

The perpetual movement of dots and grains: Reble, Takashi, Telcosystems, and visual fragmentation

by James Snazell July 2014)

The main focus of this essay is to analyze an exploration of visual fragmentation achieved by a set of individual filmmakers using a combination of HD technology and analogue film. These filmmakers and digital moving image artists are Jurgen Reble (Bonn, Germany), Makino Takashi (Tokyo, Japan), and the Dutch collective Telcosystems (Rotterdam, Holland), consisting of Lucas van der Velden and the brothers Gideon and David Kiers. It can be seen that whilst these filmmakers have worked independently of each other in terms of being based in different places, and for Reble in terms of being part of an earlier generation and thus coming to filmmaking before the others, their exploration of a visual language of fragmentation using a combination of the mediums of analogue and HD digital film ties these filmmakers together. It is noteworthy that all of these filmmakers have used a combination of these mediums that can be traced back to their work in 2008, which is when HD gained universal prominence and affordability.

The work in question by these filmmakers explores a fragmentation of visual information by looking to push various digital and analogue film techniques to an extreme, resulting in work that consists of an ever-changing flux of highly complex patterns. These artists have achieved this by utilising techniques that foreground the materialism of both the digital and the filmic: from the grain and emulsions of celluloid to the pixel structure and surface textures derived from digital formats.¹

For the viewer watching works by these artists there is the sense that aspects of both mediums can be seen simultaneously, particularly the material components of analogue film that are able to be analysed, assessed, dissected, and reformulated in various ways and the imprint and impact of the digital format, such as digital image processing and pixel-based compositing, that place a spatio-temporal flexibility and multi-dimensionality not acquirable from analogue film when used on its own. In this way their work has a ‘film-digital hybrid’² quality that evokes both the digital in the filmic apparatus and the filmic in the digital algorithms, with an understanding of such a crossover coming from an exploration of the work on a material and technical level and which acts as a foundation for the appreciation of the work.

These combinatory techniques largely result in the ever-changing flux of highly complex and abstract shapes that testify to the co-existence of and the continual interaction between the material traces of both mediums. The filmmakers look to blur the boundaries between film and digital technology and through doing so achieve a level of fragmentation, which is not possible with either format individually. In some ways this ever-changing flux and fragmentation reflects a shifting landscape of experimental cinema production that includes a range of diverse formats, mediums, outputs, and outcomes. This in itself reflects a culture where digital technology offers endless variations and possibilities and a volume of imagery the level of which gives a complexity, density, and a sense of fragmentation not seen in previous decades.

Jurgen Reble is the oldest of these filmmakers. He first began producing work which was with the German filmmaking collective 'Schmelzdahim', composed of Jochen Lempert, Jochen Muller, and Reble. From 1983 to 1989 the collective produced over 20 short films using unconventional processing techniques. With the Schmelzdahim collective Reble developed a repertoire of processes and a practice that he has been developing and shaping in his individual work since the mid-1980s. Such a repertoire included transforming 16mm and 8mm found or original footage by way of bacterial processes, weathering, and chemical treatment during and after development.³

In Reble's work the representative content of the footage is combined and moulded with his post-production processes, allowing the film itself to become raw source material for a transformation to the point where any narrative construction rather than taking centre stage either goes through a fragmentation process such as through the use of loops sitting alongside the transformative processes or becomes hidden by the texture on the film that is created. For his *Instabile Materie* (1995), Reble exposed the 16mm filmstrips to crystallising salts and other chemicals, to the point where the results show a network of lattices and patchwork aggregations that start to define the chemical and molecular structures of the salts themselves. His work becomes a visual expedition into crystallised salts and dyes, which emerge as remnants of the act of processing and that constantly change rhythm and structure between frames. These 'chemograms',⁴ as Reble describes his work, are made by unique alchemical transformations of the film material itself, so that what the viewer is witnessing by looking at the film whether in terms of the static individual frames as images or whether in terms of witnessing the movement of the frames when run through a projector is not necessarily the representative content of the frames themselves. In the fragmentary process of the film emulsion itself; the viewing of the film becomes an appreciation of the realism of the materialism of the film, whereby it comes to denote itself rather than the film looking to represent anything else.

There is a sense that as film the work acts as a ready-made, or more correctly an assisted ready-made, in the sense that the fragmentation that occurs is initiated by Reble by way of an initial process, whether this is in terms of applying chemicals or by way of initiating natural processes on the film strips. Beyond this, the work is created by chance and accidental discovery from natural causes that transform the celluloid beyond Reble's control.

For *Materia Obscura* (2009) Reble revisited *Instabile Materie* by digitizing the strips of the film, frame by frame, creating 25,000 high-resolution scans which became the visual source material for *Materia Obscura*. In the process of digitizing the work he was able to reorder the original imagery. In so doing Reble discovered new patterns in the older materials, and by digitizing his analogue work he was stepping away from creating a work that denoted itself – by creating a digital copy of the original analogue film. There also exists on the other hand the argument that in digitizing the work the digital version again becomes a distinct entity from the original analogue filmstrips by way of utilising the features of digital technology in order to create a distinct piece of work. For instance, through using the digital format and computer editing software Reble was able to slow down the speed of the images, allowing the viewer a closer look at the sequence of events in terms of the natural changes occurring on the original film's emulsion. The resultant work can be seen to be morphology between film emulsion with its embedded substances and the techniques of digital technology, with Reble using both formats to explore the development of a visual language of fragmentation.

The logical conclusion of the process of fragmentation in Reble's analogue celluloid work would be the total destruction of the filmstrips themselves. Either through chemical, weathering, or bacterial processes they would disintegrate to the point of becoming dust; or, by running the celluloid strips through a film projector to the point where the frames would melt. In digitizing the filmstrips the process of fragmentation of the liquid mutations is captured and frozen by way of an arrangement of pixels before it reaches the complete physical collapse of the celluloid film.

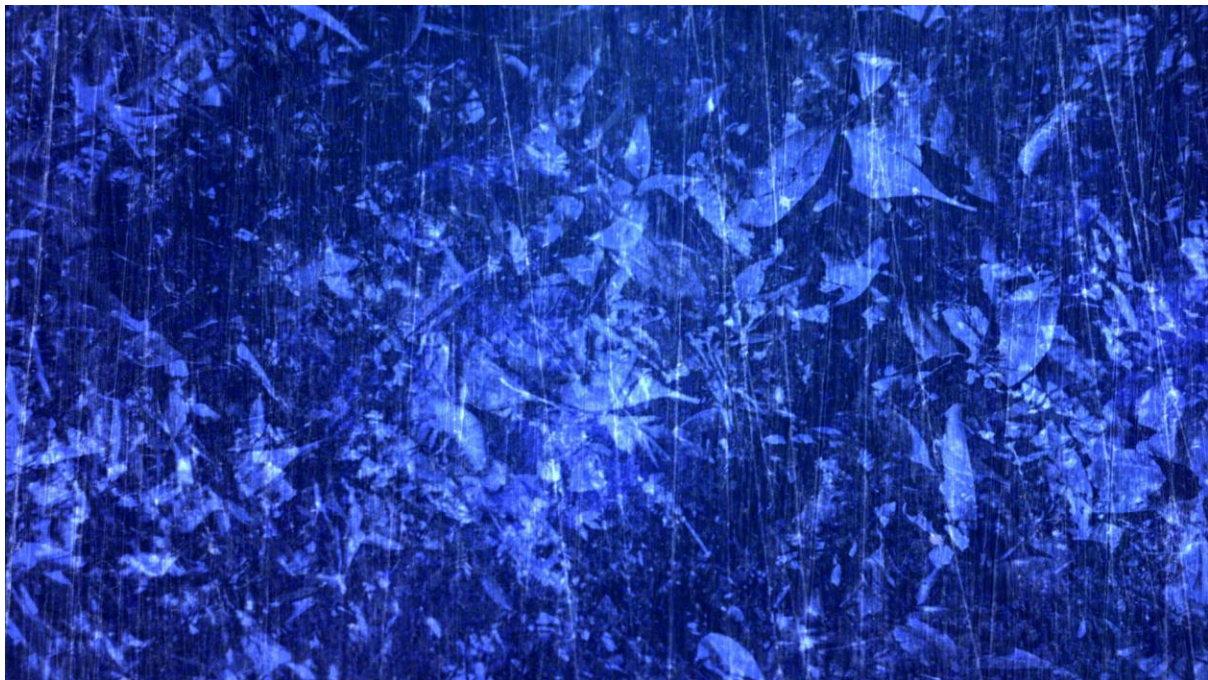
This allows the viewer the chance to see the fixed digital endpoint after the chemical process has happened by further highlighting the glory of the fragmented mutations by way of utilising the ability of digital technology to slow down movement and create transitions between individual frames. It could be argued that the digital process is an afterthought to what Reble has achieved, in the sense that the resultant digital moving image is paradoxical in that it is trying to fix something that as an event is a process of continual change, a live chemical experiment that has occurred and to which it has now become arrested, seized, and secured. By scanning the work frame by frame and thereby fixing the process of disintegration, Reble is able to use digital technology to allow the individual images to morph, mutate, and transform, as a result highlighting a fragmentation process not attainable with film alone. In such work it is difficult to say whether the analogue film aspect or the digital moving image aspect takes greater prominence; neither takes centre stage over the other. Whilst each aspect keeps its distinctive qualities there is a sense that the two connect and link, producing a mutated fragmented hybrid between the two formats. It is this connecting link between the two formats that ultimately achieves the greater prominence and holds the viewers' attention as they watch *Materia Obscura*.

Similar to Reble, Makino Takashi comes from a background of using analogue film – particularly 16mm film. He first began using Super8 whilst studying cinematography at the Nihon University, College of Art in Japan in the late 1990s. A lot of the work he has produced since 2004 uses his own footage of nature-based imagery. Takashi puts this footage through a layering process achieved in-camera through multiple-exposures, taking a shot and then rewinding the film within the camera and re-shooting. He then creates a fragmented image overlaid on top of the captured image, which, unlike Reble with his focus on chemical or bacterial processes, he achieves by focusing on using various handmade processes of scratching, painting, and sanding. In doing so Makino develops a form of visual fragmentation that he uses to mix the complex layered imagery of natural forms such as trees and water.

In his work *2012* (2013), this mixing of the two entities together allows the handmade techniques that sit on top of the filmed content to reveal and obliterate the complexity of the layering of the natural forms. Such a process is made more visually complex by transferring the work via telecine processes into a digital format, then further layering the imagery using digital software.

There is a sense in *2012* that the small detail, rather than being pushed into the background as one's brain looks to filter out what it sees as unnecessary, looks to form recognisable representative images. The detail rather takes centre stage, forcing any recognisable imagery into the background and forcing such representative imagery to act primarily as a foundation for the complexity of the detail in the foreground. For the viewer watching *2012* there is the possibility of getting lost within this complexity, as the eye and brain encounter the difficulty of being able to fix on what is being presented because of the density and the speed at which

visual information moves across the screen, which is also often highlighted by the size of the projected HD image.



Makino Takashi, 2012 (2013). 35mm, 16mm, and 8mm transferred to HD. Courtesy of the artist.

This response that the work has of causing a schizophrenic effect on the brain by not allowing it to discern and filter out the complexity of visual information being presented to it could be seen as nightmarish, visually unpleasant, or even boring. However, there is also the possibility for the viewer to be mesmerised by such complexity, with the brain freed from particular kinds of perception. Such a dichotomy relates to notions of the sublime and taps into a whole tradition of 19th century painting, such as J.M.W. Turner's *Snow Storm – Steam Boat off a Harbour's Mouth* (1842) or Caspar David Friedrich's *Wanderer above the Sea of Fog* (1818), that demonstrated the overpowering and unpredictable forces of nature and the relative insignificance of the individual in the face of such danger. Makino's *2012* fits into such thinking, in the sense that the work relates to the tsunami and resultant Fukushima nuclear power plant disaster that occurred in Japan in 2011, which highlighted the vulnerability of the individual when faced by such a natural disaster;⁵ also, in the sense that Makino's intervention on film by hand echoes some of Turner's techniques of applying paint onto the canvas (he was known for using his hand and other tools to manipulate, scrape, or scratch the surface of the canvas).

With such handmade techniques, as with Reble's ways of manipulating the surface by using various chemical processes, these procedures can also be seen to yield outcomes that can be considered sublime, by way of both filmmakers setting up initial systems that are then allowed to yield widely diverging outcomes. As Makino describes, 'to take images into a territory even I cannot foresee and allow them to flourish in their new environment'.⁶ Such complex, fragmented, chaotic behaviour that result from simple behaviours within a system can be seen to reflect the study of scientific processes observed in many natural systems, such as weather and climate.⁷ This also includes other entities such as electronic noise, which is often considered as an unwanted by-product, as in audio or visual noise such as the 'snow'

seen on a degraded television or video image. In signal processing or computing, electronic noise can be considered data without meaning, with noise seen to block, distort, or change the meaning of a message in both human and electronic communication. Such a form of fragmentation could be seen as a way of blocking out or distorting any kind of meaning or message. However, for Makino such a blocking of a form of representation and meaning allows him to explore realism on a micro level in terms of the material itself, both in film and the digital format. Makino uses the digital format in order to help describe a visual landscape that is constant and repetitive but also unstable and multimodal by nature, only revealing itself through bits and pieces travelling at superluminal velocity. At these speeds even the slightest fluctuation or disturbance unleashes a cascade of shape-shifting patterns of sono-optical movements; a kind of constant and repetitive turbulent chaos is revealed.

This way of working can be seen to fit into Peter Gidal's essay 'Theory and Definition of Structuralist/Materialist Film' (1976), whereby he lays out the terms of materialist filmmaking as 'non-illusionist' and as a political practice that disrupts the mechanism 'of identification' characteristic of the commercial 'cinema of consumption'.⁸ Almost four decades later and in the context of digital imaging and celluloid obsolescence, the terms of this argument have shifted considerably. Contemporary materialist film is arguably no less political, whether consciously or not, but now it is almost inevitably positioned as a response to the changing landscape of moving image production.

The working methods of Makino and the others mentioned in this essay fit a way of thinking that has the possibility of impacting filmmakers who continue to look to engage with producing film in such a changing landscape, where film production has become obsolete in the mass market. What is occurring now that is different is that filmmakers are bringing not just concerns and undertakings first explored with photochemical film 30-40 years ago but also considerations and thinking that comes from digital culture and the digital medium itself. That gets taken on board consciously and unconsciously through the daily use and consumption of digital technology and images. As film processing looks to continue (and if it is to continue) in whatever small and cottage industry form it may take, it will do so through the prism that is digital culture and technology and will be influenced by such a culture, even if it is as a reaction to it. For instance, such an impact includes the ways in which digital culture looks to mix low-fi with high-resolution imagery, a mixing of the rough with the smooth, of looking to mix the faults and mistakes that occur both within the digital and celluloid film format (over-saturation, scratches, blown-out areas of the image/clipping, etc.) with the predictability, controllable nature, and sharpness of high resolution and bit depth that comes with high definition. There is a lot of moving image work created that looks to take the edge off and step back from what might look like ultra-sharp and ultra-crisp digital moving imagery, by way of practices that highlight and give the impression of low quality in order to produce particular aesthetic effects.

| The Rotterdam based collective Telcosystems create digital software that enables them to compose real-time self-structuring, generative processes that they output either in terms of installations or films by way of a digital format. A moving image work that gave them greater recognition on the experimental film festival circuit was a piece called *Loudthings* (2008). They describe this piece in the following way:

'Loudthings' is an audio-visual account of an expedition into the inside world of the computer. Using a set of elementary instructions such as modulation, masking, and feedback, programming a self-organizing network of algorithmic processes for the

creation of spatial image and sound. The result is a non-referential world which strains the senses; an exploration along the borders of human perception, through worlds of multiplying and mushrooming clouds of light and sound, through worlds of mesmerizing spatiality and interfering landscapes.⁹

One would be forgiven for thinking this work is a purely digital exercise, except for the fact that the screening format for this work is 35mm film. Telcosystems in this work take a similar route to Reble and Makino in that they transfer one format to the other exploring the way different formats impacts on each other. Yet they take an opposite route to Reble and Makino: rather than translating film into a digital format they take the digital format and translate it into film. This gives the initial digital work a power that is not inherent when viewing it in a digital format, by way of a kind of colour depth, contrast, and saturation that is specific with film.¹⁰

Telcosystems used such a process of transferring digital to film and looked to further explore the ways different formats impact on each other when they collaborated with Makino Takashi to produce the work *Deorbit* in 2013.¹¹ Such collaboration allowed Telcosystems and Makino Takashi to develop their own individual procedures of combining film and digital techniques by linking and looking to combine aspects of their own practices together. 'The idea of the *'Deorbit'* composition was to go from outer space, from the cosmos, to inner space, into the cosmos of particles to give the sense of moving from the largest to the tiniest space and by doing so look to enter the grain of the material itself.'¹²

Deorbit looked to investigate the transition from the analogue to the digital world by exploring the different resolutions of different formats, from 4K to very rough pixelated material, as well as from the physicality of film grain to the virtuality of digital resolution. The work looked to explore the transitions between these different states or phases. As Lucas van der Velden of Telcosystems explained,

the Vertical Cinema project is also an invitation to examine the history of formats and carriers, so we used super low-res materials and super hi-res materials and fused them into a very complex, layered environment. It was interesting to experiment with all these different approaches and media to discover how they could be brought together.¹³

All these different formats and media are brought together in this work and in terms of the other work discussed in this article, by way of the development of HD and rendering power. It is easy to forget that HD and greater rendering power is now ubiquitous within everyday culture, though in actual fact it has not been around for that long (initially in 2003 on a mass market level and gaining universal prominence around 2008). Such a time frame also reflects an increase in affordable and greater processing power and greater storage of data. It is no surprise that the work discussed in this essay developed from this time period. High definition has allowed a resulting image that has a density of visual information not previously seen before. Whilst on the one hand HD may be rejected in preference for the warmth and grain of analogue film, at the same time it is accepted for its ability to forward a complexity and possibilities not achievable with celluloid film. There is a sense that Telcosystems and Makino Takashi use 4K and various digital software and technology as a platform to process, edit, composite, and render different material together. There became three stages to their working practice for the production of *'Deorbit'*: the first is gathering and collecting all the different material, whether film or digital; the second is feeding this

material into the digital workhorse; and the third stage is the viewable, finished output of the work in this case as analogue film. Telcosystems and Makino Takashi look to take and in a sense amalgamate different aspects of both formats to work through the production and output of the work.

High definition offers contemporary experimental filmmaking ways of thinking through the current status of film by foregrounding an aesthetic of materiality that speaks directly to the impact of the digital. This happens, in terms of the filmmakers mentioned, by an engagement with a shifting fragmentation, which can be seen to relate to the changing landscape of cinema production. The work mentioned in this essay can be seen to point toward a way of thinking that relates to a sensibility of the sublime that looks to foreground matter itself and that which is unknowable. High definition has become the central format in a digital culture that is often defined as total banality and a vacuum that is a surface of nothingness. Makino Takashi, Jurgen Reble, and Telcosystems look to reflect this in their work by exploring a fragmentation achievable with high-definition technology and analogue film. At the same time through such a process of fragmentation they look to give a new sense (of meaning) and creativity to encounters with the limits of the visible, exploring that which goes beyond everyday perception and dominant modes of seeing.

Author

References

‘Interview with Makino Takashi & Telcosystems: In the Eye of The Machine’, 2013: http://verticalcinema.org/film_filmakers/deorbit/.

Cain, N. ‘From Micro-Organisms to Planetary Nebulae, the Films of Takashi Makino’, *The Wire Magazine*, Issue 364, June 2014: 21.

Gidal, P. (1975) ‘Theory & Definition of Structural/Materialist Film’ in *Film theory: Critical concepts in media and cultural studies, volume 4*, edited by P. Simpson, A. Utterson, and K.J. Shepherdson. London: Routledge, 2003 (orig. in 1975): 149-170.

Hamlyn, N. *Film art phenomena*, 2003.

Le Grice, M. ‘Art in the Land of Hydra-Media’ in *Experimental film in the digital age*, 1998.

Reble, J. ‘Chemistry and the Alchemy of Colour’ in *Poetique de la Couleur*, edited by N. Brenez and M. McKane. Paris: Auditorium Du Louvre/Institut de L’Image, 1995 (orig. in 1996 translated from German to French by M. Gandaras).

¹ Both Reble and Takashi come from a background of using 16mm and 8mm and see themselves as filmmakers who have brought the HD format to the filmmaking process. Telcosystems comes from a background of creating digital moving images and have brought the analogue film process to the digital medium. Reble and Takashi see their working practice as fundamentally different to Telcosystems, yet there is a similarity in outcomes that tie all of them together by producing work that can be seen as a flux of ever-changing patterns.

² Such work recalls the discussions of Malcolm Le Grice's essay 'Art in the Land of Hydra-Media' (1998), taken from his text *Experimental Film in the Digital Age*, also Nicky Hamlyn's book *Film Art Phenomena* (2003).

³ 'The final years of collaboration with Schmelzdahin were primarily dedicated to the study of those chemical processes that unfold during and after film developing. First of all, we conducted colour film experiments involving: changing the hydrogen potential of the colour developer, introducing deviations in important temperatures among different baths, brutally interrupting the printing process, and rinsing with chemical baths not permitted by the standard procedure. These operations brought about quite a series of intriguing results such as: the shift of overall colour balance to a single colour, several false solarisations, alteration in grain, and even the loss of layers of colour.' (Reble 1996)

⁴ The term 'chemograms' can be seen to derive from the artistic medium conceived by Peyton Richmond Russo in the early 1970s, in which the artist brushes development chemicals onto sensitized photographic paper in a darkroom. Each chemograph becomes an original creation, an end in itself.

⁵ 'Of Makino's abstract films, the 30 minute "2012" is unusually political in intent. "As everyone knows, Japan is in a period of decline," he [Makino] elaborates. "Radiation rains down on us, our prime minister is insane. I used the sound of Geiger counters. There are cameras at the Fukushima nuclear power plant that you can look at online, so I used some sound from there too.' (Cain 2014)

⁶ Ibid. p. 20.

⁷ This is highlighted by the fact that Makino refers to many of these natural systems as source material for his work, in terms of imagery such as trees, water, and cellular and astral structures.

⁸ Gidal 1975.

⁹ Light Cone Distribution, Diffusion et Sauvegrade Du Cinema Experimental Online (<http://lightcone.org/fr/film-6446-loudthings>).

¹⁰ Such a process of transferring digital to 35mm film is one that has been used for a long time in the feature film industry. The original footage is shot on 35mm motion picture film and then digitally scanned into a computer-based editing system. The resulting files are then edited together digitally. The final result is colour corrected and printed back to film using a high-resolution film recorder. An advantage of such a process is that the output can be projected using lower-end film projectors with results that rival high-end digital gear.

¹¹ An advantage for Telcosystems in using such a system is that the work can be created completely within a computer without the need for the source material to be captured on film and then outputted to 35mm. At the time *Loudthings* was produced, in 2008, it would have given a different look to the digital version, with the effect of softening the edge of the initial digital composition. Although in 2013, with the development of HD and digital technology, there probably is not that much difference between digital and 35mm film formats, though the film format will always contain a certain warmth not attainable with digital.

¹² *Deorbit* was one of a series of ten newly commissioned, large-scale, site-specific works by internationally renowned experimental filmmakers and audio-visual artists which were presented as the Vertical Cinema project. All ten projects used the Telcosystems technique of transferring work onto 35 mm celluloid, and all the work was projected vertically with a custom-built projector in vertical cinemascope. The Vertical Cinema project had its international premiere on 24 January 2014 as part of the International Film Festival Rotterdam.

¹³ 'Interview with Makino Takashi & Telcosystems: In the Eye of The Machine', 2013, http://verticalcinema.org/film_filmmakers/deorbit/ (accessed on 23 January 2014).