine, and as humans are themselves interlaced into novel assemblages they are transformed and become hybrids encountering newly dispersed ethical fields in life.

Conclusion

Upstream Color is a film that reconfigures the traditional love story in an extraordinary turn towards microbiology and a journey 'upstream' to explore a realm of primary causes and pure affect. Love at first sight now has a material base in sub-corporeal, molecular and hormonal changes – variations picked up, antennae-like, by the partner who senses, who is primed to sense. This is at the same time a new ground for recognising the affective force of change at the molecular level, a development which has been only reinforced and facilitated by the digital image's capacity and inclination towards the atomic view. It is almost as if the fundamental process of digital reduction and codification into elemental form is co-opted as a model by Carruth in his image of affective relations. The bilateral synergy between affect and the digital that allows for this move upstream confers another possibility – an affirmative, connective, and expansive notion of love over a possessive and conformist one. Rather than peddling the recognisable plotlines and sentimental tropes of the traditional romance, *Upstream Color* acknowledges the power of affect to disrupt as much as to delight in the love story, so that the outcomes are not the predictable ones. Indeed, the setting for this emotive tale is less the expected world of human intimacy and betrayal, than the natural world of the life-cycle of a parasite. Carruth's focus on intensive encounters of a microscopic degree opens up not only a primary zone of cellular interaction as a legitimate micro-drama of its own, but acts also as a ground for disrupting established molar orders with a potential for novel affinities with human and non-human 'partners' – which is nothing short of the emergence of a new ethics and politics of the human.

[1] On the BFI's website, *All about…nitrate film*, the authors write of the magic and romance of nitrate film, suggesting that part of the fascination stems from its physical connection with life and death: "The bones of celluloid, that magical ribbon which carries our cinematic memories and dreams, are literally that: ground up bones. Made into gelatin – in which microscopic, reactive silver salts are suspended – this emulsion is coated on a clear, flexible, cellulose band a little over a millimetre thick… Perhaps it was the danger and beauty of it that made it the object of interest to filmmakers themselves". Available at https://www.bfi.org.uk/features/all-about-nitrate-film. Accessed 23 September 2023

[2] Despite the common usage of online dating apps, social media and other digital mediations of intimate relations, there is a counter movement pointing to the putative social and psychological dangers of digitally technologising the arena of love. For instance, political philosopher Firmin DeBrabander (2019) regards the kind of love implicated in such digital intervention and dissemination is 'amour propre', a kind of self-love mediated through the opinions and judgements of others, and a type which is inherently 'fraudulent'. See 'Is love losing its soul in the digital age?' *The Conversation*, February 2019. Available at https://theconversation.com/is-love-losing-its-soul-in-the-digital-age-110686. Accessed 23 September 2023.

[3] Several contemporary reviews mention this obtuse 'unclassifiability'. See, for instance Michael Atkinson's review in *Sight and Sound* (September 2013), Jonathan Romney's review in *The Independent* (31 August, 2013), or Kenneth Turan's review in the *L.A. Times* (11 April, 2013).

[4] Interview conducted by Sam Adams for *The AV Club* magazine, 5 April, 2013. Available at https://film.avclub.com/shane-carruth-on-self-distributing-upstream-color-and-1798237345 (Accessed 23 September 2023).

[5] The city setting is left ambiguous but the filming location is reported on IMDB to be Dallas, Texas.

[6] The water fast and Thoreau's call for a return to natural living have a strange resonance with the retreat-narrative of H2Odio, reinforcing these themes as zeitgeists of the early post-millennial period.

[7] This process of transformation is a main driver of digitalisation in the business world, which would see firstly an integration of processes resulting from digitalisation, and then a transformative impetus in operations, production and marketing. Gartner Inc., a business consultancy and global research centre, called the current logic of capitalist expansion the 'Continuous Next'. (available at https://www.gartner.com/en/newsroom/press-releases/gartner-says-continuousnext-is-the-formula-for-success-through-d (Accessed 23 September 2023)

[8] *The AV Club* interview (op. cit.)

[9] Laura Mulvey's (1989) seminal work on visual pleasure and narrative cinema identifies 'scopophilia' as a patriarchal cathexis of desire that translates into a codification of narrative technique, which in turn engenders visual pleasure accordingly.

[10] In *Parables of the Virtual*, Massumi (2002) describes affect as 'unqualified' intensity, not ownable or recognisable, whereas "Emotion is qualified intensity, the conventional, consensual point of insertion of intensity into semantically and semiotically formed progressions, into narrativizable action-reaction circuits, into function and meaning. It is intensity owned and recognized." (Massumi, 2002: 28)

[11] The formula is repeated in Linklater's follow-up films *Before Sunset* (2004) and *Before Midnight* (2013), where the couple continue their efforts to reconcile their original 'spring romance' after having extended intervals apart, during which their lives and worlds have taken different courses.

[12] See Deleuze and Guattari express the state of the BwO as a site of raw energetic transfer and experimental praxis: "People ask, So what is this BwO? – But you're already on it, scurrying like a vermin, groping like a blind person, or running like a lunatic: desert traveller and nomad of the steppes. On it we sleep, live our waking lives, fight – fight and are fought – seek our place, experience untold happiness and fabulous defeats; on it we penetrate and are penetrated; on it we love" (1988: 150)

Chapter 4: Affect and Temporality

"Time is invention or it is nothing at all"
Henri Bergson

This chapter arrives at the heart of the problematic of affect and digital cinema: the question of time. Cinema, as a temporal art, has always been taken by questions of time and form. In retrospect, the exhilaration of watching the earliest moving pictures from the Lumières et al was matched by an ever-present 'haunting' of spatio-temporal uncertainty inhabiting the re-play of images. From a Deleuzian point of view the aleatory movement and ambiguous temporality of the early Lumière skits was not in itself evidence of a 'primitive' or failed art. On the contrary it portended an opening to a whole new realm of thought and creativity, the unanchored 'movie' providing a nod towards time's dual facets of emptiness and invention. For the nascent 'cinematic' image, the subsequent instigation of a plot driven narrative, continuity editing, and cause-effect chains partially remedied what Leo Charney (1998) calls the epistemology of 'drift', necessitating the invention of technical solutions for communicating complex temporal shifts, such as the dissolve and the flashback. Concomitantly, the invention of further devices, such as the close up and other 'melodramatic' techniques, enabled the cultivation of a truly 'psychological' character, and the elevation of affect as the mobilising force of a popular mass cinema. From a Bergsonian point of view, the most obvious way in which affect intersects with questions of temporality is via the problem of memory, wherein the past asserts itself on the present to create the conditions for renewal. Bergson offers various mechanisms by which this is achieved, differentiating between habitual memory and attentive recollection, which in turn have been adapted by Deleuze to correspond to a cinematic ontology of time in the 'movement-image' and the 'time-image'. Deleuze's cinema books essentially posit the different levels of relations between subject and world through the actual and virtual as it existed in an indexical cinema – a pre-digital cinema that 'touched' the physical world directly.[1] However, the issue of temporal ontology is a deeply fractious issue in the change from analogue to digital milieus. Indeed, it could be concluded that temporality forms something of a blind spot in digital media theory, which tends towards spatial and 'diagrammatic' analyses of contemporary experience and its expression in digital practices.[2] I intend to reverse this tendency by exploring the complications of the digital image and its novel temporality with

the aim of revealing a new power of invention released by the epochal development of the computer. Such innovation is less a question of computer based imagery per se, but arises from the wider implication of the digital idea itself.

Self-evidently, questions of time and memory have been prominent in film theory and praxis ever since still photography gave rise to the moving image in the late nineteenth century. Edweard Muybridge's famous time and motion studies in animal and human locomotion, sequencing an image of movement out of a series of photographic stills, tapped into a desire to 'represent' movement in a modern world increasingly characterised by dynamism and speed, as well as a need to catalogue and archive the perceptual 'real'.[3] Muybridge's experiments, commensurate with modernity's mechanical reproduction and industrial automatism, was not only an opening to a new artistic and cultural form, but also an incitement to a new imaging of bodily transformations across time. Subsequently, practitioners in moving image have invented various methods for soliciting time, from narrative to montage, from sequence shots to morphing, from dialogue-synching to the mobile camera. Encapsulating this temporal imperative, Godard's famous aphorism that film is "truth 24 frames per second" looks backwards to *chronos*, the cinematographe's mechanical, spatiometric record of reality, and forwards to *aion*, a metaphysical veracity invoking the pure or 'empty' form of time. Nevertheless, despite the structural presence of temporality as a formal property of the moving image, it is noticeable that a *conspicuous* methodology of time, a 'temporal consciousness' so to speak, has ebbed and flowed alongside the variegated epochs in the history of cinema.

This concrete engagement with time-in-itself started precisely at the moment of its birth when audiences at the Café de Paris first witnessed the stuttering surge of the temporal in those first projected scenes from within the Lumières' cinematographe. As Mary-Anne Doane (2002) argues in *The Emergence of Cinematic Time*, the new "representability" of time was necessarily a combination of openness and formal limits, a "curious merger of contingency and structure" that appeared to defy the fleeting nature of time itself (141). If subsequently the hegemony of the popular narrative form reduced this contingency to the dictates of plot, submerging time per se beneath the epiphenomenon of movement and action, we could cite avant-garde film of the 1920s and 30s as modes that complicate, if not overturn, this pragmatic instrumentalism. When, for instance, Soviet filmmakers challenged the narratology of contiguous space-time through the short-circuitry of montage the subsequent shock to thought caused a sensation in world cinema. For their part, the French surrealists

introduced dream time divorced from the anchors of physical law and social mores alike, loosening the perceptual links between images and paving the way for audacious automatisms of time. Further on, we could add post-war Italian Neorealism, and certain aspects of European art cinema and 'New Hollywood' in the 1960s and 1970s, as fleeting periods where a new self-reflexivity of time forges a more complex relationship with the chronometry of mainstream narrative film. Taking time and movement as an object of study, Deleuze's influential works on cinema are, for many, a starting point in theorising forms of temporal involution and affect in twentieth century cinema as firstly the 'movement-image', where time is subordinate to the facts of movement, and secondly the 'time-image', where time becomes both content and form – an image of temporality in and for itself.[4]

Time and the digital

Fast-forwarding to more contemporary times, the cinema of the digital era arguably provides another such moment where a consciousness of time rises up and not only inflects film form but is visible through repeated thematic threads and plotlines across a range of genres. It is not that complications and enigmas of time form anything like a universalising theme in this period. Rather, what we are witnessing is a literal 'zeitgeist' or direction of travel where profound social and technological change is registered as a symptomatology of the tensions and shifts in experiential time. To pick one typology (which itself fractures into various sub-genres), time-travel films, multiverse narratives, and space-time distortion dramas in the second decade of the post-millennial period are testament to the way in which complex problems of temporality have been propelled into a mainstream cultural arena. Today this is sometimes labelled 'maximalist' film, where a maelstrom of high-rhetoric visuals and high-concept plots create a cinematic experience of delirious-affect, as summed up in the aptly titled film, *Everything Everywhere All at Once* (Daniel Kwan and Daniel Scheinert, a.k.a. The Daniels, 2022).[5] Anterior to this current phase however, a germinal moment for such ambitious jumps into space-time multiplicity occurred in the period which I am calling the 'digital interregnum', from roughly 2000-2012. In films such as *Memento* (Christopher Nolan, 2000), *Irreversible* (Gasper Noé, 2002), *21 Grams* (Benicio Del Toro, 2003), *Eternal Sunshine of the Spotless Mind* (Michael Gondry, 2004), *Deja Vu* (Tony Scott, 2005), *Source Code* (Duncan Jones, 2011), the cinema of the early millennium (and indeed of the *fin de siècle* before it) displays a conscientious interrogation of contemporary time in which the

dominant sense is contingency and mutability. Many of these examples go further than simple manipulation of narrative timelines, facilitating nothing less than an exploration into the limits of Newtonian and Einsteinian framings of space and time, and the idea of physical existence beyond them. These questions, philosophical in nature, find resonance in the most extreme cases at the intersection of humanistic and cosmological planes, echoing Bergson's comment that "wherever anything lives, there is, open somewhere, a register in which time is being inscribed."[6] The 'living-image' takes a privileged place in the work of Bergson: an entity entirely open to the pure ceaseless becoming of the universe, and connected with it at the level of time and *duration*, the virtual domain which is the co-involvement of past, present and future.

How do we explain this unusual pivot in the culture industry from the dominance of *chronos* to, at the very least, a renewed interest in *aion*? Writing of the explosion of contemporary time-travel stories in film and media, Matthew Jones and Joan Ormrod, observe that "we are obsessed with the idea of time travel and the possibilities it offers us to venture into the past, to meet iconic figures and amend mistakes, or to travel to the future to discover our place in history" (5). The 'time-hopping' plotline has made sporadic appearances before, notably in 1980s action films such as James Cameron's *Terminator* films and the *Back to the Future* franchise. But this modern captivation with time is not limited to an externalised view of time travel. It also extends to a dimension of temporal refractions that can be better described as 'internal' – a purely relational structure of time necessary for subjectivity, accessed through memory and implicated in the deeply affected states of Bergson's so called 'living images'.[7] A whole new area of 'memory studies' has recently opened up to explore this interest, built around the key contribution of time-based media research which investigates how, in the words of Emily Keightley (2012), moving image archives "actively construct shared pasts and articulate autobiographical narrative selves" (14). I will return to the complication of memory later on, but for now it is sufficient to note how this memorialising tendency, together with the cultural appropriation of time, overlaps with the digital revolution and developments in computer imaging. This correspondence is not, I contend, merely coincidental – rather, it can be said to reflect and contribute to the interplay between the infrastructures of an information society, the cultural expressions of temporality, and the phenomenological experiences of time. Therefore, in keeping with my overall project, the aim of this chapter is to probe the difference of the digital in relation to cinematic time. What new thinking can address the set of problems and issues related to temporality, memory and

affect that emerge from digitalisation *per se*, and the deployment of digital aesthetics in the cinematic image? For instance, how can the baroque expressions of time and duration in the time-travel film be thought through the specifics of the digital machine? What new affection images emerge in a digital contemporary when storytelling conventions are challenged through disjunctive editing and database plotting? Exactly how can the ultra-determinate periodisation and datarisation of the computer possibly give rise to the fractal complications of time that pervade contemporary cinema? And finally, can a quantitatively constituted image ever open out to the qualitative territories of duration, memory and affect, which is to say the realm of pure time and the virtual? I argue below that the innovation in digital cinema does not rest solely, or even principally, in computer driven special effects, expressive of powerful new capabilities in actualising images. It is also that, at a different level, characteristics inherent to digital machines such as repetitions, loops, glitches, and conditional execution routines ('if-then') have permeated at a deep level into cultural discourse and story architecture, inciting 'crystalline narratives' where metaphysical problems and temporal paradoxes infuse the image as such. Here, potentially, is a new amalgam for cinema where the traditional scope of montage, which is to synthesise the 'whole of cinema', is widened to encompass the 'whole of life' if not the 'whole of the universe'. The broken line or vector of cinema no longer stops at the boundaries of the text, but rather enters a 'spirit' of human-machine.

The challenges posed to theory by this fascination with the complexities of time in the digital period are considerable. To some degree, issues of temporality undoubtedly inflect the methodological approaches of materialism and phenomenology outlined previously in my introduction. But it is with Deleuzian thought, starting from Bergson's theory of time and duration (*duree*), that cinematic time occupies the central position from where a perspective on digital affect can be formulated, not least because both affect and cinema are, in the Deleuzian lexicon, deemed to demote individuated subjectivities and link directly to virtual entities of pure time. In broad brush terms, materialism accommodates a theory of affect that favours epistemological concerns, effectively reducing temporality to a kind of teleology of ideological and mobilising possibilities for the moving image. More concerned with the constitution of the spectator as subject, materialism, especially that which rose to prominence in the 1970s and 1980s, investigated ontological questions in terms of textual mechanisms and effects that penetrate consciousness and 'position' the viewer. This effectively brackets the problem of time and affect, imposing a model of limits and fixes as opposed to a critique

of transformation. On the other hand, the more recent theorisations of embodied phenomenology weave questions of temporality more directly into theories of the individual's sensual and affective responses to the screen, albeit in a way that privileges 'subjectivating' moments rather than an ontology of time per se. Thus, phenomenological approaches forever defer to a human consciousness and the epiphenomena of events, excluding an ontogenetic view that can open up an ethical terrain beyond the human. The project of making human experience and perception the ground for philosophy is therefore a fundamentally wrong move, and is being increasingly challenged in the realm of animal rights, cyborg and post-human research, and the whole realm of new materialist theory. Neither tradition – phenomenology or classical materialism – is best disposed to answer questions on affect and temporality based upon pre-subjective and intensive bodily change, and furthermore neither provide effective critical tools for analysing 'digital affect' in cinema.

I have previously defined digital affects as those exhibiting singularities structured through a series of *topoi* coupled to the modus operandi of digitalisation. It is now time to ask the question as to what forms of temporality can be theorised in relation to digital affect? Affect in general is ultimately a measure – in the Spinozian sense – of the *change* in bodily states and is therefore significantly related to cinematic temporality along two related axes. In essence, firstly at the physically determined level, affect is measured in its continuous differential development across a linear section, the signs of which are captured diachronically across the typical undulations of narrative event and character action/reaction. Notwithstanding Deleuze's designation of the affection-image as occupying the gap between perception and reaction, the physical 'effect' of affect can be assigned to certain sub-types of movement-image, most typically the 'action-image'.[8] Secondly, and at a different level, time manifests a non-corporeal, 'circular' connection to memory, associated with the virtual and with consciousness – designating a 'mental privileging' of affect. Set out in an aesthetics of cinema, the former is a chrono-metric construction, finding expression in certain forms of movement-image cinema specified by Deleuze, for instance Soviet montage; whereas the latter is a labyrinthine and 'fractal' assemblage, and especially prevalent in the 'time-image' of postwar European cinema. The proclivities of the movement-image and time-image have been well discussed in the case of twentieth century cinema, not least by Deleuze himself in his two volumes. It is important to now enquire how these two aspects of temporality – rectilinear and circular – are articulated in digital terms, and in what ways they find

expression in post-celluloid cinema. Taking the recent popularity of the time-traveller film, David Deamer describes how most of these narratives engage time-travel through the general principle of "an encounter with temporal paradox" (2015: 36). Thus, the protagonist time-traveller within these movies normally acts as an agent who attempts some kind of reconfiguration of linear timelines creating both a temporal 'baroque' and an ontological dilemma. Not infrequently, this takes the form of going back in time to eliminate or protect an individual who will be important in a version of the future (as is the case in James Cameron's 1982 film *The Terminator*, or more recently in digital era films such as *Donnie Darko* [Richard Kelly, 2001], *Source Code* [Duncan Jones, 2011], *Looper* [Rian Johnson, 2012], or *Predestination* [Michael and Peter Spierig, 2014]). However, notwithstanding the potential crisis-in-history caused by an alteration of past events, this model does not actually disrupt the homologous chronology of time, but rather enacts a 'ludic' rearrangement of the chains of cause-effect.

From one point of view, this 'externalised', diachronic view of time is just a dramatisation of what is already a familiar feature of the temporal diagrams in our "age of planetary computerisation" as Guattari calls it, replete with individualised timelines, gant charts, and scheduling assistants. In the digital diary, for instance, events, actions and time-blocks are abstracted segments which can be simply shuffled, duplicated, dragged and rearranged into new facilitatory relationships. The computerised timeline is defined by an arch instrumentalism, in effect 'spatialising' time as an independent variable in the abstraction and standardisation of our 'datarised' present. This is not the same as the timespace compression theorised by David Harvey (1990) in the context of postmodern culture, where socio-cultural time horizons are fused into 'hybridised' texts. Rather it is a pan-world system where 'algorithmic thinking' – which is to say an abstracted managerial method facilitated by and through software applications – has led to a systematic and all-pervasive technical administration deployed for the management of life, labour and social relations at both an individual and mass societal level. The rise of the algorithm to administer a generalised bureaucratic agency has been termed "algocracy" by A. Aneesh – an interface between computer and human adopting the clock speeds of the microprocessor.[9] It is important to note, however, that it is not only numerical data which is exchanged in the algocracy. In these newly formed informational networks the image itself assumes a privileged position as an operational vector critical for the smooth functioning of global finance, production and communication markets. Memes, logos, emojis, clips, influencer spots, trailers, 3-D

animation and infographics, whether still or moving, lens based or computer generated, the networked image is inseparable from commercial and social activity today. For Ingrid Hoelzl and Remi Marie (2015), the 'algorithmized' image enters a generalised digital environment, manifesting a flat ontology within the computer database that is continuously updated and refreshed, stored and circulated through wired and wireless networks. The image "is no longer a stable representation of the world, but a programmable view of a database that is updated in real-time."[10] As such, Hoelzl and Marie argue that it has forsaken its role in political and social relations in favour of facilitating synchronic data-to-data relationships. Within this unprecedented situation, timespace compression gives way to a "horizontal now", the concept of an endlessly looped present where closed circuits and the speed of data processing and transfer are the new temporal aesthetics.

The critique of the algorithmic image is replicated in film and media studies in ideas such as the 'uncanny valley'.[11] But despite the recognition of an abstracted temporal complexity in a computerised culture, there exists a latent circumspection of the digital in the glut of time-travel films, a concomitant belief in a 'digital deficiency' in which digital technics are considerably opposed to a more enigmatic, durational quality that reaches backwards and forwards into the voids of time. This could be called a 'spirit' of time: the virtual dimension that encapsulates affect, a dimension already well known to early filmgoers such as Maxim Gorky when he recounted the strange aleatory and dreamlike consciousness invoked in the first stuttering iterations of cinema that he called the 'Kingdom of Shadows'.[12] By contrast, Aden Evans (2010) posits the digital lack on the "maximally determinate" form of binary data, a reductive ontology opposed to the truly "problematic" field of the material world, which stems from the virtual. We will have cause to scrutinise this view more fully below, but for now it suffices to recognise that Evans voices a commonly held view when he surmises that "whereas the virtual is creative and fecund, the digital is sterile and hermetic" (147).

But does the presumed abstraction and sterility of the digital really preclude any expression of duration? Turning attention to contemporary cinema, I propose to theorise the very return or 'feedback' of the virtual in digital cinema and the forms of affect produced in its extraordinary imaginarium. The critical question is whether the very characteristics of the digital that supposedly negate entry to the virtual domain – repetition, overdetermination, disjunctive step-change – evoke, at another level, a typology of time that emphasises elements, relations, intensities and affects. In other words a digital time immanent to the

material world, generating forms, events and subjectivities which are not second-order mediations or surface effects but that – to double-quote Deleuze and *Hamlet* – put "time out of joint". Digital temporalities in the moving image have been researched most commonly in relation to fine-art or experimental film practice rather than commercially released cinema.[13] In common with previous chapters, I have selected as case studies two films from the early millennial period (the previously defined 'interregnum') when an idea of the digital had infiltrated into, without necessarily subsuming, filmmaking as such. Consequently, the analysis will focus not on those film texts which often assume the mantle of digital cinema by virtue of special effects, but rather on examples where digital modalities are more subtly imbricated as signs pushing new thought on temporality to the surface. Thus, the selections are based on Darren Aronofsky's *The Fountain* (2006), and Terence Malick's *The Tree of Life* (2010), both works from established filmmakers showing an extraordinary boldness in the problem of time, memory and consciousness. At this point it is worth reiterating that my designation of digital affect does not assume that the films in question are necessarily shot in the digital format (principal photography in both of these case studies was conducted mainly on celluloid film). Rather, the task is to survey this transitional period, detecting, in aesthetics and affects, a mark of digitality in temporal 'disposition'. Hence, in both mentioned films, we find in the confrontation between memory, affect, repetition and difference, the most astonishing and provocative visions of what I call 'digital temporality'. Discussing these films from the digital standpoint allows us not only to ascertain new parameters of an experimental phase in filmmaking, such as tremendous shifts in spatial scale – from microscopic to the cosmological – but also to rethink time itself as more than an abstraction or plot contrivance in digital cinema. In both *The Fountain* and *The Tree of Life*, for instance, CGI and post production is not used to manipulate the image 'temporally', in speeding up action, or slowing it down, or glitching, or morphing, or any manner of digital micromanipulations mobilised to awe the spectator or create new percepts. Rather, 'recombinant' editing (or non-linear editing, as the first iterations of computer montage were called) is used to invoke an infolding and feedback structure that explicates the problem of time rather than 'solving' or correcting a legacy.

These case-studies, then, are film texts that engage the second aspect of the time-travel film, tapping in precisely to this virtual, corporeal, and 'circular' connection to memory – associated with Bergsonian *duration*. In fact, both *The Fountain* and *The Tree of Life* are fascinating films that audaciously take 'the cosmos' – philosophically rather than

scientifically – as their true subject matter. Within this general thematic the films exist at different ends of the film industry spectrum, the former being the more commercially orientated, the latter more inspired by an American independent or 'art'-film tradition. Before examining in detail how these films express a theory of digital time which, in turn, is key to their power of affect, it is worth recapitulating how temporality can be understood retrospectively in the cinematic image *per se*. Looking back, it is easy to see how the first, jittery evocations of early cinema invoked a temporal uncanny. Despite Deleuze's own sceptical attitude to the durational capacity of the early actualités and scenics, this aspect – a 'spirit of time' – was arguably locked into the technology of moving image from the start, encapsulated in the reanimation of stillness (or the resurrection of dead matter) mentioned above.[14] The strange aleatory consciousness invoked in Gorky's 'Kingdom of Shadows' is just one invocation of the simulacral power of the new medium. Subsequently, various periods, phases and geographies of cinema invoke their own complex of temporal imprints from historiographic record to innervating event to nostalgic memorialisation. But what is beyond doubt is that the onset of the digital turn in the approach to the new millennium provoked a massive re-evaluation of the temporal ontology of the film medium that is not entirely exhausted even today.

Deleuze's analysis of cinematic temporality was conceived prior to the onset of digital production, and yet his most valuable lesson, derived from Bergson – that time is nothing but the invention of the new – is fundamental to any investigation into digital cinema. This philosophical insight, even as applied to the technology of the digital, is counter to the utilitarian deployment of time by science, used as an external measure of change in a system. It is therefore worth, at this point, revisiting the thesis on time that Deleuze develops, in order to establish the precise connection between affect, duration and memory. Following on from this foundation, I will outline the most potent objections to considering digital cinema, or digital objects in general, as being endowed with a durational capacity. Thereafter, moving on to examine my digital film examples to argue for an immanence of the digital order, producing an image not constrained to represent the world, but instead alluding to a technics that opens up to the productive assets of time, thought, and the virtual. Despite the strictly pre-digital formulation of Deleuze's 'cineosis,'[15] aspects of his cine-ontology are still vital for my exploration of digital cinema, not least because the categories of movement-image and time-image are governed by philosophical, technological, formal and political questions that are still absolutely relevant in the contemporary. If anything, one particular aspect of

Deleuze's comprehensive account of temporality – that of the ambiguity between the actual and the virtual in the *crystal image* – is arguably more relevant than ever in the hybrid CGI forms of today.

Deleuze's theorisation itself stems from Henri Bergson's metaphysics of time laid out in *Matter and Memory* (1896), from which Deleuze undertakes a 'materialist' revision entailing a number of basic theses mapped onto the cinematic case. The account relies on Bergson's connection between subjectivity, memory, and the body through which 'habit memory' (an instant access to the past) is distinguished from 'attentive recollection' (a search through time triggered in the present), to which Deleuze supplements with a notion of 'pure time' or the virtual (the empty or pure state of time). The first two forms are depicted in Bergson's famous upside-down cone diagram of time splitting between the present and a past that is preserved, where the volumetric shape represents the dilated vastness of time past in its undifferentiated form and the apex denotes the most contracted state of time as it approaches and intersects with the flat plane of the present, which is also the point, between perception and action, where the subject resides. Habit memory, in this formulation, instigates an 'automatic' reaction to a recognized situation insofar as the subject defaults in a pre-determined way to a familiar task presently undertaken. This type of memory process is completely associated with everyday functioning within the sensory-motor-schema, and instantly connects the apex with a singular point in the cone, involving a minimal delay between stimulus and response, therefore ensuring the subject's continuous existence – and functioning – in the present.

Attentive recollection, on the other hand, is where an interval emerges between perception and action into which time and memory surge. In this temporal form, there is no snap-to-grid of recognition or knee-jerk reaction. Instead the subject searches their past (specific points in the cone) for an experience that resembles their current situation, and discerns or percolates a response from this memory. An interesting, if oversimplified version of this process drawn from the canon of sci-fi cinema would be from the aforementioned *Terminator* (1984) where the eponymous robot's AI 'brain' employs a response algorithm to the constant stream of real-world stimuli, visualising the various options pulled up from a memory bank and selecting the most appropriate reply. Cameron clearly envisages the silicon memory as a relatively simple database involving a short interval between input and output commensurate with the process of search and selection from 'random access memory' (the 'right' memory for the corresponding situation).

In these first two typologies of time derived from Bergson, it is the body's attitude, situation, or relation to an outside that provokes the form of the memory-image. But there is a third category of time in the Deleuzian schema where the body's physical attitude is not the sole determinant of memory. This is where time itself can become a catalyst for recollection, which is a more complex and nuanced encounter with the past better considered 'involuntary memory'. Here, it is not a linear, causal connection of a present point to a past one, but rather a condition where time 'pushes' forward to meet a current unknown positionality, disrupting the continuous line of past-present-future to open up new permutations, creating a new memory capable of activating a new present, a 'memory of the future', as Deleuze calls it. This memory of the future is not simply a 'flashback' that reveals how we got to now. It is instead drawn from *aion*, or the spirit of time in the genesis of veritable invention.

Within the cinematic regime Deleuze detects a sign of this mode of memory in a particular type of image that does not perform to narrative exigencies: the so-called *crystal image*, which will be important in the discussion of digital time and affect. In the crystal image, we have the reiteration of the Deleuzian ontology of the actual-virtual split. The crystal is "the most restricted circuit of the actual image and *its* virtual image" (Deleuze 1989: 69, emphasis in original). There is an oscillation between virtual and actual, an indiscernibility between the two, expressed visually in the proliferation of certain objects: mirrors, uncanny doubles, ambiguous figures, reflective characters devoid of action, and hollowed out, unrecognisable spaces.

In film, the crystal image denotes the unmotivated image, the so-called 'purely optical and sound situation'. Deleuze cites Ozu as the exemplar in postwar cinema, introducing into his narratives image-objects that are not linked to action or character, or aimed at galvanising a 'correct' response to a milieu or situation. Instead, the inserted image enters a reverberation circuit – a glitch in digital parlance – that falls outside of the sensorimotor regime, igniting perhaps a flashback, or maybe an errant thought or new sense. In any case a vista, however brief, of a new potential difference or motive force in time. To be clear, the crystal image is a different type of durational image to the long-take or sequence shot preferred by Bazin and the Neorealists, but it no less taps into a virtual order, a 'pure time' with its own history and memory. In the digital case the possibility of the crystal image, or any form of durational ontology, is more controversial due to the avowedly deterministic and sterile constitution of the image itself, explicated more fully below. But for now we should note at least that the parallels are striking between the Deleuzian view of on the one hand paratactic montage and

other forms of interruption and fragmentation of continuous flow as a kind of 'back door' to duration and pure time, and on the other the very abstraction of the digital process that throws into crisis the veracity and identity of the actualised image.[16] Such parallels will need to be reckoned with when discussing aspects and potentials of the digital image in respect of the crystal that is absent in many critical accounts of digital cinema.

As mentioned in the methodological chapter, David N. Rodowick is one of the most prominent of the early sceptical voices critiquing the apparently impoverished temporal state of the digital order. Rodowick's thesis, laid out in *The Virtual Life of Film* (2007), is that an ethics of time based on duration and indexicality is what most powerfully affects us in film. Moreover, this temporal 'depth' is precisely that which is missing from the digital image. The interruption between image and world caused by digital sampling and conversion means that in a world of digital displays, where the visual is a construct from binary data, "we are uncertain that what appears before us is *an* 'image,' and in its powers of mutability and velocity of transmission, we are equally uncertain that this perception has a singular or stable existence either in the present or in relation to the past" (94). In Rodowick's view, the material and durational legitimacy of the digital film is thus put into question by the digital order itself, based on the algorithmic processing of data, rather than any connection with the physical world or with thought. Taking the photographic medium as a template that formally guaranteed a temporal causality and hence durational legitimacy, the digital image, by contrast, takes and emphasizes only the aspect of the photograph that it can easily duplicate (i.e. spatial coordinates) and supplants the "primacy of the temporal sense" that defines the photograph, with its own temporality, which is to say, "the time of calculation or computer cycles" (2007: 104). As an example of the temporal difference of the digital, Rodowick takes Alexander Sukorov's 'single take' digital film, *Russian Ark* (2002), where an unseen narrator and his interlocutor take the spectator on a dizzying 200 year journey through the Hermitage museum in St. Petersburg/Leningrad, conjuring up an array of historical characters and events along the way. The enigma of pure time is given by the narrator, who asks "How did I come to be here?" But this is also the paradox of the digital, in which you are both everywhere, in the sense of the general equivalence of digital data, and nowhere, in the sense of having no material or hermeneutic existence. No doubt Rodowick recognises and appreciates *Russian Ark*'s aesthetic achievement, inspired by the complex of time, history and subjectivity, as well as the 'utopia' of recording continuous duration (164). But ultimately, Sukorov is accused of assuming an easy equivalence between photography and digital video, whilst not

recognising the differences of perceptual realism, especially in time. For Rodowick, the issue of time is related to two incommensurable worlds and event-systems. If, for Deleuze, the event is an actualisation of an intensive process, the "digital event" for Rodowick "corresponds less to the [image of] duration and movements of the world than to the control and variation of discrete numerical elements internal to the computer's memory and logical processes" (166). Given this, Rodowick rejects the designation of Sukorov's experiment as a one-take, or single shot film allowing for duration, calling it instead "a montage work" composed of more than 30,000 independent digital events (corresponding to the number of digital samples).

We could easily refer this rejection of the digital camera on the grounds of instrumentalising time to Bergson's own denunciation of the cinematographe as falsifying movement. Furthermore, given his association between affect and time, it is clear that Rodowick, at the very least, is doubtful about the digital's ability to affect – to translate the temporally-given knots and flows of the virtual into a bodily register. Aden Evans (2010) puts the ontological division between the virtual and the digital even more starkly. Even though both ontologies are abstract, the powers of abstraction of the two orders are entirely different. Like the virtual, the digital seems dynamic and productive – a source of the actual. However, they represent two poles of 'action'. "The virtual denies all form, all representation; it is an action, a production but not a product. For its part, the digital is entirely form, maximally determinate. Every 0 is precisely 0 and every 1 is precisely 1, and the digital has nothing but these 0s and 1s, no ambiguity, no indeterminacy" (149). The distinction is manifest in the concept of the genesis of form and substance which in the case of the virtual results from the differential interactions of singular points in a given, intensive field, and in the case of the digital results from the specific output selected from a set number of possible solutions according to an algorithm. The former is a radically open potential, inherently aleatory and experimental; the latter is a radically determined process, inherently possible and necessary. The positions of Rodowick and Evans sound undeniably conclusive, were it not for the fact that on a practical level, accident and failure are a property of the digital, as we have already encountered in the theory of the glitch. Equally affect is apparently alive and well – empirically present in digital encounters of all sorts, from the much vaunted creation of 'immersive experiences' in the art gallery, video games, and cinema itself, to digital communications, online interactivity, and AI decision making which is increasingly visible in the public sphere. In any case, Evans concedes the point that any account of the sterility of the digital must be missing something,

given that its unprecedented reach “rivals writing, speech and money” (157). The hermetically sealed world of digital equivalence interfaces with the human world at many points, and if there is a virtual remnant in the digital it is at these points or folds that Evans sees a potential for creative force in the friction of encounter. Indeed, he levies what amounts to an ethical duty to guard against the ascendance of abstraction and a lapse into homogeneity in aesthetics and politics: “to make the digital creative, one must [always] seek out and ramify its folds” (166). But even in admitting this ability to affect, Evans defers this capacity to human powers of invention. Moreover, in terms of temporality, the deferral of computer time, measured in gigahertz, to chronological time is an integral assumption that complacently regards human perceptions and capabilities as impervious to the abstractions and qualities of the digital.

A more positive inflection on the problem of ontology is offered by Luciana Parisi and Stamatia Portanova (2012) who propose a new category of ‘soft thought’ in cultural analysis, which takes as a given the already mathematical basis of reality. Against the prevailing theories that assert an ontological difference between the worlds of analog and digital, material and algorithmic, they maintain that reality itself can be conceived of highly iterative and repetitive patterns – we can think of the repeated patterns in petals, vertebrae, geology, or other innumerable formations in nature; alternatively we can think of equally abundant instances of cultural and societal forms that are repeated and recurring across time. If these examples of reality contain recognisably mathematical functions and configurations, then according to Parisi and Portanova software can be viewed – like other tools – as an abstract machine, an intervention or cut in the infinitely occurring mathematical operations of reality. Moreover, this cut is always innovative and aesthetic before being 'functional'. Computational theory – based on the work of Alan Turing – states that, far from determinable and closed states of truth, an indeterminability, and therefore the potential for novelty forms part of the limit of computation. It is the very transcription of digital data into vectorial operators or models that are autonomous from their 'origins' in material reality that is the basis of soft thought. These models are not the usually considered utilitarian instruments that only synthesize and simplify, but rather metamodels that increase complexity, "transferring the relational potential of the [object] to different fields" (Parisi and Portanova 2012: 15). In their thesis on soft thought Parisi and Portanova challenge the hierarchical boundary usually maintained between analog and digital dimensions. They maintain that finite algorithmic rules in the computer machine are born from a potentially infinite sequence of logical

symbols and operators. In which case "algorithms are not only actions or pragmatic functions but also, as Deleuze may call them, suspensions of action or forms of contemplation of this infinity" (18). Under such conditions, thought or "contemplation" is not that of a human subject, but is precisely the form of an interruption of the continuous chain between past and future, an interval in the sequence of operations which releases a potential for new connection at their limits. Again, this should remind us of Deleuze's view of montage in the strict sense, which entails a certain 'violence' in the cutting or the clash of images translating movement within the frame to a radical 'outside'. Parisi and Portanova do not attach a particular import to the parameters of time for soft thought, although it can be taken as read that their theoretical account involves a paradoxical duality between the nano-speeds of computation and the designation of the virtual in the infinite and in duration.

But what are the practical manifestations of computation that should elicit such an opening to duration and pure time? Put another way, where in our culture can we see the ontology of the digital manifest a calling of the virtual? The aforementioned glut of digitally produced blockbuster movies and TV series on the theme of time travel and 'multiverse' worlds is one answer. The commodification of virtual worlds in popular media represent a more or less crude and commercialised assertion of non-linearity and the infinite within the confines of conventional narrative paradigms. One of the more interesting examples of this now globalised tendency comes in the Pixar animation *Wall-E* (Andrew Stanton, 2008) where computation must be assigned to a (robot) body not in order to acquire a cumulative 'consciousness' (in the form of 'machine learning'), but in order to express a pre-existing one, for consciousness or spirit is already inherent in the 'soft thought' of the machine brain. Epitomising the emergence of the Anthropocene as a major thematic of our time, *Wall-E* envisages an earth devastated by overconsumption and waste, its only inhabitant the last of a series of robots charged with cleaning up the mountains of detritus abandoned on the planet by the long-absconded human race. Initially we see the eponymous robot, 'Wall-E', dutifully performing 'his' daily tasks which we assume have been executed for eons with tedious repetition. But within the confines of robotic programming, Wall-E is constantly finding ways to go beyond the 'directives' given by software to effectively reach out towards an anthropomorphised life and affect. Traditional in the cultural figure of the robot, the mundane and repetitive actions are nothing but actualisations of the loops and reiterations inscribed in the algorithm, as was already indicated in the case of *The Terminator*, above. But can we not see the machine's digital modelling of the material world as just such an example of 'soft

thought', that is, as an intervention, a cut showing abilities to ponder and experience what are usually considered questions of the spirit, precisely relating digital automation with cosmological contemplation? To exemplify, Wall-E plays a video clip from the musical *Hello Dolly* (Gene Kelly, 1969) over and over again on a salvaged VHS player, the sequence of the romantic couple singing and dancing inspiring curiosity and 'desire' in the robot. The content of the clip, unremarkable *per se*, is not the significant aspect. Rather it is the recurrence itself that seemingly triggers longing and romantic desire in the metallic hulk. In other words it is not that the android 'gets' the affective charge in the screened moment, but rather that it is in the act of repetition that the sensible states of joy and wonder are discovered. By way of contrast, the humans in the film – marooned for generations in outer space on a huge space cruiser – exist in a state of infantile dependency, their every need catered to by a servant army of robots and AIs. Just as their bodies have become obese due to uber-consumerism and lack of mobility, so their minds are dulled by unthinking compliance given through a diet of entertainment and manufactured pastimes. The robots, on the other hand, programmed for incessant servitude, harbour an unexpected possibility in their repeat routines, which goes so far as instigating the idea of revolution in their human counterparts.

Within the animation tradition of Disney, which is the parent company of Pixar, the efficacy of *Wall-E* relies on the age-old conceit of anthropomorphisation of inanimate objects or animal beings thus stamping the mark of human psychology and behaviourism onto natural and artificial worlds alike. Notwithstanding this orthodoxy, the film reveals more than the mere transference of homo sapien identity to robot worlds. Within the undoubted urgency of the Anthropocene motif, an equally pertinent question posed by *Wall-E* is to what extent can and should robots and AIs harbour 'creativity', or to put it in line with Parisi and Portanova's agenda, how can programming encompass 'soft thought'? Deleuze has already provided a model of how perception in the case of a pure optical and sound image constantly returns to the object in a kind of repetitive circuit which, in first appearing superficial, actually brings out its "essential singularity." The repeat sound and image of the clip from *Hello Dolly* performs such an 'event horizon' for the artificial mind of Wall-E as the robot fixates on one detail from the clip – the hand-holding moment from the song and dance number – highlighting what for Deleuze are "the layers of one and the same physical reality, and the levels of one and same mental reality, memory or spirit" (1989, 65). *Wall-E* suggests how the digital easily slides into the cosmological and the spiritual, supplanting the clock-speeds of microprocessors with intervals of time more akin to meditation, epiphany and the eternal.

If the cut into both mathematical iteration and *duree* produced by digital software is inherently not only productive but creative, as suggested by Parisi and Portanova, then *Wall-E* provides an insight into a defining mechanism of innovation given by digital design: repetition and reiteration. The bog-standard cut and paste, or drag and drop functions of digital systems – at first glance simple and purely technical operations – should not be conceived as dumb, derivative, or banal in themselves. A basic feature that inheres in numerical systems based on multiplication and division, the duplication and recycling of wholes or parts of digital objects is one of the most effective inventions in building out complexity and movement from static origins. Pre-digital art history of course contains its own famous cases of repetition, not least in the work of Warhol and Mondrian but digital tools increase *ad infinitum* the practical instances and possibilities of repetition in art and expression. One need only think of photo editing software or meme creation in everyday visual culture to recognise the frequency and efficacy in creative settings of the unassuming cut and paste function. It is clear that the whole issue of repetition in the case of digital systems requires a theoretical treatment in order to address assumptions around the dyad of original/copy not just in spatial determinants, but in temporal terms as well. In *Difference and Repetition* (1994) Deleuze relates repetition to the power of difference, the repeat device being the very mechanism which pushes through differentiation and with it new instances of expression and affect. Life is full of dynamic acts of repetition that multiplies variation in the series, acts that invariably involve memory and retrievals from the past. But in affirming the power of the new Deleuze insists that memory, at least in its habitual, non-attentive mode, has a confirmatory effect which needs to be transcended. As he remarks in the book's introduction, "[i]t is in repetition and by repetition that Forgetting becomes a positive power..." (7). For reiteration to lead to change Deleuze suggests that we must let go of the conservatory hold of the past. By contrast, Joel McKim's (2011) concept of "Creative Recall" in memory systems triangulates the terms of memory, repetition and invention and in so doing attempts to recuperate memory for singularity and unpredictability. Starting from the underexplored connection between Deleuze on one hand and Sören Kierkegaard on the other McKim shows how there is in fact no repeated iterability of sameness – rather iterability always implies change. Repetition, in 'Platonic' thought, negates recollection which is the means of access to the Ideal (eternal) forms. Against this, Kierkegaard argues that repetition is intrinsically a forward movement that posits unpredictability over the eternal – an idea that contests the recent emergence of trauma based memory studies which, in attempting to discover the hidden truth of a past event, tend to fix and to "fetishize the inapproachable

voids of history" (McKim 2011: 62). As McKim states, every actualization of pure time in the 'repetition' of attentive recollection refers back to a virtual excess creating divergent lines of possibility, an intensive moment that "carries with it a reminder that it could be otherwise" (68).

This conception of fecund repetition in thought requires something of a leap from representational and identity based approaches towards the past, the logic of 'commonsense' and 'good sense' that assumes the unfolding of time from past to present to future. As Deleuze and Guattari argue in relation to memory and change, "becoming is an anti-memory" (1988, 294) and each plunge into the void of pure time is a search with an unpredictable outcome, inevitably implicated within a process of difference and transformation (McKim, 68). Understanding the processes of mathematical repetitions and iterations of the computer reveals not only their centrality in contemporary production and creativity but elevates the notion of the 'digital double' from a marginal trope to something of a paradigmatic figure across culture and commerce.[17] In contemporary media, the digital double finds articulation in, for instance, Denis Villeneuve's *Enemy* (2013), Jordan Peele's *Us* (2019), and a recent resurgence of zombie films and streaming series that envisage an informatic present where individuals, families and whole populations are nominally 'copied'. What interests in this body-double textuality is that the 'copies' do not conform to Platonic representations of an ideal, which would submit into the arena of 'commonsense', but rather, in seemingly emerging from a pure or empty form of time, aspire to the 'illegitimate' typology of the simulacrum. Unsurprising, therefore, that these texts inhabit most fittingly the genre of uncanny horror (or perhaps 'Hitchcockian' thriller in the case of *Enemy*) as they incite the deepest of foreboding in temporal rather than spatial domains, invoking the most disturbing embers of the past to infiltrate and reverberate in the present.

On the side of theory, Parisi and Portanova's notion of 'soft thought' in computation combined with McKim's assertion of creative recall in cyclical acts of memory construct a new edifice for regarding invention as being at the heart of the repetitive function, a force that opens out the digital text to the power of time itself – eternal or untimely. Equally, on the side of practice, the widespread adoption of the repetition trait to invoke such untimely effects as the glitch or the digital double, effectively demonstrates the attitudinal change that has taken place from various fin de siècle pronouncements about the 'death' of filmic duration, purposed upon mathematical abstraction, to the invention and adoption of new tools that undo habituated thought and memory, as heralded by Deleuze and Guattari. This amounts to an

affirmation of the computer per se as a source of temporal enigma, hidden in the very abstraction which is purported to be a stamp of its sterility. This potential to provoke, like involuntary memory, an entry into virtuality itself, opens the doors to the remarkable ascendency of the time-travel and multiverse narrative in contemporary cinema, as mentioned above, founded upon the terrifying uncertainty of the virtual, or pure form of time. Turning now to two films from the period I call the 'digital interregnum', I aim to show how the texts integrate an image of time in a more or less direct way by using digital aesthetics to infold the endless potential given by the virtual into the surfaces and depths of their dramas.

4.1 Chance and Potential: The Case of *The Fountain*

Firstly, Darren Aronofsky's *The Fountain* was released in 2006 on the back of the considerable critical acclaim achieved by his first two films, *Pi* (1998) and *Requiem for a Dream* (2000). As the film titles suggest, the former work centred on mathematical themes of recurring natural patterns, whilst the latter charted the inner space of narcotically induced hallucination and paranoia. Inner and outer worlds, and the spatio-temporal cuts between them, are similarly the key terms at work in *The Fountain*. The latter film audaciously posits different iterations of the 'same' love story, the events of which are interleaved across three different time-blocks each set 500 years apart. Eschewing a more typical sequential or linear passage from one epoch to the next, elements of these stories – themes, objects, lines of dialogue, tonal and geometric patterns –recur across the different time frames to create a complex reiterative, or fractal structure in which the intersecting forces of time and affect are refracted through a digital denotation. The central love story between Tomas and Isabel (or versions thereof), played respectively by Hugh Jackman and Rachel Weisz, is clearly intended to exceed the limits of affect and thought given in the typical romance film. To set the scene (for convenience in a chronological order), Isabel is the Queen of sixteenth century Spain threatened by the power of the Church at the time of the inquisition. Tomas is her devoted Conquistador sent on a self-destructive mission to the Mayan jungle in search of the mythical source of eternal existence, the 'Tree of Life'. In the subsequent time-block, in what we could call the present day, Izzi is a writer working on a novel, 'The Fountain', which is in fact the literary recurrence of the same Conquistador tale previously mentioned. As Izzi is suffering from a brain tumour this will be her final work, wherein she implores her spouse, Tommy, to finish it on her behalf. Tommy's driven nature and volatile personality is a

version of the Conquistador spirit, incarnated within this time block through his profession as a brain scientist. Yet he is beset by strange neuroses and unpredictable mood-swings, which may be symptomatic infiltrations from other time zones. As a neurosurgeon, his singular focus – which becomes an obsessive race against time – is the search for an elusive cure for brain cancer involving the trialling of new antigens on primate subjects. Tommy cannot accept Izzi's terminal illness, a denial that prevents him from accepting his wife's request to finish the book. To complete the triad of bizarrely separated but interconnected stories, spaceman Tom Creo is travelling in the distant future in a transparent biospheric globe which hurtles through outer space towards a dying star. The orb is both an incubator containing the semi-petrified tree of life, and at the same time a 'zen' repository for Tom's memories down the ages, which intermittently force themselves through the surface to manifest in the globe itself. The spaceman's destination, a star within a nebula called Xibalba, is contained within a triangular constellation which has been visible from earth for eons. The star is soon to reach the end of its life-cycle, and Tom's mission is to conjoin with the supernova before the moment of its implosion and transformation into pure matter-energy. How this astrophysical body pertains to the mortal worlds of earthly characters and milieus is elucidated through its recurrence in the three time zones as a tantalising point of transcendence, first as a heavenly body worshiped by the Mayan civilisation, then as a magical, life-affirming entity in the contemporary night sky, and lastly, as the spaceman's final destination. In fusing with the star at the end of the film, Tom desires less a state of ultimate enlightenment, as might be expected from his yoga robes and zen postures, than a final absolution across time and a concomitant entry into the virtual.[18]

The extraordinary reach of the tale, traversing and crosscutting between immense scales of time and space, subsumes the sentimental love story ostensibly at its heart. Clearly, the Xibalba nebula performs an important, albeit enigmatic function as a recurring anchor for the 'schizoid' plotline. In the temporal domain, however, Xibalba's cosmological frame imposes a highly ambiguous chronology as its position many light years away renders it both potentially present and absent, both eternal and provisional.[19] Indeed the interwoven timeframes of the film, created through match cuts and repeated geometric and ideational motifs, amounts to an audacious reversal of narratological principles in which it is not a character that inhabits a timescape, but rather an incessantly changing temporal formation that spawns and 'actualises' the individual from the virtual or elemental force of pure time. Since the invention of classical narratology, a protagonist is used to both escort us through a

story and to express a consciousness, endowed in a nominal space-time or *chronos*. In contradistinction, *The Fountain* rather asks us to consider what it would look like to invert the relation. How can time give rise to character and world? Here the digital methods of repetition, recombination and disjunctive synthesis are used to envisage an entry into *aion*, the virtual form of time unbounded by the empirical categories of past, present and future.

The Fountain is not the first film to depict the same 'character' – an avatar in digital parlance – multiple times across an extended timeframe. For instance, Sally Potter's *Orlando* (1992), adapted from Virginia Woolf's modernist novel, also envisages three versions of the eponymous protagonist across different historical periods. But a cursory comparison between the two films reveals significant differences in the constitution of the subject-character. Despite a radical approach to gender identity, Potter's hero(ine) nevertheless denotes a consistent, unified persona, or 'soul' defined as a psychological unity confronting time's sublime. In contrast, Aronofsky's array of the 'same' protagonists in *The Fountain* display a more contingent and unpredictable set of characteristics that are forged not on the (illusory) rock of an inner essence, but rather on an unstable relation to a 'time-sense'. This inconsistency born from a more arbitrary and erratic approach to character no doubt contributed to the largely negative reviews generated by the film from an industry tied to the popular appeal of univocal desire. Consequently, where critical opinion previously lauded Aranofsky's novel combination of mathematics and runic enigma, sections of the film press now lined up to accuse the director of auteur-narcissism bent on formal experimentation for its own sake, and feeding off pretentious themes of mortality and infinity.[20] This expert disapproval, based upon a perceived 'schizophrenia' of character, text and time was unsurprisingly mirrored in online chatrooms, populated with ruminations dedicated to unlocking the 'enigma' of time in the text.[21]

Careering wildly from the Mayan universe to contemporary worlds, to transcendent cosmic futures, it would be easy to characterise the violent undertow of time in the film as an example of a collapse of human perspectives. As Mario Perniola (1995) argues, the irreconcilability of temporal frames between digital and human-phenomenological systems is even more sharply defined when ancient and modern imagery and systems of thought are brought into proximity. Perniola calls our current epoch an 'Egyptian moment', by which he intends a temporal disturbance or confusion, an uncanny zone in which the past and the future can no longer be distinguished, imploded into a supremely problematic present. Perniola argues that this type of enigma has for centuries been symbolized by the Egyptian pyramids

in the Western imagination. The enigma is different from the secret, which is dualistic in being either known or unknown. By contrast the enigma is more like a paradox or riddle: an enfolded knot or dilemma, immanent to its conditions as if arising from a milieu. It implies a temporal impasse. One can neither use recollection nor projection into the future to explicate or unfold it. Perniola is clear that the contemporary Egyptian effect is in part due to digital technology's time-flattening effect creating a point of convergence of repetition (the past) and difference (the future) in the ubiquitous simulacra of digital media.[22] We can say that certain operations of the digital machine such as the iterative logic of cut and paste on the one hand, and, the always provisional, shape-shifting data-forms on the other, advance this confused and 'circular' contact between past and future. For Perniola, this is not just a question of aesthetics but also of a global urge to 'return to origins', notable in the Western identity in a Greek *arche* and a concomitant repression of the 'Other'. Indeed, this is visible, claims Perniola, in tensions between the West's simultaneous and coexistent repulsion and fascination with Egypt, which acts as both 'enigma' and 'return of the repressed'.

In the case of *The Fountain*, the search for the key to the enigma more often than not involved a 'correction' to the perceived aberrations of timeline – one that would unify the fracturings and bifurcations under a single *chronos*. For instance, Roger Ebert, a stalwart of 'mainstream' film criticism, explains the dilemma for the regular filmgoer in this way:

> I imagine they don't realize…that it all takes place in the present and there is only one 'real' Hugh Jackman character, Tommy. The conquistador named Tomas is the hero of the novel his wife Izzi…is writing, and the spaceman named Tom Creo is the hero of that novel's final chapter, which Tommy writes after his deathbed promise to his wife."[23]

What we see here is a cathexis that resolves the Egyptian Effect by privileging the contemporary present of Tommy and Izzi's world (the world of the writer and the neuroscientist) as the singular 'truth' of the text. The purging of the ambiguous timeline, which proliferates in unexpected directions, has its own reassuring logic and mass appeal in its aim of asserting a final 'truth' of the film. Nevertheless the typology of truth promoted is based on 'common sense', and it is both reductive and reactionary, as it appropriates for 'oedipal' orthodoxy what is an experiment in expression, desire and affect.[24] The tumultuous connections and reiterations through time are thus reductively interpreted to conform with standardised storytelling in a pragmatic reading of the film that ignores or invalidates the incessant transformations and interactions of bodies and affects across not only temporal zones, but also species boundaries and ontological planes. Shot in a style where, as I will

show, the ontological field is divided between connected series of time, corporeal and incorporeal states and the transitions between them, what we have is an order in which human-sensual relations of traditional storytelling are constantly vying for attention with an abstract field of unseen force and 'spirit' conceived in the Bergsonian terms of pure time's foundation on invention and change. Furthermore, the example of *The Fountain* shows how these complex and weighty themes of spirit and time can be related, paradoxically, to a digital modus which is said to thrive in the realm of the 'surface' and the abstract and to thus be caught in a spiral of depthless incorporeality.

Firstly, the application of 'good sense' to an abnormal text has its basis in the theory of representation as a model for communication and expression that attempts to unify the orders of things and concepts, signs and meanings. Ebert's 'correction' is a prime example of how this good sense attempts to domesticate temporal complexity under the auspices of an integrated present and a logical direction from past to present to future. More exactly, the approach serves to pin unpredictable event to the 'depth' of bodies and things which act as the guarantor of causation in the now. However, 'good sense', or 'common sense' is never as simple as it seems, beset by a succession of contradictions and paradoxes which Deleuze analyses at length in his 1969 work *The Logic of Sense*.[25] Moreover, in this work Deleuze opposes the depth of bodies and things to the 'surface' level of incorporeal event. Opposed to bodies existing in three-dimensional extension and acting on each other concurrently, the 'surface' is the incorporeal domain of effects which evade the present (Chronos) and are instead orientated towards the past and future (Aion). In this light, Ebert's good-sense recuperation of a putative present is also an act of corporealization or an attempt to address a 'depth-deficit' in a text whose temporality complicates, or even totally escapes the now. Through repetition and reiteration, the constituent scenes of this 'now' are scattered randomly throughout the film, communicating freely and 'superficially' with other temporal orders. In this light we can perhaps accept that the critique to which the film was subjected was somewhat understandable, related as it was to a supposed 'flimsiness' and superficiality – where a 'surface' temporality of pure event undercuts the 'depth' of bodies.

Surfaces are in fact a principal concern in *The Fountain*, where the skin is both the most potent site of bodily sensation, and a kind of portal to a deeper spiritual plane, as witnessed when one of the Spanish inquisitors inflicts a vicious self-flagellation exercise, raking the skin to purify the soul. Or, conversely, when Izzi loses the feeling of hot and cold on her skin – a sign of the encroaching disease which will soon take her life. The surface is important in

other guises also: ‘mathematical’ surfaces of spheres, glass plates, interior claddings, diagrams and maps, complement the flat planes or curved surfaces found in nature such as patinas of snow, tree bark, skins and coverings of all sorts. In totality, these surfaces form an interconnected series across the time zones that counter the ‘causal’ depth of coupling bodies traditionally seen in the love story. As Deleuze says, events float on the surface of bodies and do not 'exist' as such, but sub-sist or per-sist in the relation between bodies. However, the digital structuring in *The Fountain* may well operate in the reverse sense – that the ‘disjunctive’ happenings take precedence over bodies which, in turn, float on the surface of events. This is reflected quite literally in one scene where the defeated body of conquistador Thomas is transported on the surface of a sea of arms to his final confrontation with the chief of the Mayan tribe, as if on a conveyor belt. In another, the neuroscientist, Tommy, achieves a breakthrough in treatment when he stares up at a ceiling skylight, which provides a translucent surface upon which clumps of snow and ice shift and dilate, revealing the light of the sun beyond. This physical action becomes a two-dimensional ‘fractal’ of evolving shape and pattern invoking a transversal image of cellular interaction, repeated at other cosmological and microscopic scales throughout the film. In this instance the image sparks for Tommy an exciting new idea for a compound with potentially cancer-inhibiting properties.

But of the manifold surfaces in *The Fountain*, the ultimate may well be the cerebral cortex itself, its membrane enfolded on the surface of the brain into numerous pleats to multiply the zonal space for synaptic activity. It is important to recognise that the labyrinthine cortical surface, visible on the numerous brain scans that adorn Tommy’s laboratory, is not a metaphor for the imagination, but the very site of its genesis and expression, the physical effectuation of thought itself. In most film operating through genre and formula, this genesis of new ideas, problems and affects can be referred to the workings of film ‘grammar’ or ‘narrative device’. Considered as such, the imagination or ‘thinking’ of film revolves around devices such as turning points, plot twists, and realisations or discoveries made by characters. Indeed, Eisenstein maintained that the generation of affect, or ‘pathos’, was dependent on “strong explosive action and constant qualitative changes,” although, for all the revolutionary potential of his art, including the temporality of montage, he insists that such machinations must conform to the mythical “golden section”, never to compromise the “organic unity” of the text (1959: 57-8). Clearly, Eisenstein is talking about aesthetic structure but the directive is for an artistry conforming to established or ‘common sense’ boundaries of design and

representation which are to all intents and purposes ‘natural’. In many ways the deployment of these narrative devices, taught religiously in scriptwriting manuals, mirror the ‘conjunctive synthesis’, the ability to synthesise convergent series in the unfolding of ‘everyday life’, which Deleuze and Guattari locate in the brain and cite as an integral aspect of subjectivity. However, this world of ‘organic’, natural, or by-the-book artistry has hardly any need for philosophy as such, as it is a self-perpetuating order without regard for its own solipsistic organisation and evolution. By contrast, in *Anti-Oedipus*, Deleuze and Guattari’s analysis of capitalism and schizophrenia, they posit another side of subjectivity, the ‘disjunctive synthesis’ as a “relation of non-relation” where divergent series remain discrete yet communicate across a boundary precisely because of a difference that traverses between them like a spark or a flash that forces itself across. This flash, often occurring between the boundary of the physical and mental, the actual and the virtual, is enough to provide a shock to thought, as Melissa McMahon (2005) states: “thought occurs at the 'edges' of a given system as the principle of its initiation and revolution: thought occurs not 'naturally' but when we are *forced to think*” (46). The three time zones in *The Fountain* produce a number of these ‘disjunctive’ series, discrete and separate in themselves, but constantly flashing across temporal barriers understood as a constant set of corporeal and incorporeal correlations. Solid objects (rings, knives, quills), geometrical shapes (triangles, circles, folds), and ideational themes (mortality, growth, loyalty) are interlaced and repeated to reflect an internal symmetry that nevertheless gives rise to a sharply uneven shape, like a crystal or fractal that is constantly changing across its surface. It may well be the case that the on occasion bewildered critical response to the film is symptomatic of an unsatisfactory storytelling which traditionally demands an integrity and ‘depth’ based on a linearity to the time-bound ebbs and flows of the romance tale. Instead of the organic and conjunctive, we have a narrational architecture that is algorithmic and disjunctive, creating a splintered surface of affect dilated ‘fractally’ across time.

Patricia Pisters has offered a new reading of the more fractured and ‘visceral’ narratives that have emerged in parallel with the ubiquitous spread of digital production and communication. Apropos of the centrality of the brain in *The Fountain* and other contemporary media, Pisters (2012) discerns a new type of image to update the Deleuzian taxonomy of film form. As introduced in the methodology chapter, the “neuro-image” is a type that can account precisely for the crystalline structure, and the intercalated temporal alterity of *The Fountain*. Pisters maintains that this new form, a convergence between Deleuzian philosophy, digital cinema,

and neuroscience, has the potential to move beyond movement-images and time-images to express a primary synaptic relation between spectator and image. What is envisaged is not a 'digital' model of the brain's workings, but a Piercean 'firstness' where "[c]ontemporary cinema has become brain-cinema, in the sense that very often the camera has moved almost literally into the characters' heads" (Pisters 2015: 120). From this point of view, Tommy's profession as a neuroscientist in *The Fountain* is exemplary of a much wider dissemination and popularisation of neuroscientific thought in popular media and culture. Here, the non-linear digital architecture of the film resonates with a probabilistic theory of the brain in forming new thought by way of synaptic disjuncture, 'irrational' connections and non-normative reconfigurations. Furthermore, this cerebral image is in no way divorced from the body. On the contrary it is absolutely co-imbricated with sensory-motor physicality through the functioning of the nervous system and sensorial feedback loops. In guarding against a new version of the mind-body dualism that has afflicted philosophy down the ages, Pisters asserts that, "The mental spaces and brain worlds of the neuro-image... are much more embodied, affective, visceral and sensuous" (Pisters, 2015: 131). Here Pisters alludes to a move away from the dry, symbolic imagery of earlier sci-fi epitomised by Kubric and towards a 'wet' neuro-image which is profoundly involved and involving: "visceral and sensual, full of affection-images, faces and hands in close-up, smelling, touching and tasting" (135).

Marshal McLuhan (1994) had already noted an integral requirement for 'deep participation' as a feature of the tactile, mosaic form of the 'electric image' of the TV screen. Today, this insertion of the qualities and intensities of a new media image straight 'into' the synaptic circuits of the brain is what Steven Shaviro (2010) calls 'Post-Cinematic Affect', a historically significant supercharging of the affective potential of images as they become not only carried upon, but constituted by constantly modulating electronic signals. These signals are unlike the stable centres of attraction in the classical analogue image – they are rather vibrational injections, able to stimulate sensation directly, and eschewing the traditional mediations and semiology of 'old' media. But Shaviro's critique, which relates digital modality to neoliberal capital flows, does not account for the disjunctures across series and surfaces which is a typical by-product of the digital methods he critiques. These ruptures cannot but introduce an unruly disturbance to the new levels of institutional control that Shaviro rightly sees as the digital's legacy to neoliberalism, a radical openness that cannot be tamed or completely captured and marketised by globalised capitalism. Pisters concurs that

enacting a new and more complex temporality related to database logic and modern assemblages of power and information, the digital texts of the neuro-image are ultimately able to suggest new directions within contemporary society. Indeed, Pisters states that whilst the neuro-image is "able to be incorporated by 'capturing machines' and controlling powers (any brain, film, movement, device), it can also offer powerful possibilities for resistance." (2012: 16). I return to the issue of political relevance in the conclusion to this work, but for now it is worth reiterating that the modern-day connection with the digital or the neurological is not chiefly a question of plot or content, despite Tommy's biomedical profession and computerised workplace. Neither is it primarily a question of computer generated aesthetics, despite the armies of digital artists involved in latter-day productions. Rather, from the point of view of 'soft thought' and the numerical grounding upon which it is based, the arrangement, distribution and repetition of story elements in *The Fountain* completely defies the classically linear cause-effect chain, resembling rather a 'crystalline' or algorithmic organisation of digital databases and the production of new metamodels of time and thought. It is not that digital operations are necessarily abstractions of the world, it is rather an increasing realisation that reality resembles the self-organising 'abstractions' and iterative processes of the digital. It is this correspondence between modern culture's non-linear, self-organising networks and the workings of the human brain which forms the basis of Pisters' analysis.

Applying these insights to *The Fountain* we can accordingly designate a visual and sonorous field attuned to the corporeal and embodied vistas of the neuro-image. Close-ups of pierced and flayed flesh, in the act of tattooage, flagellation, hand-to-hand combat, and even brain surgery, bear witness to the extent of the haptic and visceral immediacy of the neuro-image, as mentioned by Pisters. Additionally, the film aesthetic abounds with bodily parts, particularly the hands, fingers and face, in touch with human and non-human interlocuters, each contributing to the golden-hued sensuality of the ravishing imagery. But if this kind of 'human' or embodied participation in the image demarcates the affective limits of both the neuro-image and 'post-cinema', we can consider how Aronofsky redraws the boundaries of affect much further than the internal or external 'passions' set by Spinoza to encompass time itself. For if the 'randomness' of time that distinguishes this film invokes Deleuze and Guattari's 'plane of consistency' it is principally because, as Karen Wendy Gilbert (2007) maintains, this zone is a plane of immanence "akin to the concept of infinity, which can be defined as the place where a part is equal to a whole…an ontic category in which

heterogeneous linkages take place across phyletic lines and time zones." (2007: 88). The expectation, or even demand for cinematic 'representation' of human relations and desires are broken down into more abstract, but no less physical forms than is normally prescribed in commercial cinema – physical forms not determined spatially, but given temporally. Thus, the connections and affects between bodily surfaces and material membranes, further coupled with the instruments and particles that come into contact with them, repeat and reverberate towards infinity. *The Fountain* opens with yellowed parchment being inscribed with a passage from the book of Genesis by an old fashioned quill, the physical contact between ink and paper creating something new: the incorporeal idea of the Garden of Eden, and the Tree of Life as a genesis event. This literal point of contact between ink and surface also insists, modified, across other ages and spaces, repeated images all the while acting like a disjunctive synthesis that multiplies through time. For instance, when Tommy pierces the skin of his ring finger with the nib of a quill causing the ink to siphon down and mingle with blood to tattoo the skin. Or equally when the spaceman prepares a dye with powdered seed and flame to tattoo his arm, again with a quill fashioned from primitive resources. Circles and other geometric shapes oscillate between natural and man-made forms. Symmetries and repetitions of contour, light, movement and event scatter and recombine, all of which disjunctions speak of a 'secret' of cosmological connections. Even sexual relations, defined in traditional terms as intimate, 'productive' contact between human bodies, extend from the usual touch between lovers to a radical comingling and tactility between particles and surfaces. Threaded through the work, one of the more resonating of the repeat images is of an extreme close-up of spaceman Tom's finger approaching the micro fine bark-hair of the tree of life, the cilia flexing as they respond to the static electricity concentrated in the tip of the finger. The series of images are coupled at various points with close-ups of the micro-hairs on Izzie's neck, observed by Tommy, or kissed gently by his lips, instigating a contact across time, both material and spiritual, between humans and nature: human-tree, lips-neck, through which seemingly discrete objects are drawn into an affective relation (fingers and lips being sensitive and erogenous areas of the body). Other objects are repeatedly coupled with their incorporeal ideational significance: the wedding ring with love, the hospital bed with mortality, the starlit sky with infinity and the empty form of time.

These objects, which carry the weight of their symbolic connotations, appear resolutely solid in their physical being, and relatively closed in their semiotic meanings and 'analogue' status. However, from the point of view of a pixelated image, they are nothing but provisional or in-

between forms, ready to be morphed, layered, or recombined in relation to a boundless matrix of other images. Aronofsky, for his part, seems keen to assert how the material world is formed from a virtual order of scintilla, specks and sparks, 'cellular' agglomerations – or pixelated forms – that come before, or after, the solid state of matter. Whether on a microscopic, macroscopic, or astral plane, these dots scatter and conjoin, attract and repel to form new nodes and relational networks that ultimately form the material foundation of the cosmos. In one scene, Tommy wanders the city streets in a distracted condition after visiting Izzi in hospital. As he walks slowly past a group of workers welding the girders of a building the soundtrack is totally silent, mirroring his concentrated thought. But the blow-torches used by the labourers generate a fountain of sparks and scintillations, ushering in the sound of the street once more and suddenly snapping Tommy out of his semi-catatonic state. This is Tommy's incorporeal memories and thoughts confronting the fiery elemental surface of the here and now. Whether the forces surrounding the cellular formations are centrifugal or centripetal in nature, the dynamic is always one of transition and transformation of a generative kind. Recalling Deleuze's claim that every practical cine-aesthetic is also a thought or a philosophy of cinema,[26] an overarching style such as the one found in *The Fountain* can be thought of as manifesting an internal logic of 'digitality', a recombinant logic of splitting, repetition, and regrouping from one 'molecular' state to another. But this 'numerical' image is not one of spatial fragmentation, but paradoxically one of emergent patterns, tending towards timeless duration, what Deleuze calls the Open.

How can this numerical image be reconciled with affect and the creative force of time? According to digital media theorist Wolfgang Ernst (2012), digital computing enables experimentation by numbers introducing virtual, counted time which, far from sterile, is the foundation of original modelling and new thought. This 'mathematization' of the world experiments with virtualities including "time-axis manipulations which cannot be done with physical means, thus engendering knowledge, chronomorphing experimental events or even creating 'events' that otherwise have not been perceptible to human senses" (191). Even though the microtemporal events of digital processing, scaled at thousandths of a second, are beyond human perception, they nevertheless give rise to a 'temporal sense' of the human interlocutor. Moreover, this inhuman, 'artificial' time can open up whole areas of innovation, from theoretical physics to virological modelling. As Ernst puts it, "The implication is that the digital simulation of experiments can lead to the creation of a new type of event: artificial events, 'artifactual events,' revealing not physical but mathematical moments of the real"

(ibid). Aranofsky's previous imbrication of mathematical theorem and cinematic form in his first film, *Pi*, has already been cited. Now, in the formal symmetry and fractal relations in *The Fountain*, immense cosmological and epochal timeframes exist alongside infinitesimally short jumps, sudden step-changes in scale, testifying to an equal experimentation in the mathematical moments of the real. Creativity comes through altering the 'good sense' of the straight line of time, introducing a kink in the rationalist or teleological view where the future is an already determined next step from past through to present.[27] The preponderance of corridors, enclosures, passages and doorways that continuously frame character and event are not staging posts on linear journeys but rather indicate the importance of thresholds in the passageway from one state – physical, mental, temporal – to another. Whether such an experimental aesthetic is conducive or compatible with the expectations of a mainstream audience and industry is debatable. The unified character and well organised narrative arc of such a 'Hollywood' model is replaced by a fractal design that betokens a visual field strewn with repetitive patterns, striations, specks and scintillations, proliferating geometrics that envelop the material world with a sense of chaotic but self-organising force. All of these recurring structures are examples of what Patricia Pisters (2012) calls 'nested instancing', the fractal principle, multiplied in the digital era, in which simple operations in lower orders become replicated, with ever increasing variation and complexity, at higher orders (15).

Aranofsky emphasises this variation-in-recurrence in one particular scene which achieves a certain elevation and poignancy as event, defined by the creation of a new line of time. Each event, for Deleuze, is in fact such a force of creation that touches the verges of the Open whole. The scene in question, repeated several times throughout the film, envisages Izzi in a distinctive ensemble of white hat and coat interrupting Tommy's work with an offer to take a walk with her in the season's first snowfall. As an event in the philosophical sense, the whole encounter is subject to radical contingency, the scenario presenting Tommy with a choice – will he choose Izzi or will he attend to his pressing neurosurgical experiments? In repeating the clip a number of times Aronofsky hints at the cut and paste function of digital operations, but each time with a slight variation leading to different outcomes. Twice he rejects Izzi in favour of the urgency of his work. Only the third time does he choose the 'right' path and prioritises his wife over career. From the perspective of the romance genre, Tommy's final choice is indeed predictable, but from the point of view of 'artifactual events' thrown up by the digital machine, the choices are equally valid, leading to different outputs. To be clear, this is different from the realm of memory or the imaginary of subjectivity, as was artfully

created in Resnais' *Last Year at Marienbad* (1968). In the latter film the repeated imagery is founded on confusion and contestation of memory, attesting to the closed realm of the possible and leading in a straight line to an enigma. In *The Fountain*'s case, by contrast, there is no such single subject whose memory we can defer to. Instead we have the proliferation of events which float on the surface, sliding over each other, enacting a fractal temporality of different versions of a story: the always-same-always-changing. The image of Izzi standing erect in her snow-white attire achieves an iconic status, echoed and stamped across various nodes of convergence, whose temporal situation is unclear. The narrative device seems, in this sense, like the disruptive time of deja-vu, which in the context of the digital constitutes a recombinant logic of a looped snippet inserted at a different level or phase, making new connections, evolving into a new drama. Brian Massumi's (2002) definition of the fractal contains this notion of repetition between orders:

> The organization of multiple levels that have different logics and temporal organizations, but are locked in resonance with each other and recapitulate the same event in divergent ways, recalls the fractal ontology and nonlinear causality underlying theories of complexity. (Massumi, 2002: 33).

During the final repetition of the scene, which occurs after Izzi's apparent death from a brain tumour, Tommy, learning from the past, and regretting in the future, finally picks another path – that walk with Izzi in the snow – which does not defer to the exigencies of 'his' time (high-flying, high-tech, high-pressure career), but rather opens out to a pure time and a pure affect that belongs properly to infinity. In fact the walk turns out to be a visit to her grave where Tommy plants a seed whereupon the circle of renewal begins again..

Here we come back to the Deleuzian concept of the 'crystal image', so important in the lexicon of the time-image. Firstly, it is worth exploring the rationale behind the terminology itself, a task which has surprising insights for digital analysis. The very etymology of the 'crystal' reveals its Greek roots in coldness, ice and abstraction, and is extended in scientific nomenclature to include solids composed of regimented arrays of molecules that are reflected in its external form. On the face of it this should remind us of a few basic characteristics of the pixelated image, as well as of the digital per se. Abstraction, the determinate and 'pristine', as mentioned in the introduction, are qualities often associated with digital images, not to mention the 'lattice' form of the digital gridlines.

The Fountain is not a 'time-travel' film of the kind which have become recently so popular. It does not simply travel back into the past to propose a conundrum for its characters in the

present or future. Rather, using algorithmic and fractal methods, it connects the impersonal singularities of pure time to invent a new narrative of surface and event. Events not 'within' time, but opening out to new lines of temporality.

4.2 Time as 'Spirit': The Case of *The Tree of Life*

We have seen how *The Fountain* professes a radical ambiguity in temporal occurrence which releases an open whole, or pure time, as envisaged in Deleuze's time-image. We have also argued how this aberrant temporality can be read as an effect of its digital logic, and algorithmic constitution, which paradoxically opens narrative to contingency and event. Finally, we have seen how the image of the 'tree of life' provides a foundational insight into the 'plane of immanence' encompassing huge scalar variations from the microscopic to the astral. A contemporaneous film that poses an equal problematic of time whilst adopting the same arboreal image is Terrence Malick's *The Tree of Life* (2011). But where Aronofsky's film works on a purely virtual realm from which memory is drawn, Malick's film reverses the direction deploying a more direct image of memory itself to explore the connections between human subjectivity and the void of pure time. If memory is the most obvious way in which affect intersects with questions of temporality then it is traditionally considered as a purely personal cathexis, an image of the past carried within the subject that is integral in forming individual or communal 'identities'. But in Malick's film the charge of memory enters much wider circuits, fully revealing its connection with the boundary between actual and virtual states, as foregrounded in the crystal image, and consequently giving rise to fundamental questions surrounding digital aesthetics and temporality. Closely reflecting on such aesthetics and themes entices us to ask: whose memory – do we need a subject, or is there a memory in 'things'? Secondly, where is memory – is it in the brain, the body, in 'history'? Thirdly, why memory – do we actually need memory, is there too much memory in the digital archive?

Made just a few years after *The Fountain*, Malick's no less audacious film has a more directly philosophical stance on time and consciousness invoked through pensive voice-over and visual aesthetics, and permissible from a filmmaker renowned for a meditative, not to say 'spiritual' opus. In films such as *Badlands* (1973), *Days of Heaven* (1978), and *The Thin Red Line* (1998) Malick has created a cinematic terrain founded on an artistry of duration which, corresponding to the calling of Andre Bazín, promulgates a capacity for filmic art to seek out questions of subjectivity, being and time.[28] Different from Bazinian realism, however, Malick

etches out an indeterminate world, a hazy demimonde that is not subject solely to the effects of a purely physical reality but also buffered by intangible presences, as if affected by the virtual force of pure time. What unites Malick's admittedly small number of released films is precisely the oneiric quality issuing from within a quotidian reality of the characters. *The Tree of Life* continues this dreamlike examination of individual singularity within an open whole that is constantly changing. By loosely serialising the story of a successful architect whose reflections incite a meandering string of memories and contemplations, we are immersed into a typically mobile and 'philosophical' tour de force, a fervently affective text which, according to Lee Carruthers (2016) "mobiliz[es] a temporal constellation that moves [us] like a song, or a prayer" (116). But if there are distinct connectives with Malick's ouvre there are also significant new directions, especially in the realm of 'temporal aesthetics'. As I will argue, Malick's first work to incorporate sections of purely computer generated imagery reverberates, as much as does *The Fountain*, with a far more pervasive logic of digitality than merely the special effects used for certain scenes, such as the outrageously incongruous appearance of dinosaurs, or the equally aberrant creation of the universe. In more fundamentally embedded ways, the cornucopia of intercalated shots and jump cuts that refract the scenarios amount to an aesthetics of fragmentation and recursiveness, serving to dislocate and 'dephenomenologise' the categories of motivation, desire and affect. To clarify, even though many of the image-fragments from which the film is composed are ostensibly 'of' the body, they are nevertheless distinct from the kind of directly 'sensuous' or embodied filmmaking aesthetics validated as 'haptic' by film-phenomenologists such as Vivian Sobchack or Laura U. Marks.[29] In fact we could call Malick's visual strategy 'incorporeal' in the sense that the partial and splintered sectioning of faces, hands, and torsos denies any easy identification or empathy with a single character or consciousness, rendering a strangely abstracted view of personhood and memory mediated by a digital logic.

To continue, at each moment, the immersive sense of the film is drawn from a kind of 'generalised' temporal ontology that spreads out from individualised character to encompass the whole of nature and spirit. The aesthetic strategy adopted to achieve this is a type of montage reminiscent of Godard's jump cut – a 'horizontal' method that releases shot-by-shot construction from the norms of spatio-temporal continuity. As Carruthers notes, in horizontal montage, "image relations do not work to secure a temporal progression, advancing from one shot to the next, but perhaps propose a mode of time that seems to 'widen' it, increasing an image's available surfaces and points of contact in a kind of visceral interpolation" (2016:

28). . Whilst talk of 'plot' and 'character' in *The Tree of Life* is, therefore, a misnomer under the accepted understanding of the terms, it is nevertheless worth delineating with some precision how 'individuation' is engendered in a film whose artistic and ethical concerns reside precisely in a tale of genesis – which is to say, how the birth of matter, consciousness and spirit emerge as assemblages from intensive conditions and primary metastable states. In short, what Malick's film provides is a theory of 'life' based on a memory not of the past but of a present that encompasses the vast epochs of pure time. Lest it be mistaken, this interruptive method and constructed immanence in a tale which is only nominally about the human being results in a film that is not at all banal, tedious or prosaic. On the contrary, the multiplication of perspective in memory and desire provides a showcase for the thunderstruck and a new model for immersive cinema.

Given such immense scope and elemental intent, it is no coincidence that the film announces its purpose at the beginning with an epigraph from the book of Job, reading "Where were you when I laid the foundations of the earth?...When the morning stars sang together, and all the sons of God shouted for joy?" Appearing after this unusually direct alignment with Christian theological teaching is a black screen and a period of silence, dissipating slowly to reveal a yellow mist in centre frame, congealing further into something resembling a diffuse flame, swirling gently as if held together by a weak gravitational pull. Later, the same enigmatic image will be more directly related to the birth of stars and galaxies out of clouds of luminescent gas, thus connecting the human drama and Christian theology to the most sublime fields of science and cosmology. Taking this 'birth narrative' as a central theme, we can split the filmic exposition into three discrete but interwoven strata – not separated sections or sequences but rather cognate imagery that is spliced, cross-threaded and interlaced throughout the film. In his book on Foucault, Deleuze (1988) refers to strata as archives or reservoirs, which not only collect and store all that has come to be known, but also "force something new to be seen or said" (120). Describing Malick's irregular image-fields as strata enables patterns to emerge from relatively inchoate material, like the imprint of fossils in geological formations which are, strictly speaking, independent of human-phenomenological co-ordinates. Thus, in the first stratum, we have the genesis of a nominal consciousness and personhood – that of the architect, Jack – out of the ingénue and relatively undifferentiated world of infancy and childhood. Jack is part of the O'Brien clan, a petit-bourgeois family from Texas consisting of mother, father and three sons. As a child Jack is played in remarkably raw and edgy fashion by Hunter McCracken and as an adult he is played by an

equally perturbed Sean Penn. In the second stratum, Malick uses computer generated imagery to conjure unfathomable leaps in time, creating a bewildering and highly unusual sequence portraying the 'dawn of time', which is to say, the origins of our solar system out of protean clouds, with a coda depicting the beginnings of life on Earth from similarly far-from-equilibrium liquid states. Finally, there is an equally hypothetical, if not theological stratum regarding the genesis of a 'spirit' – which, again, need not only refer to the human – harking towards a sentient afterlife or parallel world in which all the figures or singularities in a lifetime intermingle on a harmonious plane envisioned as a beach illuminated in twilight. The way in which these sections – astonishing in their conception and brazen connection – are splintered and interwoven provides an accumulative, transversal theorem of temporality and life which clearly presents a challenge to the expectations and codifications of narrative cinema. Moreover, at each section where the chain of fragments aggregate into a more coherent mosaic of circumstance, they will be interrupted by 'unmotivated' images from elsewhere, amounting to a digital aesthetic of disjunction which jars against the more sweeping durational compositions of Malick's previous work. Consequently, despite the numerous awards garnered by the film and Malick's own formidable repute as an auteur, critical responses – even from erstwhile admirers of the director – reveal significant ambivalence towards the obtuse thematics, no less than with the apparent retreat from the distended durational flow of earlier films.[30]

How, they ask, can such outlandish narrative restlessness and tumultuous discontinuity – on both micro and macro levels – flow back into a corporeal experience of being and time necessitated by audience expectation? For many critics – ones that don't outright reject the cosmic-theological themes and restless visuals – the answer lies in hermeneutic and phenomenological explanations, which is to say, attempting to suture and envelop complexity in the colonising embrace of humanist horizons whereby the manifold fractures of the text become expressive of the bodily experience. According to David Sterrit (2018), for example, the predominant effect of the film's fragmentary structure is not distraction but dynamic resonance between the transitory and the timeless: "From the standpoint of eternity, Malick poetically suggests, the feeling of an instant and the meaning of a lifetime are interwoven parts of a seamless whole." (56). Under this view, the human intellect and sensorium is the necessary anchor that weaves together the fleeting perceptions and the constant ambivalences of the film. Carruthers (2012), too, insists upon the binding force of phenomenological capacities, noting that "bridging all [the film's] disparate structures … is a kind of tactile

alignment, a shared flow of sensation that shows us temporal experience as something embracing" (134). Finally, Steven Rybin (2012) interprets the disjointed structure of the film as a series of "surfaces of contemporary life [which] have the power to kindle memories of past worlds that remain hidden in the imposing girders of our present ones" (173). In his estimation, the search for a lost or hidden narrative is constituted through a flashback structure aligned to Jack's memory which "continuously circles back on itself" (ibid). Such accounts, which attempt to recuperate the film's wildly uneven logic of temporality, are understandable taking into account the mediating and hermeneutic function of the film critic. But the conceptual coordinates of phenomenology and individual psychology are not the only means to present an image of the world at once discontinuous and encompassing which is at the same time meaningful and 'productive'. As I will show, approaching *The Tree of Life's* aesthetics and imagery through a digital logic exposes new fissures in the presumed philosophical, phenomenological, and theological designs in the film generating different readings of affect related to 'spirit' and ethics.

Taking each of the aforementioned strata in turn, the enigmatic opening gives way to a brief sequence of a young girl growing up in a picturesque rural setting endowed with friendly cattle and blossoming sunflowers. Through attentive close-up and fluid movement, the camera immerses the viewer into this world detailing affectionately, but elliptically, the whereabouts of the girl around the farm. The human figure is captured by the image, but vies for precedence with the forms and textures of the natural order: fields, sunflowers, the sun in the sky, all of which offer their own special luminescence. Later we understand that this is the childhood of Jack's mother, the fragmented images, together with her edified and worldly voice-over narration, suggest a retrospective view, images parsed together by an imprecise and highly selective memory. Compositionally, the camera wavers and drifts, its centre of gravity and putative object never completely certain in the strategy of deframing. This leads on to a lacerated exposé of family life in 1950s Waco, all wide suburban avenues and front porches, mainly following the mother in her characteristically airy dresses frolicking, waiflike, with her three young sons, or at the dinner table with the father present. These initial scenes consisting of truncated clips, conjoined horizontally, are as elliptical as they are impressionistic. Synthesised, they are suggestive of a joyous and enriched maternal relation, a positive vibration, especially in the developmental life of Jack, which is later undone by the authoritarian force of a paternal influence that increasingly lays claim to the 'law of the father'. Throughout this opening passage, and indeed through the whole film, the identifiable

character is at best ‘probabilistic’ in the sense that they occupy the majority of the frame, or appear in the majority of a sequence of images. In these early moments the mother is the privileged one, thereafter superseded by Jack, often shot tangentially, from behind, or laterally, rarely in full-frontal mode, forestalling the kind of easy identification usually encoded into cinematic narrative. Here, we have a different kind of identity and identification, built not on the continuous display of literally the ‘best side’ of a face or body, but on a kind of ‘cinematic cubism’ whereby digital editing provides multilateral views and adds a temporal vein to the constantly interrupted lines of a composite subject.[31]

These fleeting glimpses of maternal endowment and spirited youth are themselves interjected in capricious and unpredictable fashion with elemental images of nature. At the beginning of the film, the maternal voice-over suggests that through life one must choose to follow either the way of grace or the way of nature. As Malick’s camera abruptly takes leave of the ‘here and now’, it edges down into the ferocity of a waterfall’s vertiginous depths, thereafter craning up at the yawning branches of a tree, as if these vertical ‘paradigmatic’ movements compensate for the horizontal ‘syntagmatic’ editing in the expository sections. Even in these early scenes the aesthetic strategy forges a contact between the edges of each image and the multiplicity of virtual worlds contained in the very near and the very far, instigating a new conception of mobility much wider than the continuity methods of classical filmmaking. Thence, scattered through the film we see quite random inserts of ancient woodland, barren desert, rocky outcrops, silently asserting what appears to be a timeless presence. Eventually, a telegram arrives at the house to inform the parents of the death of one of the sons, and gradually we realise that it is some years later. Scant consolatory dialogue between mother and neighbour, fatherly regret, and the same elliptical editing of conjoined hands, memory flashes, and looming branches suggests there is nothing but pain and sadness in the now diminished household. Yet, as one neighbour says, “life goes on…nothing stays the same” – a platitude for sure, but a statement that could also represent a supplementary ‘Darwinian’ maxim to the biblical scripture that starts the film. The choral chanting that underpins the sound score of this opening section combines surprisingly well with the scattered horizontal montage to support this sentiment of universal variation. Suddenly, the soft suburban image, suffused in the almost permanent glow of dusk, gives way to blurred artificial lights whizzing past the camera: the speeded up, energised but alienating cityscape introducing the world of Jack in the present day. Now a solemn and reflective man, he lights a votive candle in the kitchen of his modernist villa to commemorate the anniversary of his brother’s death.

Gradually, via accumulation of sound and image we learn that Jack is a high-ranking architect who restlessly inhabits the elevated lattice structures of corporate Houston. Jack is constantly in movement, often seeking the natural light found at the edges of the gleaming glass and steel enclosures of his workplace. On this day we assume that Jack is recalling his childhood upbringing in Waco, an understanding derived not through extended 'flashback' sequences, but by quasi-random, intercalated streaks of memory, woven into series or episodes of life that seed the images of Jack's agitated present. These flash-memories, interwoven with an assortment of images, are recursive in nature and invoke a database structure that rather counteracts the consonance and easy synthesis solicited by some hermeneutic critics and reviewers. In this strata of the film it is easy to characterise Jack's mother and father as falling respectively under the dualism of empathy and discipline, or grace and nature, as foretold in the beginning – but not unambiguously. The mother, invariably shot in diaphanous beauty and soft focus, is also strong and resilient in her loss. And the father, rebuking and authoritarian, is also self-aware and warm, with a passion for music and always insisting on a kiss before bedtime from his three boys. The film plunges us into a temporal fluidity of vision that recalls less the Bergsonian treatment of memory than a Benjaminian constellation. The final impact is one of mystery and complexity. Through the syntagmatic assemblage of images Malick immerses us in the same free-floating search for meaning that Jack is apparently undertaking.

But the vision is far from confined to one or other consciousness (perhaps the mother, the father, or Jack). Pasolini tells us that free indirect discourse in cinema is a blend of subjective view and camera consciousness, but a subjective view is never quite achieved in *The Tree of Life*. Instead a kind of floating consciousness is individuated and 'attaches' to figures provisionally by virtue of the temporal variegation. This radical variability is especially figured in the second stratum which is interlaced into the first one, featuring the 'dawn of time,' an extended segment introduced by the same gaseous flame-like insignia which appears at the start of the film. Gradually extinguishing, the flame gives way to silent wisps of floating luminescent gas, slowly gathering into more congealed and organised forms until a bright and burning centre is glimpsed in the ethereal mists. Subsequent shots show further fluid arrangements of illuminated matter, mesmeric vaporous trails subject to unseen and mysterious forces which warp and induce wave-like movements. Eventually, the shimmering phosphorescence gives way to recognisable astrological forms: stars, planets and renowned nebulae, followed by views of molten volcanic surfaces, gaseous plumes and the nascent

atmosphere of our own planet pierced or 'seeded' by itinerant asteroids. Significantly, the image turns from this cosmic vantage-point to an earthbound one with the camera firstly pointing up at clouds in the comforting blue sky, and then down into the same violent torrent that is the waterfall seen earlier in the film, connecting, for an instant, this genesis section with the earthly chronology of Jack. Successively, the sequence flips in immense steps of scale from the cosmic macro to the infinitesimal micro-view of primal chemical reaction, between exquisitely coloured forms in liquid suspensions, leading to combination and fusion. Malick's beautification of the origin stories at both intergalactic and microbiological levels follow similar paths, despite the quantum leaps in scale. Whether these depictions pertain to 'nature' or to 'grace' is less important than the invocation of a materialist essence at the heart of creation. But at this point we are only half-way there. The rise of a bright point of light over a curved horizon clearly signals the dawn of a new dimension, advanced presently as the emergence of multicellular life. This is itself a process of generative combination, born of similar material processes of matter, movement, force and energy as the planetary systems before, although now the primitive marine organisms depicted move independently in undulating and spiral movements proper to their forms. Gradually, the planar, undersea worlds and their early lifeforms are joined by the familiar geology of land: beaches, deserts, and verdant boulders, until a solitary tree (the first one?) is exposed on a promontory, framed in isolation under a brooding sky.

Again, a leap in time and evolution occurs as the scene shifts to the Jurassic and Cretaceous periods, providing a precipitous glimpse into the era of dinosaurs and their extinction. Elicited through a sudden image of a plesiosaur-type creature on a beach contemplating a gash on its side, the image cuts to blood-stained ocean water and the ominous circling of ancient sharks. and then an interior close-up view of blood capillaries leading to an embryonic sack containing a reptilian head, followed by exterior shots of a small herbivore in an ancient fern forest dappled by the radiance of the sun. Cutting thereafter to a remarkable encounter between a carnivorous raptor and a smaller incapacitated ornithopod lying by a river bank. As if to defy the dinosaur blockbuster movie, not to mention the regime of purely Darwinian urges, the hunter examines the prey curiously, immobilising the herbivore with its foot, but it then moves away to pursue other interests allowing the defunct dinosaur to expire without violence. And then we are back to an interplanetary vista of the extinction-event Chicxulub asteroid heading to earth and eventually impacting, followed by a short sequence of immense underwater oceanic swells and barren earthy landscapes. This creation stratum,

perhaps more than any other, has provoked consternation and perplexity amongst critics, especially for those that would seek to impress upon Malick's disjunctive structure a phenomenological model dependent on a nominal human consciousness and memory. Where do these images of planets and dinosaurs come from, and how do they connect to a panoply of remembrance, both human and not human? Following the creation stratum, any referral of the temporal apparitions of *The Tree of Life* to the common notion of psychological memory fails completely. If the creation stratum points towards a material version of genesis and individuation, a Darwinian 'tree of life' if you will, then it does so by emphasising contingency and possibility, a 'random-access' memory bank removed from purely human orientation and open, at least in theory, to infinite reconfiguration. Critics have gone to extraordinary lengths to encompass the creation stratum into a holistic spiritual vision of the film, even to the extent of suggesting that the sequence is a projection of Jack's 'daydream'.[32] As stated previously, this kind of last-ditch hermeneutics has more to do with squeezing Malick's incessantly splintered experiment in time into narrational conformity than an empirical analysis, or a treatment of the film on its own merits.

We finally move out of the creation stratum through the desolate views of a barren, lifeless landscape, possibly portraying a world after the extinction event just depicted. But the inhospitable terrain is conjoined with the strange imagery of a man in a dark suit traversing with difficulty through this rough geology of salt-flats and rock pools.[33] The anonymous figure can only be associated with Jack, as we have seen something like it before on several occasions: previously interspersed snippets of the architect wondering through various otherworldly formations of desert landscapes and rocky outcrops, quite literally the obverse of the high-tech architectural environments he occupies in the now. This enigmatic impression is yet another 'contaminant' – a module or seed of the third stratum to come. The scenes thereafter revert back to the first stratum, envisioning by way of the now familiarly disintegrated editing, the courtship of Jack's parents and his subsequent birth, followed by that of his siblings, and an extended elliptical montage sequence showing Jack's family nurturing, replete with youthful errors and wrong turns. Notwithstanding the schismatic cutting, the film carefully delineates the accretion of the sensory-motor capabilities of the infant child as the camera incrementally picks out details of Jack's encounter with things (stairs, mirrors, water), and the acquisition of basic skills (walking, reading, tactility), all under the tutelage of a loving mother, an influence that becomes increasingly strained as Jack grows into early adolescent rebelliousness. It is not that this boy is especially naughty,

sensitive, or confused about the diverging series of opportunities and challenges of growing up. It is rather that the film seems to allude to the innumerable 'molecular' contingencies and unique convergences, which play into Jack's choices and actions: this girl sat next to in class, rather than that one, this neighbour leaving their door open rather than that one. It is also important to note that Jack's is not the only point of view in this lengthy section lasting over an hour. At times the camera prefers to linger over the sensuality of the mother's skin as she passes a bare foot over the long grass, or to follow the father's legal route to file some technical patents. And at other times the camera just entrusts to the simple beauty of the everyday, like the vivid sheen emitted from the polished wooded floorboards in the O Brien's house. We are witnessing something approaching the mystery of the individuation of a subject from a veritable milieu, a singularity envisaged as an effect of radical contingency at the heart of intensive situations, in other words the power of time. This slippage back to the first stratum of the human story after the 'scientific' exposition of creation, presents a fragmentary yet compelling bildungsroman, further reinforcing the idea of a personhood being formed out of the complex and unfathomable matrix of personal, social and environmental factors.

Finally, considering the third stratum of *The Tree of Life*, many commentators have read this period of the film as the final redemption of its spiritual and theological ambitions. The aforementioned series of aberrant images of a besuited Jack wandering through an uninhabited desert-like landscape foreshadows the entry into this climactic section, which is no less astonishing and perplexing than the other strata through which there is a constant enfolding and interleaving. In its presentation of yet another dimension or step change in existence – one that seems to lie outside of space and time – this third stratum commences with a sharp cut out of the here and now of Jack's workplace into a scenario of a series of disparate gates, openings and portals into which the adult Jack hesitantly enters. Through the first, appearing as a rustic door frame jarringly set in the middle of a desert, he is met by a mysterious woman. Through another, by his younger self who seems to lead him towards a beach populated by all manner of people, some of which we recognise from his upbringing in 1950s Waco. Ultimately, in this twilight setting, the family consisting of mother, father and younger brothers are reunited with the adult Jack in a touching embrace of reconciliation. The mother's meeting with her 'dead' son, R.L, is especially wrought in poignant and luminous close-up, paving the way for a gestural 'letting go' and the final words of the film: "I give you my son…". This parallel space, surrealist landscape, or even 'afterlife', could easily be

considered transcendent in its stark and beatified depiction. And yet, it exists on the same 'material' plane as the other sections, cross-fertilised with snips from previous strata, and subject to concurring epigrammatic voice overs, and requiem-like orchestral scores and choral chants. The final images of this stratum comprise a feminine triad of mother together with two other unknown young women (one of whom could be herself as a young girl). Their gentle embrace and hand-raising to the azure sky in acclamation, takes no precedence over, for instance, earlier images of diaphanous jellyfish wafting gracefully upwards towards the ultramarine luminosity of the sea surface. Once more the ambiguous status of the image – a memory, event, or imagining of no-one's in particular – is distributed equitably across the strata, to achieve a syntactic equivalence which, far from non-expression, or a mere collection of random miscellanea, has the concentrated capacity to make new connections – between things and thoughts – and to move us in a most intense way.

This final 'location' of the surreal beach – primal and devoid of material markers – brings us back full circle to the dual facets of Bergsonian time: emptiness and invention. If at this point we recall Deleuze's description of the crystal image, where there is a radical confusion between virtual and actual, expressed visually via deeply ambiguous figures, meandering characters, repeat images, and hollowed out, unrecognisable spaces, then we could assuredly assign the artistic vision in this final section of the film as an exemplar of crystalline imagery as well as a rendition of the film's spiritual 'idea'. Spiritual not in the sense of dogmatic theological pathways or transcendent knowledge, but the expression of an 'in-between' space and time capable of generating affects emanating from radical immanence. The austere landscape, divided sharply at the horizon between sky and shoreline, strongly emits an air of non-place, not aligned with postmodern alienation, but of a 'ground zero' with elemental or primal essence, evacuated of external or material causes, resembling instead an internally folded space, speckled with figures from elsewhere and 'elsewhen'. Here, memory does not undergird the single subject as the point of convergence of present and past, as in Bergson's temporal schema. Malick's stratagem at this point articulates a virtual that aligns with time's pure force, aesthetically placing nominal ideas about character and world under severe strain. What we have is a dissolution of memory as the territory of the individual, supplanted by a 'dividualised' memory of no-one in particular, combining past, present and future. Characters, or better figures, emerge from this generalised space like molecular agglomerations in metastable states, figures that are more like events – surface effects of aesthetic experiment – than psychologically drawn. Individuation is now a question of *aion*,

spirit or style, a combination of memory and the imaginary, rather than direct connection with an outside.

Contemplating matters of time and affect in *The Tree of Life* it is easy to overlook the question of the digital and its role in creating the singularities of the text and especially its involvement in attributing a temporal form. But neglecting the digital aesthetics of the film is a severe shortcoming of the many critical analyses of the film's impact. In thinking through Malick's film as a digital text we confront, again, the hybridity of a work shot mainly on celluloid and containing physical as well as digital effects. As mentioned in various trade reports and reviews, Douglas Trumbull, the veteran special effects coordinator hired by Malick, chose to eschew CGI in favour of filming chemical processes using dyes and liquids to replicate the knots, arcs and filaments of matter that so impressively illuminate the genesis of worlds – both cosmological and biological – in the second stratum of the film. If this gives the impression that the digital is held at arm's length by the film's main artistic contributors, such a conclusion would be wrong on two counts. Firstly, at a practical level, visual designer Dan Glass admits in a trade journal that the overall intentions and strategies of the filmmakers – which perhaps can be summarised as worldly, affecting, and philosophically inquiring – were supported by both physical *and* digital methods, the latter being deployed in as subtle a way as possible:

> What is hopefully evident in the result is a collection of practical components. That may lead to a conclusion that digital elements have been minimized, but in fact they play a greater role than people recognise. We took a cautious approach with a goal of authenticity and naturalism, more like found artefacts and events. (Glass quoted in Hurst, 2010)

Glass's comment reminds us that, due to the necessary and immediate conversion of film to digital format (even in celluloid-shot productions), contemporary filmmaking is empirically 'hybrid', riven with digital interventions at every level, not just in the particular area of special effects, but including the countless micro-manipulations and corrections of post-production. The film's particular realism can be therefore regarded as a crossbreed form of digitally enhanced naturalism visible, for instance, when computer generated prehistoric life is composited with physically captured natural backgrounds, and when live-action cinematography is counterpointed with static photometry from the Hubble telescope and electron microscopy, which is itself 'brought to life' through digital animation.

Secondly, in parallel to the pragmatics of contemporary production, the mark of the digital is visible in *The Tree of Life* on many conceptual and structural levels enabling new assertions of aesthetic and formal directions. Applicable terms such as fragmentation, transcoding, horizontality, modularity, recurrence, replacement and recombination help us to understand the work as a digital media object. This should not be a surprise if we take seriously new media theorists such as Lev Manovich who have long argued that cultural reconceptualisation with respect to the digital is a necessary precondition in contemporary analysis. In *The Language of New Media* Manovich specifies that "cultural categories and concepts are substituted, on the level of meaning and/or language, by new ones that derive from the computer's ontology, epistemology, and pragmatics." (47). But whilst many of the antecedents in Manovich's early study of digital culture stem from the twentieth century avant-garde, which he sees as providing in many instances a precursor for digital aesthetics, works such as *The Tree of Life* (and *The Fountain*) go beyond the industrialised chronology of modernism to encompass a paradigm exhibiting a more virtual-facing temporality. To reconceptualise *The Tree of Life* under these conditions means aligning the aesthetic complexity and disjunction addressed above with a digital logic and an algorithmic functionality expressed in features such as repetition, feedback loops, fractal compositions and so forth.

One of the quintessential characteristics noted by Manovich of the new media landscape is the database structure of information and communication, an accessible archive of free-flowing data allowing for an infinity of permutation and combinatorial functionality. In my analysis of *The Tree of Life*, I have foregrounded the array of disparate imagery and anomalous juxtaposition in the pictorial composition, a montage style of quasi-random inserts described by film critic Michael Atkinson as "isolated oases" or even "mytho-surrealist touches [that] simply scan like ideas Malick had and then gave up on" (2011: 79). But I argue that this new direction in the architectonics of the director is far from an arbitrary or accidental approach. On the contrary this recurring formula can itself be related to present-moment developments in networked screen cultures and beyond: viral media and digital 'clip-culture' where commercialised and technologized visual communication occurs via minimally associated 'out-of-nowhere' picture and video files that nevertheless create a self-perpetuating ecosystem. Some of the repeated shots of majestic woodlands, undersea swells, raging torrents, and wind-moulded rockfaces, that recur at unexpected moments are redeployed shots from previous projects of the director that never came to fruition, material

taken over many years from camera teams dispatched to various corners of the globe; and equally, the final film was assembled by a bank of five editors who collaborated with Malick for over two years on the project.[34] These kaleidoscopic elements combine with a staged shooting style which quarries the contingency and aleatory moments of reality, a modus operandi revealed by cinematographer Emmanuel Lubezki's on-set recollections. Lubezki, who had already worked with Malick on previous occasions, tells how the director would 'block' the set, which is to map and prepare a space for the regimented movements of actors and camera, only to destroy it in search of the more naturalistic and incidental micro-events that can emerge from unrehearsed action and unchartered time: "We create chaos, and within that chaos, things that feel natural – feel real – start to happen."[35] This eclectic, modular, and recombinant approach destroys the 'external' dictates of causal narratology with its plot-driven beats and timings, and replaces it with an internal logic – the "sufficient reason" as Deleuze calls it – of digital ordering.[36] This is not to diminish the role or directorial expertise of Malick, who could strictly speaking be redesignated as director-curator taking from a reservoir of images: happenstance performance and concatenation of event.

If the mark of the digital indeed subsists in the formal strategems of *The Tree of Life*, as I have argued, then where is a commensurate force of affect to be found? Further, is there an ethical and political corollary that can develop out of the open virtuality of time? It is clear from my account of Malick's curatorial approach that affect is to a large extent decoupled from the scripted capacities and 'personality' of the character. The carefully constructed coordinates of psychology, motive, and plot expected in commercial cinema is absent in this case, replaced by an open delineation of subjectivity and affect largely detached from action. To that end, disjunctive editing, and a focus on intensive zones and dream-like landscapes collude in creating a dissonant concept of affect and agency relating to a novel movement of body and thought where the contraction of subjectivity at the tip of Bergson's cone synergises unpredictably with seemingly any other point in the cone's volume to produce anomalous 'memories' which are as provocative and stirring as they are subjectless. To properly describe this schema and its political import we have recourse to one of Deleuze's figures of 'firstness', namely the any-space-whatever which he cites as the "genetic" element of the affection-image. In Deleuze's account, largely framed in relation to the development of postwar Italian neorealism, the any-space-whatever is a form of spatiality which is unable to provide organic coordinates of identification and social determination. More affirmatively, what they also produce is "a richness in potentials or singularities", introducing the spectator

to “a ‘system of emotions’ which is much more subtle and differentiated, less easy to identify, capable of inducing non-human affects” (Deleuze 1986: 110). In the any-spaces-whatever of *The Tree of Life* the visual system that is usually ‘englobed’ around the homogenizing role of determinate space, and the consciousness of the subject, is dissolved and replaced by a spatial arrangement which links – infinitely/digitally – with other any-spaces-whatever, near and far. The heterogeneity of this new system, appearing random at first, connects with an idea of genesis and individuation at multiple scales and levels, manifest as “a richness in potentials or singularities which are, as it were, prior conditions of all actualisation, all determination.” (Deleuze 1986: 109). The removed spatial anchors of the any-space-whatever most obviously appears in the wide open landscapes leading to the final shoreline meeting between the adult Jack and the incorporeal figures from his past. If the journey to this final destination resembles Antonioni’s ‘depopulated’ deserts, or better, Pasolini’s *Theorem,* with its naked, alienated capitalist wandering the wretched earth, it is not down to motifs of personal psychological breakdown or rage, but because of the strong echo of a decadent state of things seized upon by these inheritors of the Italian neorealist mantle. Even whilst other sections of *The Tree of Life* arguably demonstrate stronger ties to place – the scenes in and around the O’Brien family home for instance – in its incessant fragmentation and potentialising of space, the film as a whole manifests the distinctive liminal ontology of the any-space-whatever. A restating of the propriety of the human within the grandeur and self-worth of nature as a whole. Within the spatial architecture of the any-space-whatever, the body is just one entity in an assemblage of forces or affects that enters into composition with a multiplicity of other forces or affects.

As a result, the affection-image’s dilation and erratic connectivity achieves a prominence that instantiates both a crisis in storytelling and the implantation of consistently experimental zones of ethical thinking. To exemplify, there is a passage in the first strata where the mother reads a bedtime story to her three young sons, the quiet tenderness of the moment stemming from the obviously caring disposition of the mother and the unusual stillness in the cinematography of this nighttime scene. A certain sensuality is further derived from the serene compositions, in low key lighting, of the mother’s head foregrounded against the gentle folds of the boys’ bedsheets, and of her hand, shot in close-up, caressing the cloth of RL’s nightclothes, slowly running up his tee-shirt and ending by touching his face. After one of the boys asks their mother to recite a story from before they can remember she commences with a memory of her flight in an open topped bi-plane – a graduation present from her

father. As the image cuts to the majestic and exhilarating view from the cockpit, the mother's story is appropriated by another, her narration replaced by whispered entreaties from the youthful Jack: "Mother", "Make me good", "Brave". The sudden switch in perspective (is this a memory of the mother's or an imagining of her son's?) is paralleled in the shifting surface of the image where movement – in the form of graceful wave-like gyrations– now takes over from the stillness of the previous scene. Consequently, the invigorating force of air and freedom represented by the flying is extended into the subsequent shots of a strangely levitating mother performing an 'air ballet' next to the familiar oak tree growing in the family's back yard; then a precipitous cut to a thicket of underwater reeds swaying in the azure current of a stream, and then a match-cut to a similar tuft of leaves, shot from below, blowing in the courtyard of a modern office complex that we have seen before. Finally, the adult Jack, again shot from an innervating low-angle which only accentuates the towers looming high above, trails his hand over these same leaves, the montage taking us back full-circle across horizontal zones of space and time, combining compound memory, cognition, and event. This swirling example of the affect-image involving elements of stillness, movement, magical realism, naturalism, and alienation, invokes a fluid but discontinuous narratology, privileging sensation over drama, affect over interpretation. This methodology is time and again utilised by Malick to open out fields of connection between humans and the natural world, triggering linkages deemed aberrant or spurious in conventional narrative cinema. Unconcerned with 'whose' memory or which story, phenomenological integrity, which is a linchpin in readings that favour interpretation, is replaced by a 'pure' affect that is prior to cognitive understanding or universalising paradigms. As Carruthers notes, "what is pictured is a kind of sensuous involvement in the world that is dynamically multiplied from shot to shot" (136). This strongly immersive environment, constructed from a digital syntax, leads us from the any-space-whatever to an entry into a politic which is far from the traditionally conceived terrain of social organisation and ideology.

To be clear, within the dramatic realm of *The Tree of Life* there exist numerous facets of family life, labour relations, and even hints at the segregationist realities of 1950s Texas to justify an ideological critique of the conformism and political conservatism of the time. Nevertheless the elegiac qualities of the film together with the abstractions of time, memory and the natural world have steered critical attention away from political discourse and unsurprisingly towards questions of theology and spirit. Furthermore, the syntactic and semantic disjunctions, which seem only to harbour a sense of division and discontinuity

commensurate with the 'reductive' materialism of digitisation, can be seen as contributing to the erasure of the social in the film. To take the question of politics seriously requires a closer look at film form and digital aesthetics, for the constituent terms in a digital artefact need not, despite their discrete status, remain in an atomised state. On the contrary, the recombinant drive native to digital praxis, based on repetition and differentiation, invites a 'molecular' method of analysis capable of linking the particular abstracting tendency of the computer to the relational world of ethics and politics. Stemming from Gabriel Tarde's 'microsociology', Deleuze's understanding of the social field deploys just such a reconceptualisation of the coordinates of political engagement in formations that are not obviously orientated towards social interaction. Citing this Deleuzian approach, John Rajchman (2000) elucidates the 'stretched' interrelations which at their limit exceed individual human scales in micro and macro directions:

> In social terms, connections are not social interactions between already constituted subjects; they are at once 'smaller' and 'larger' than individuals and suppose a kind of sociality not based on the mechanisms of collective recognition or identification... Here, 'micro' does not mean 'individual'; on the contrary, it supposes a 'mass' that is not yet 'individualized'; and the question it raises is not about individuals and contracts, but about singularities and the space and time in which they can co-exist. (Rajchman 2000, p.11-12)

An ethics based on microsociology is therefore based on the 'haecceity' of a body defined in terms of its molecularity, its flows and affects, its speeds and slownesses, where it can connect, and where it is blocked.[37] This extends the object not only to 'things' but also events. A microsociology based on the digital aesthetics of *The Tree of Life* would consequently eschew the false teleology of the narrative arc and instead focus on the temporal interruptions and stuttering technique which contains the capability of forging contingent openings, lines of flight, some of which take off to eventually form an impersonal singularity, and some of which don't (Lubezki's ultra-mobile camerawork fervently stalks these lines to their [in]conclusions). This methodology may harbour an ethics that is more experimental than programmatic but it nevertheless potentialises formerly hidden or underestimated avenues, of exploring the 'what if' of becoming at the bifurcation points of a seemingly calcified milieu. Within the stultifying socius of suburban Waco, for instance, where the unvaryingly white professions, church congregations, and the endless tree-lined residences harbour their fair share of competitive conformism, there is a brief insert of the O Brien's stopping off, seemingly by chance, at a Sunday fate in a nearby African-American neighbourhood. This 'out of nowhere' appendage, where the inhabitations are noticeably

more down-at-heel, acts like a wedge in the otherwise uniformly pure ethnic purview. Just as there are no black folk in the O Brien's neighbourhood, so there are no other white folk at the barbeque. Is this scrap, this micro-episode a bifurcation point that can lead, embryonically, to something of a more multicultural social unit? Certainly, the young Jack surveys the surrounds, replete with black children of all ages, with the same inquisitive look of uncertain possibility as he does the rest of his youthful encounters. Nonetheless the O Brien's appear baffled by the occasion, their movements slowed down and hesitant – as if, like in Deleuze's description of the time-image, the sensorimotor links are broken, and there is no possible action commensurate with a given milieu. In the end the incident leads nowhere, and therefore has no legitimate place in mainstream drama. But in the mix of *The Tree of Life* the short segment of no more than 30 seconds provides an analytic indictment just as acute as more earnest and extended cinematic renditions of American racial histories. Furthermore, in the very fact of its presentation, this anomalous splinter produces on a microsociological level a momentary potential extinguished: a glimpse of a broken line of flight that in other times or places could have invented a new sociality with a different end (Jack's adult workplace in third-millennium Houston is equally an almost totally 'white-only' zone). The disjunctive symptomatology of the film does not present the lack of social relations between black and white as individual failings but rather as both a pre-individual non-event on an affective and virtual plane, and as a systemic blockage, a resistive force contaminating the whole of the socius. Using this method, the 'enigma' of *The Tree of Life* is not about discovering the key to contemporary alienation under the auspices of memory or theology, but understanding the productive possibility of divergent paths: the open prospect of the future, and the material creation of time.

Conclusion

To conclude this section on digital cinema and time, both *The Fountain* and *The Tree of Life* use the arboreal image as a tantalising 'primal object' for the structure and meaning of life. Furthermore, this image is intimately woven with a thesis on time, memory and affect, as it subsists in the figuration – animate and inanimate – of story and design. If the 'symbolism' of the tree therein mobilised is one of unilinear growth and stability then this is a misleading idea, as both Aronofsky and Malick invest their images with qualities that usurp the enduring sway of the mighty oak. Qualities of multiplicity and disjunction, differentiation and change,

enhanced and exacerbated through digital aesthetics disaggregate life into a probabilistic field of chance and potential. The affect generated by this method is at once bewilderingly unconventional and compulsively immersive, indicted by the polarised critical responses to the films. Of the two, *The Fountain* is more classically derived from plot and character convention; but even here mathematical or crystalline recurrence, together with vertiginous temporal vaulting create a confusion of past, present and future and a communication across the surface of event that compels affect into thought. *The Tree of Life* goes further in eliciting digital aesthetics to transform standard family melodrama into non-ordinary states of affection and perception. Using horizontal, syntagmatic editing to constantly erode 'subjectivity' in the face of the virtual of pure time it creates an immanent plane of life from which a new ethics of connection could arise. From the point of view of the tree, the silent witness across time which it provides is not only an outlook on the egotism and hubris of humankind. More importantly it provides an extension of the idea of fractal growth from the organisation of matter in intensive states to organic systems and life itself, aligning to a new basis for ecocritical thought in film. This is not a devaluation of human life but far more a critical perspective on privilege and responsibility.

For many, the technical idea of the digital is antithetical to the complex and infinitesimally enfolded terrain of human thought. With its abstract, machinic operations how can a digitally sampled and algorithmic world ever correspond to, or dovetail with the continuous variation of the universe and the embodied perception of the living organism? Already, in an early exploration of digital cinema, Malcolm Le Grice (2001) asserts that digital recording is only nominally linear in a temporal sense. In fact, "[N]ot only does this open sequentiality more thoroughly to experimentation, but the philosophical implications for our concept of memory or its 'modelling' in artistic terms and the relationship between time in representation and reality become accessible in a new way through digital applications in cinema" (2001: 240). Even though Le Grice was writing specifically about experimental cinema, digital aesthetics are capable of redrawing the codifications of time in cinema narrative generally, instrumentalising the already infinitely occurring mathematical investiture in the natural world. From the evidence of *The Fountain* and *The Tree of Life* it is not the memorialising subject who retrieves and accesses a temporal archive but an abstraction of time itself that overflows into consciousness. Critics have, to my mind, failed to notice this productive abstraction of time and how the fractal and disjunctive aesthetics related to a digital modus, represent not only an idea of divergence which lies at its heart, but also a powerful argument

of ‘spirit’ as that which affects us at the deepest level. A spirit, that is, not deferred to theological or even strictly human coordinates, but rather one that relates to the virtuality of time itself.

Both *The Fountain* and *The Tree of Life* arrive at a ‘final destination’, configured in what could be called a far-from-normal, in-between state orientated towards spiritual redemption and rebirth. This is recognisable in the highly-charged climactic locations of the closing events: respectively an intergalactic nuclear fusion between the space-traveller and an exploding star in the case of *The Fountain*, and in the case of *The Tree of Life*, a surreally rendered eschaton populated with a beneficent human archive from Jack’s past. These types of extreme end-of-days locations – the outer limits of the imaginable and experiential – are the now common loci of sci-fi and fantasy genres, especially those which, as previously mentioned, deploy time travel and multiverse narratives. But I contend that a recourse to spectacle and quixotic temporal rearrangement does not do justice to the complexity and ambiguity of the films studied above. The texts of the digital interregnum rather articulate their particular visions of spirit and consciousness through a distinctive aspect of the digital idea: one that sees the counting and algorithmic principle as not only compatible with the world of material reality, but a most generative method of eliciting the chance-based splitting of time, propagating differential futures and memories, and of realising the creative possibility inherent in *aion*. What these films show through their aesthetic structures is the breakdown and reconfiguration of acquired and expected patterns of thought and movement operationalised through the digital cut. Under these conditions – of infinity interrupted – thought, memory and affect is not confined to the human, but resides ‘within’ the gap in the continuous chain between past and future, releasing a transformative potential, triggering something new onto the scene.

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[1] From C.S. Pierce’s semiology, the indexical sign is that which physically imprints itself onto the carrier medium. Thus, in the case of celluloid film, light energy is directly registered onto the photochemical substrate without the step-interruption applied through numerical conversion of digital processing.

[2] Speaking of the difficulty in grasping contemporary life in terms of economic and cultural realities, Steven Shaviro (2010) states “It is necessary instead to proceed by abstraction: to “diagram” the space of globalized capital, by entering into, and forging a path through, its complex web of exchanges, displacements, and transfers” (36).

[3] Sam Rohdie (2006) notes how the images of the horse’s gallop, one of the most famous of the Muybridge sequences, were first perceived by the public as “unpleasant” and “unnatural,” further testifying to the uncanny effect of ‘animating’ the photographic image outside of temporal anchorage. Nevertheless, Rohdie goes on to say that the “disturbance [in vision] was quickly standardised, accepted as both real and true.” (4).

[4] See Deleuze *Cinema 1: The Movement-Image* (1986) and *Cinema 2: The Time Image* (1989).

[5] Such is the prevalence of the time-travel and multiverse trope across recent cinema that a self-reflexiveness has entered the format in a current instalment of the Marvel superhero franchise, *Loki* (Michael Waldron, 2021). The eponymous anti-hero, brother of Thor, is sucked into battle with a law-enforcement agency whose task is to integrate the anarchic multiverse of time-travelling superheroes back into a coherent universe with a singular timeline.

[6] Henri Bergson (2012), *Creative Evolution*, trans. Arthur Mitchell, New York: Dover Publications, p. 16

[7] In the Bergson-Deleuzian taxonomy of matter-images, the 'living image' stands in for life-forms or organic agglomerations that do not necessarily react immediately on the plane of immanence, but rather instate an interval or gap between action and reaction. Living images are, in Bergson's words, "centres of indetermination" precisely because of the gap between received movement and executed movement, and the unpredictability of the relationship is the condition of the creation of the new.

[8] Deleuze's action-image is a cinematic type which defines movement in many popular genres, classically populated by male action heroes. Although it derives from sensory-motor capacities which link perception to action in a more or less direct and immediate way, Deleuze notes how affect is implicated in the interval between the two.

[9] See A. Aneesh (2006) *Virtual Migration: The Programming of Globalization*, Durham, NC: Duke University Press

[10] Hoelzl and Marie's basic argument that the digital image is itself a programmable artefact and, as such, has relinquished its role in representation is printed on the back cover of the book.

[11] The 'uncanny valley' is a term first coined by Japanese cybernetics professor, Masahiro Mori in 1970 to signify a feeling of unease when confronted by a humanoid figure who provokes uncertainty as to their real-life human credentials.

[12] 'I.M. Pacatus' (Maxim Gorky), 'The Kingdom of Shadows' *Nizhegorodski listok*, 4 July 1896, translated (by Leda Swan) and reproduced in Jay Leyda, *Kino: A History of the Russian and Soviet Film* (London: George Allen & Unwin, 1960), pp. 407-409.

[13] Jihoon Kim (2008), for instance, challenges D.N. Rodowick and Babbette Mangolte's arguments on digital deficiencies relating to time by referring to artists such as Sam Taylor Wood, James Benning, Sharon Lockhart and Thom Andersen, who use celluloid to originate images and then digital transfer in post-production to variously extend and experiment with the durational dimensions through colour-correction, motion effects and cohabitations of stillness/movement (102).

[14] In his work *Cinema 1* (1986), Deleuze determines that the static frame of the Lumières and others of the early period amounts to stillness + abstract time, an immobile section of the world that closes off active links to the outside . It is only with the invention of montage and camera motility that cinema is released from stasis and has at least the opportunity to conjoin with the 'Open' or 'Whole', that is, with duration.

[15] 'Cineosis' is a term used by David Deamer to describe Deleuze's 'cinematic semiosis'. See Deamer (2011) 'A Deleuzian Cineosis: Cinematic semiosis and syntheses of time' in *Deleuze Studies*, Vol.5 No.3 pp. 358-83

[16] In a complex account of the relationship of editing to the 'Open' or 'Whole' (which terms can stand for the virtual), Deleuze suggests that montage indirectly alludes to the potential and perpetual creation of the virtual state: "Far from breaking up the whole, false continuities [editing/rupture] are the act of the whole, the hallmark that they impress on sets and their parts, just as true continuities [sequence shots] represent the opposite tendency: that of the parts and the sets to rejoin a whole which escapes them." (1986: 28)

[17] Manifested across swathes of modern life, where the mapping of the individual onto a digital environment is exploited for private or commercial purposes the digital double takes a variety of different forms, from bodily health-tracking devices to meta and virtual-world subjectivities. Ultimately, the digital double is connected to move towards 'big data': the quantification of behaviours, qualities, entities, and phenomena for the purposes of control and profit.

[18] Interestingly, the violent and dimension-altering fusion with the star at the end of the film is reminiscent of the many filmic attempts to depict the passage from the physical world into the immaterial, ideational, or virtual world of the computer. Hence, *Tron* (Steven Lisberger, 1984), *The Lawnmower Man* (Brett Leonard, 1992), and a host of other subsequent CGI films have sought to give expression to the spatio-temporal rupture when traversing the threshold between the material and digital orders, usually through the character of the gamer.

[19] The light from distant stars and nebulae, having taken thousands or even millions of years to arrive, means that its source may have already expired, or radically changed in composition, at the time of observation on Earth.

[20] Peter Bradshaw (2007), for instance, labelled the film as "narcissistic and flimsy", criticising what he saw as the dishonest portrayal of Izzi's death, presented with "spiritual superiority and sacrificial redemption". Variety magazine called the script "tedious and repetitious", further reporting that the film was "Greeted by booing at its first press unspooling".

[21] In *A Thousand Plateaus*, Deleuze and Guattari define schizophrenia as the spontaneous or unpredictable forms of subjectivity produced by capitalism's incessant deterritorialisation of social codes. Writing before the onset of digital communications era, Deleuze and Guattari assign to capitalism the axiomatic function of abstracting qualitative processes into monetary value – a quantitative function that has easily been subsumed by the digital machine.
[22] It is notable speaking of the 'Egyptian effect' that the pyramids of Geyser feature in landmark CGI blockbusters of the new millennium period including *The Mummy* (Sommers, 1999) and *Transformers* (Bay, 2007-2011) franchises.
[23] Roger Ebert's review of *The Fountain*, available at https://www.rogerebert.com/reviews/the-fountain-2007 Accessed 28 September 2023.
[24] Cheri Lynne Carr (2018) denotes the impulse, 'fascistic' in nature, to repress the multiple and fluid forms of desire and affect that exist before its normalisation in the service of capitalistic and commercialised imperatives. See 'Love, Consent, and Arousal: Deterritorialising Virtual Sex' by Cheri Lynne Carr in *Deleuze and Guattari Studies* 12.4, 2018, p.601
[25] In *The Logic of Sense* (2004) Deleuze firstly lays out the impossibility of sense being given in propositions themselves, detailing how language is caught in a contradictory circle with each condition of a proposition in turn being conditioned by what it supposedly conditions.
[26] This thought appears in Deleuze's *Cinema 1* (1986: 55) when analysing the editing methods of various 'schools' of film from the early twentieth century (American, Soviet, French and German).
[27] Manuel De Landa (1999) remarks that the nineteenth century scientific view of a closed "clockwork determinism" was challenged in the next century when "it would become the task of philosophers and social scientists to attempt to reconceptualise the world in order to give time and history a creative role, with the vision of an open future that this implies" (29-30).
[28] In his edited collection on Bazin, Bert Cardullo (2011) attests to the Bazinian view that photography and film have a special power to affect "like a phenomenon in nature", and by virtue of this faculty they also have a special responsibility that extends into the ethical: "for Bazin, this moral duty is ultimately a sacred one – the photographic media being, in effect, preordained to bear endless witness to the beauty of the cosmos." (5)
[29] For instance, Laura U. Marks (2015) suggests that the 'embodied turn' of recent world cinema entails a shift "from classical cinema's techniques for narrative representation…to techniques that immerse the spectator in the event and call out to her own body to respond" (308).
[30] *The Hollywood Reporter* announced the mixed reaction to *The Tree of Life* at its Cannes premiere, revealing that "[w]ith the film's final, ambiguous image still lingering on the screen, a number of vociferous boos rained down from the balcony, while scattered applause broke out on the floor of the festival's main theater" . Available at https://www.hollywoodreporter.com/movies/movie-news/brad-pitts-tree-life-sets-188621/ Accessed 28 September 2023. As an example of the critical controversy caused by the film Michael Atkinson's (2011) review in *Sight and Sound* magazine provides a rather savage indictment of the film. Whilst previously appreciating Malick as a "transcendent guide" in all of his previous films, Atkinson describes *The Tree of Life* as now "an ambitious Rorschach blot that is almost exactly as pretentious and unwittingly absurd as it is inspired, evocative and gorgeous." (*Sight and Sound*, London Vol.21, Iss. 8, August 2011)
[31] Meredith Hoy (2017) argues that the twentieth century cubist artists were not engaged in truly 'digital' practices, but rather that "their geometrical units are only very loosely modular, and too invested in exploring specific properties of form (shape, volume, depth) to be identified as notational, discrete, or aggregative" (83)
[32] In his treatment of *The Tree of Life*, Brian Baker asks, "Does Jack, sitting in his architect's office, daydream of the beginning of Creation? Or is the *film's* narration at this point elided with Jack's?...In the cosmological spectacle sequence, it would seem that Jack's point-of-view is stitched into the film's own, and this is entirely at the service of a sense of awe and wonder: the rhetoric of the sublimity of science fiction cinema appropriated for a theological vision" Brian Baker (2017) '"Our Long National Nightmare is Over"?: The Resolution of Trauma and Male Melodrama in *The Tree of Life*' in *Scars and Wounds: Film and Legacies of Trauma* ed. Nick Hodgin and Amit Thakkar, (p.143)
[33] The enigmatic image bears a striking resemblance to the penitent industrialist of Pier Paolo Pasolini's *Theorem* (1968) stumbling in the desert, signifying the 'ground zero' of postwar bourgeois angst. Maurizio Viano (1993) suggests that in Pasolini's film "The desert is a powerful image imposing itself on the characters and forcing them to come to terms with their cosmic reality between being and nothingness". See Maurizio Viano (1993) *A Certain Realism: Making Use of Pasolini's Film Theory and Practice*, Berkeley and London: University of California Press. p. 205.
[34] Content for the digital-film artefact is no longer confined to 'the shoot,' the latter being increasingly just one part of a much wider reservoir of digitised materials synthesised in post-production.
[35] Quoted in an interview with Lubezki conducted by Geoffrey Macnab in *Sight and Sound* 21:7 (July 2011)

[36] For Deleuze, cause is related to external conditions, and is therefore too mechanistic a notion, whereas reason is related to internal contraction: "Cause is never sufficient. One must say that the principle of causality poses a necessary cause [conditions], but never a sufficient one. We must distinguish between necessary cause and sufficient reason…sufficient reason expresses the relation of a thing with its own notion, whereas cause expresses the relation of the thing with something else." (Deleuze, 1980 Lecture on Leibnitz, available at https://deleuze.cla.purdue.edu/lecture/lecture-01-8/ Accessed 28 September 2023)

[37] 'Haecceity' is precisely the term used by Deleuze and Guattari, derived largely from medieval Christian scholar, Duns Scotus, to designate a type of individuation that spawns from a virtuality: an intensive zone of relations and 'molecular' interactions resulting in a transitory form or event capable of affecting bodies.

Conclusion

This project has attempted to explore the problematic area of affect and its relation to digital cinema, and in so doing attempts to correct a notable absence of theory and analysis of contemporary cinema that takes seriously its digital constitution and its ethical possibilities. As Deleuze and Guattari say, creativity is political in so far as it an act of resistance to the present, an act directed at the future.[1] My aim in this thesis was to theorise the conditions in which digital cinema can, through a new affect based on abstraction, recursion, and incorporeality, paradoxically open out possibilities for novel political formations and a posthuman future. I have analysed the infrastructure of the image from first principles and explored the distinctive affective formations invoked through digital aesthetics. The challenge set out at the start is essentially twofold. In the first place it involves constructing a critical ground in which affect and the digital can be brought together against presumptions that they are eternally contradictory realms. The properties of machinic abstraction and calculability in digital media are in this view ontologically opposed to human qualitative parameters of embodiment, duration and affect. The best that can be said from such a position is that digital cinema imagery manufactures its 'blocs of affect' through either a 'conformist' digitality cloaked in traditionally affective forms and genres or, conversely, through flaunting ever more expansive and brazen CGI spectacle. Both of these modes of digital cinema utilise the numerical basis of the image only nominally and instrumentally to service the trusted technics of emotional 'suture'. However, neither of them answers the call of Youngblood, Manovich, and others to discover and activate a new, autonomous 'digital language'. The second challenge, related to the first, is precisely discerning a basis for an entirely new digitality, not reliant on cinematic syntax of the past, but rather demonstrably advancing a properly 'digital Idea', creating an affirmative, future-facing cinema; for if the extent of the digital ambit were merely to replicate and proliferate the already extant, where then is the opening for genuine innovation in art and culture? Can we ever, under the norms and clichés of a purely orthodox digital cinema, aspire to a praxis that is able to assert a temporal line to the future? The world of digital acceleration and instantaneous communication has, according to many theorists, locked us into an impasse defined by an ever-expanding present, a world, as Franco Berardi (2011) argues, without 'belief' in the future.[2] Against this, I have posited a digital cinema that deploys a language of the 'code' which unlocks stasis through harnessing

affective flows – presubjective movements of mind and body – which are not at all complicit with generic emotion, nor with imprisoning life in a sterile 'now'.

Digital cinema announced itself technologically at the end of the twentieth century in commercial films shot with digital cameras or via special effects created with computer generated graphics in post-production. The former type undoubtedly enhanced the mobility and embodiment of filmic styles whilst the latter prodigiously augmented the imaginative possibilities that the image could sustain. Yet the possible, as Deleuze says, lacks a truly creative force in being already fully constituted but simply deprived of existence – a facade we can detect in many of these early digital films where, notwithstanding a surface sheen, the conventional morphology of narrative, affect and image is, at root, rarely touched. Instead, to derive the genetic source of creativity Deleuze proposes that we need to look not at possible outcomes, but 'upstream' at the multiplicity or potential drawn from the virtual. Therefore, in order to differentiate between this category of digital film that explores more fully the potential of the virtual and those that merely entertain the possible, I adopt the notion of the 'digital Idea' which is defined by the properties of the digital and algorithmic operations. These properties, I suggest, are just such a source of potential and invention, liable to induce disruptive effects, but creating at their limit a connective-disjunctive zone of intensity open to contingent futures.[3] Whilst remaining repressed in most film texts of the pre-millennial period, this veritable 'difference of the digital' emerges finally in what I call the cinema of the *digital interregnum*, a new typology of film arising between the dual reigns of an initial wave of flashy digital productions in the nineteen eighties and nineties, and today's fully integrated CGI, with a digital inclusiveness so seamless as to be almost invisible. In contrast to both, films of the digital interregnum emerge in an ideational space, individuated from an intensive combination of technological, cultural and affective forces, an irreducible zone of haecceity that Deleuze might alternatively call a 'becoming-digital'. The result of this singular convergence is a corpus of film that often defies description but that, in aesthetics and in 'spirit', harbours a metaphysics of 'digital thought', action, and transversal affect that reverberates and diffracts in varying patterns through the film-event and outward to connect immanently with the world.

Therefore, the challenges mentioned above of constructing a critical ground for digital affect and creating a space for affirmative innovation have been answered in this thesis through a rejection of the argument that digital abstraction, dissociation, and recursiveness are inherently conducive to alienation and servility. On the contrary my findings, based on the

analyses of the case studies presented, reveal a digital Idea turned towards critique, creativity, and rebirth, defined not by blind optimism or positivist agendas, but by lines of flight which, although unpredictable, rail against a politics of conformity and counteract the elements of informatic control that pervades the modern socius. What we are talking about is the beginnings of a return to a 'belief in the world'.

The search for a methodological basis through which to conduct this study involved the assessment of a number of critical approaches which have been used to interrogate the complexity of the key terms, namely 'the digital' and 'affect', in relation to the advent of a new cinematic object. Firstly, in being one of the primary theoretical approaches to the study of film, materialism has been integral in providing understandings of the industrial and economic structure of modern societies, including the important role of technology in the mediation of reality, and its relation to politics and cultural life. A materialist approach has informed the theorisation of new networks of pervasive digital control within highly technologised and globalised societies, and more recently has entered an added interdisciplinary domain in positing the agential force and self-organising tendencies of matter on a molecular scale. However, my appraisal brought out a certain deficiency and oversimplification in its notion of affect which, to summarise, defers more strongly to a concept of social 'effect'. Whilst useful in theorising ideology, the mechanistic and positivist theory of 'effect' lacks a conceptual recognition of the incorporeal and pre-subjective realm of affect. Secondly, embodied phenomenology can be said to offer a more 'gestalt' account of the relations between the 'haptic' body, the filmic image, and the embodiment of perception, with the aim of bringing us closer to a sensual connection with the screen. In effect, phenomenology conceptualises films as extensions of our experiential selves, which renders 'digitality' in and of itself invisible with respect to the affected subject's relation to the image. In other words, whilst it is true that the increased demand for captivating and immersive imaginaries facilitated by computation also renews and enhances the connection with the human sensorium, phenomenology only accepts that it does so within a circumscribed concept of anthropocentric capacities and limits. Phenomenology therefore fails to acknowledge the full implications of the incorporeality and uncontainability of the digital image, thereby increasing its forever-dependence on the human subject as the ultimate frame for hermeneutic and affective circuits, and foreclosing any possibility for the invention of new bodies and new cognition.

Both materialism and phenomenology acknowledge the importance of 'affect' in digital cinema and the new informatic landscape more generally but their respective critical traditions do not seemingly allow for it a new constitution outside of existing human spheres of epistemology or embodiment.[4] To overcome this impasse I turn to Deleuzian and Deleuze-Guattarian theoretical frameworks. In a number of ways, the approaches offered by their philosophy, whilst in no way anthropophobic, can be seen to remove the body from an autonomous human-subject anchorage and view it in both 'cosmological' and 'molecular' terms. This subsequently releases affect from overly vague psychological determinations meaning that it can be analysed in phasings which are themselves corporeal and incorporeal, actual and virtual. Prior to this, the Deleuzian concept of the 'movement-image', with its triumvirate of perception-affection-action has considerable crossovers with both materialism and phenomenology, moving beyond each. It stands as both an ontological model of matter and movement and, in the case of cinema, describes the way in which image-sequences extend into spectator responses governed by the sensory-motor schema. Whilst the latter mechanism guarantees a certain 'permutational' stability and reproducibility in the otherwise infinitely variable image-connectivity, the passage to the 'time-image' traverses into the full implications of a crisis in sensory-motor action and a commensurate manifestation towards statis and incorporeality in images that attest to an actual-virtual split. This in turn opens the door to an affect that reverberates with memory or pure time itself and that, ironically, can be traced in the 'surface' aesthetics generated most acutely via digital and algorithmic operations (from 'fakeness' and glitches, to series, non-sense and horizontal syntax). On another front, Deleuze's cooperation with Guattari has yielded transversal yet capacious and important methodologies of 'machinic' flows, interruptions, territorialisations and deterritorialisations which are especially productive in the analysis of subjectivised bodies captured in the regime of modern capitalism. In particular, these methodologies advance 'molecular' investigations of social change, and the process of individuation or 'haecceity' involved in various becomings. These two great forks in Deleuze-Guattarian thought – affective exchanges and social expressions – are not opposed, but are in fact dialogues or perspectives which cut across the terrain of haecceities in general; and ultimately they correlate with the digital's dual disclosure in virtual and actual forms.

In short, the Deleuze-Guattarian corpus has enabled this study to reach towards a theory of digital affect with a precision and specificity related to conditions of technological, social and affective transformations. As such it has been the central set of critical instruments used in

the analysis of my case studies to prise open their complex and disconcerting textualities in order to investigate the forms of affect and creativity catalysed by the 'digital Idea'. Firstly, *Holy Motors* shows the violent effects and dislocating affect of globalisation. The digital decoding/recoding impulse radically inhibits pre-packaged pathos, reconfiguring the clichéd images of the 'now' and inviting new connections between social, cultural and economic incompossibilities. Considered as a series of discrete events, in the Deleuzian sense of individuation and genesis out of intensive sites, *Holy Motors* harnesses the digital Idea in a permutational ordering and juxtaposition of incompossible worlds, signalling that the dynastic reign of globalisation, with its violent and intolerable effects, is a digital epoch and by definition a transient phase. Additionally, the inserts or digital 'ticks' from Marey and Muybridge's not-quite-moving images, serve to draw out the aspect of 'firstness' that both undoes the 'tyranny' of a globalized code, and at the same time invites an endeavour of excitement and discovery locatable at the dawn of cinema.

Secondly, horror cinema is a genre which has especially profited from digitalisation, not only in production economies but also with the introduction of ultra-mobile cameras and imaging technologies that can pursue, distort, and cling to bodies as they suffer their most dreadful corporeal and incorporeal affections and violations. In particular, 'body-horror', a sub-genre whose *modus operandi* is getting 'under the skin' of hapless victims, gains a new meaning and a new lease of life with the digital Idea of the cellular recombinant. The case studies selected in this chapter spawn from the great tradition of Italian horror and *giallo* films from previous decades, deploying digitality in microbiological framings to illicit their different brands of terror. In both cases the microbiological is conceived as primal matter vulnerable to pathological mutation which lies at the root of bodily degeneration and possession. The digitally atomised body becomes an intensive zone for this mutant becoming – the locus of affective force – combining the cellular and the digital 'superfolds' into one machine. Both the microbiological and the digital open out a primary ground of creative and unpredictable connection which exposes matter and image to experiment culminating in a 'symptomatology' that manifests at the social level. The operation of the glitch in *H_2Odio* is the genetic/digital mechanism which reroutes affect into unpredictable action. On the other hand, the biopolitics of the contemporary in *The Gerber Syndrome* expands the frame of reference onto the social arena as a whole. Even as the dictates of horror must necessarily lay out its terrain in destructive beats, the synchronous microbiological/digital affect depicted in both films activates novel individual and social beings which, in themselves, provoke a

biopolitical critique raising the question of a new image of ethical conduct and relations emerging out of the virtual itself.

For its part, *Upstream Color* is a film that also takes bodily change as its focus. In so doing it reconfigures the traditional love story into a journey 'upstream' from the outward expressions of romance to explore a realm of primary causes and pure affect. The bilateral synergy between affect and the digital that allows for this move upstream confers another possibility – an affirmative, connective, and expansive notion of love over a possessive and conformist one. Love at first sight now has a material base in sub-cutaneous, molecular and hormonal changes – variations picked up, antennae-like, by the partner who senses, who is primed to sense. The new, experimental formations of love in *Upstream Color* finally express in a joyous, dazzling image of inter-species affection.

Lastly, the case studies conclude on the pivotal topic of temporality and the digital. If we have seen a decisive explosion of interest in cultural depictions of time-travel and associated multiverse narratives in recent years then this may well be a synergistic expression of digital principles such as abstraction, repetition, loops and glitches, as well as the vertiginous outputs of fractal algorithms and the plunges into pure time invoked by virtuality *per se*. My analysis of *The Fountain* encounters an aesthetic architecture which demonstrates mathematical or crystalline recurrence, creating a confusion of past, present and future and a communication across the surface of event that compels affect into thought. The film uses a recursion of the same 'character' individuated over three different epochs, where intensively affective lives play out in a probabilistic field giving them a chance to choose again. Affect here resides most acutely across the many interruptions and recursions, showing the chance-based splitting of time and the genetic principle of the new. *The Tree of Life*, on the other hand, uses horizontal, syntagmatic editing to constantly question 'subjectivity' in the face of the virtual of pure time, creating an immanent plane of life from which a new ethics of connection could arise. The 'enigma' of *The Tree of Life*, then, is not about discovering the key to contemporary alienation under the auspices of memory or theology, but understanding the productive possibility of divergent paths: the open prospect of the future, and likewise the material inventiveness of time.

It will be seen that the entirety of case studies exhibit a sustained and idiosyncratic 'creativity' whose invention is often met with critical antipathy or confusion from film reviewers. I propose that it is precisely the disjunctive effect of the digital Idea that, although

difficult to reconcile within orthodox empathetic parameters, nevertheless results in an affect that is connective, transversal, and generative *in extremis*. As previously mentioned, digital infrastructures have long been taken as controlling and commodifying forces within contemporary capitalism. For this thesis, the point of these films is not to argue for a liberating streak or progressive dividend in digital cinema. Rather it is to tease out the potential for rethinking ethics and action which stems precisely from the unpredictable, effusive and procreative beings which are products of characteristics of recursion, disjunction, and multiplicity. In a study of Deleuze's engagement with the digital, Deni Mischke (2021) adopts a simple definition of the algorithmic as "algorithm = logic + control" (605). According to this formula control and efficiency are by nature part of algorithmic characteristics leading to ever-increasing levels and powers of self-modulation and social restriction. While these programmes and processes are undeniable features of a present informatically driven society, I would like to propose another definition of digital processual algorithms as gate-multipliers where each control point is followed or coupled with a point of possible departure, junctures which would act as an opening or 'line of flight' as Deleuze and Guattari were given to say.[5]

The denouement of all the films analysed in this study reject the old Hollywood model of the unbridled 'happy ending'. Indeed, there is a systemic (and necessary) violence to digital affect that surges through the case studies, as they work through their mixture of dire and melancholic warnings.[6] But this is not to say that the films present a 'dead end' in their various dramas of the human condition. It will be noted that each of the case studies finishes with a renewal of the body, which can be a case of fusion with matter, or redemption of spirit, or even new possibilities of becoming-animal. If only the horror films singularly seem to deny openings for ethical rebirth, then this is surely a question of generic imperative; but even here the two films in question restore to the body a newly 'open' inhabitation. In all cases, the affirmatory vision – detectible in sparks or swathes – is not a banal or unwarranted hope, but rather a new release towards the future, akin to spirit, or the virtual.

Within this research I have sought to present arguments for an exertive view of digital cinema which presents not only the transformational potential in the digital Idea but ultimately the regenerative principle of affect itself. It is precisely the digital order which, when released from cliché or spectacle, oscillates between abstract potential and material exertion, affording us to glimpse the creative power of the virtual. To further this agenda, I have illuminated in my film selections the social and ethical inflections that arise as modulations of abstract

aesthetics. But if we are to presume that the digital realm has a purchase on politics *per se*, if we are to argue that it has the capacity for true invention rather than merely relaying inert and intolerable visions, then taking the films under discussion as examples of digital cinema, we need to pose the question about the relation of the numerical image to a reality in dire need of such ethical renewal. In other words, the problem is how an immateriality and evanescence of image – based on an aesthetics of abstraction, disjunction and mutation – finds its way back into an active body.[7] At the end of *Cinema 2: The Time-Image* Deleuze poses the same question as a deeply ethical problem, and one which fundamentally requires a response based on faith. As I have previously indicated, many cultural commentators and theorists regard with suspicion a physical and humanistic order increasingly colonised by algorithmic and digital interactions. So what kind of faith or belief is required, or possible, in an informatic world apparently seething with a surface of interchangeable digital images? For Deleuze, David Hume's empiricism, which does not look for a-priori conditions of experience, enables a faith that is non-theological, nor even necessarily 'human', but exists as a belief in the 'world'.[8] According to Joe Hughes (2011), the methodology Deleuze invented to reintroduce the body into the aleatory and meditative cinema of the time-image was an experimentalism which abandoned a rational evaluation of the conditions of possible experience (the 'theorem' in Deleuze's language), and replaced it with the conditions of 'life' (the 'problem') under which something new, as yet unthought, arises (86-8).

This replacement of the certitude of logical deduction with a probabilistic feat involves a sensitivity to openings and inflections of change, a "problematic, uncertain, and yet non-arbitrary point: grace or chance" (Deleuze 1989: 175). By "grace" Deleuze is highlighting a state of being under extreme affect, and it is precisely such instances of interruption, recursion and transmutability that point to the "grace or chance" in the films of the digital interregnum. Therefore, to conclude this thesis I want to finally re-present the digital Idea as that which provides a general mechanism of experimentalism whereby models of knowledge are interrupted and a canvas of the untried is substituted in its place. This formulation may well defy the logic of narrative and character of previous cinemas, sacrificing popularity and pleasure. It may also depend on a commitment to a belief-in-the-world. Thereafter, when percepts are freed from cliché, when affect is freed from personal feeling, then we create conditions in which chance or grace can spur a new body-in-action.

[1] "[w]e lack creation. *We lack resistance to the present*. The creation of concepts in itself calls for a future form, for a new earth and a people that do not yet exist." (Deleuze and Guattari, 1994: 108, emphasis in original)
[2] See Berardi (2011) *After the Future*, Edinburgh and Oakland: AK Press. Berardi distinguishes between the modernist movements of the early twentieth century, which were centrally built on the project of the future, this idea even providing the name for the first avant-garde movement of the century, the Italian Futurists.
[3] The 'properties of the digital' are precisely those of binary and numerical systems that convert analogue information to digital data and perform algorithmic operations. They include abstraction, discreteness, recursion, determinability, incorporeality, transmutability, dissociation.
[4] Walter Benjamin's ambivalent attempt to eradicate 'aura' from machinic art can be seen as an early example of materialist suspicion towards the uncontainable flux of affect, preferring the narrower 'political' concept of effect. See 'The Work of Art in the Age of Mechanical Reproduction' (1999 [1936])
[5] 'Lines of flight' are one of the first and thereafter most repeated concepts of escape from stratification that Deleuze and Guattari mention in their tome *A Thousand Plateaus* (1988)
[6] John Rajchman (2000) considers that Deleuze presents the violence of sensation as central to the renewal of thought. "For in all art there is a violence of what comes before the formation of codes and subjects, which is a condition in an expressive material of saying and seeing things in new ways." (124).
[7] We see in the case studies how each film in its own way puts the virtuality of the digital idea back in to the body (life). In *Holy Motors*, for instance, M. Oscar's 'boss' gently chastises him over his performances, telling him that people don't believe in what they're watching anymore, to which Oscar replies that he too finds it hard to believe in it all on account of the tiny cameras. "The cameras used to be heavier than us," he complains, "Now you can't see them at all." Oscar, here expresses disquiet at the incorporeality resulting from the digital turn and the film as a whole can be seen as a series of physical responses to this problematic.
[8] In the cinema of the time-image, Deleuze writes: "Man is in the world as if in a pure optical and sound situation. The reaction of which man has been dispossessed can be replaced only by belief. Only belief in the world can reconnect man to what he sees and hears" (1989: 172).

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Filmography

MAIN CASE STUDIES

H2Odio (Alex Infascelli, Italy, 2006)

The Fountain (Darren Aronofsky, US/Canada, 2006)

The Tree of Life (Terence Malick, US, 2011)

The Gerber Syndrome: il contagio (Maximilien Dejoie, Italy, 2011)

Holy Motors (Leos Carax, Fr/Ger/Bel, 2012)

Upstream Color (Shane Carruth, US, 2013)

OTHER FILMS

Nosferatu (F.W. Murnau, Ger, 1922)

Brief Encounter (David Lean, UK, 1945)

Last Year at Marienbad (Alain Resnais, Fr/It, 1961).

2001: A Space Odyssey (Stanley Kubric, UK/US, 1968)

Hello Dolly (Gene Kelly, US, 1969)

Badlands (Terrence Malick, US, 1973)

The Living Dead (Jorge Grau, It/Sp, 1974).

Days of Heaven (Terrence Malick, US, 1978)

Zombie Flesh Eaters (Lucio Fulci, 1979),

Zombie Creeping Flesh [aka *Night of the Zombies*] (Bruno Mattei, It, 1980)

Blade Runner (Ridley Scott, 1982)

Tron (Steven Lisberger, US, 1982)

The Terminator (James Cameron, UK/US, 1984)

Orlando (Sally Potter, UK/Rus/It/Fr/Netherlands, 1992)

The Lawnmower Man (Brett Leonard, UK/Jap, 1992),

Before Sunrise (Richard Linklater, US/Austria, 1995)

Pi (Darren Aronofsky, US, 1998)

The Thin Red Line (Terrence Malick, US, 1998)

The Matrix (Lana and Lily Wachowski, US/Australia, 1999)

The Mummy (Stephen Sommers, US, 1999)

Memento (Christopher Nolan, US, 2000)

Requiem for a Dream (Darren Aronofsky, US, 2000)

Donnie Darko (Richard Kelly, US, 2001)

Lord of the Rings [trilogy] *(Peter Jackson, 2001-3)*

Irreversible (Gasper Noé, Fr, 2002)

Russian Ark (Aleksandr Sokurov, Rus/Ger/Jap/Can/Fin/Den, 2002)

28 Days Later (Danny Boyle, UK, 2002)

21 Grams (Alejandro Iñárritu, US, 2003)

Tarnation (Jonathan Caouette, US, 2003)

Eternal Sunshine of the Spotless Mind (Michael Gondry, US, 2004)

Deja Vu (Tony Scott, US/UK, 2006)

Into Great Silence (Philip Gröning, Fr/Swi/Ger, 2005)

Transformers (Michael Bay, US, 2007)

Paranormal Activity (Oren Peli, US, 2007)

I Am Legend (Francis Lawrence, US, 2007)

Contagion (Steven Soderbergh, US/UAE, 2011)

Source Code (Duncan Jones, US/Can/Fr/Ger, 2011)

Wall-E (Andrew Stanton, US/Jap, 2008)

Looper (Rian Johnson, US/China, 2012)

Enemy (Denis Villeneuve, Can/Sp/Fr, 2013)

Ex Machina (Alex Garland, UK, 2014)

Predestination (Michael and Peter Spierig, Australia/US, 2014)

Us (Jordan Peele, US/China/Jap, 2019)

Everything Everywhere All at Once (Daniel Kwan and Daniel Scheinert, US, 2022)