

FULL COLOR VIDEO

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The following is a short account of three related videos that I made between 2004 and 2007 [1]. These videos arose out of a practice-led PhD project based at the Royal College of Art in London.

I began my project with the intention of working through an investigation of the implications of structural/materialist film theory, and related practices, in the context of digital video aesthetics [2]. Initially my efforts were taken up with thinking about how concepts relating to representation and indexicality might be reformulated to fit what seemed to be the most pressing issue concerning digital media. This preoccupation manifested itself in a video that I made entitled *Black and White* (2001) in which the difference between minimalist camera-recorded imagery and stark graphic compositions is difficult to disinter. Later I put aside my camera and began making work that used material that was generated wholly within the computer.

Colour Bars (2004) *Thirds* (2006) and *New Ratio* (2007) each deal with investigations regarding the interplay between color, movement and abstract form. Each piece draws on the same palette of colors provided by the 'color bars' associated with the standard television test signal. In commenting on these videos Sean Cubitt has suggested that the equal mixture of additive and subtractive hues (derived from the color bars) could be described as 'a democratization of color' [3]. The test signal image comprises seven stripes of equal width. From left to right these stripes are white, yellow, cyan, green, magenta, red and blue. This sequence runs through the seven possible combinations that use at least one of the three basic color components of red, green and blue: blue cycles on and off between every stripe; red cycles on and off every two stripes; and green is on for each of the first four stripes and off for the last three. The videos that I will discuss here involve a rather different type of weaving.

Colour Bars

Colour Bars perverts the function of the stable test signal by rapidly cutting between different configurations of the image. In certain sections there are two layers of video superimposed, which

suggests a palette of twenty-eight colors, but the pace of the cutting - together with the effect of visual persistence and the afterimages that are induced - makes it impossible to say how many colors one might actually see. Besides the aesthetics of color mixing, I was also interested in the relationship between the perception of movement and form in this piece, especially in relation to 'intervals'.

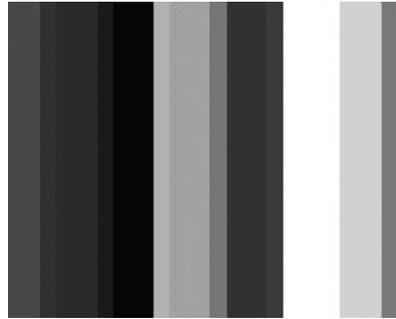


Fig 1. *Colour Bars* (2004, video, 8 mins)
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To use an analogy from painting, the lines along which the seven colors are butted up could be described as intervals. Certain paintings by Gene Davis, Ellsworth Kelly, Kenneth Noland and Bridget Riley work along these lines. Some of Josef Albers' didactic studies also advocate using vertical stripes. In this configuration the color seems 'almost shapeless', he suggests, and hence it is the 'interaction of color' that one attends to rather than the interaction of form [4]. In *Colour Bars* there are intervals between the colors in each frame, but there are also time-based intervals between one frame and the next [5]. What one sees in the video isn't exactly the movement of the color bars, but the interaction of color along lines that apparently weave between frames.

Besides some analogies with the aesthetics of modernist painting, another reference point is early abstract cinema, particularly the films of Walther Ruttmann and Hans Richter. The most significant aspect of Ruttmann's *Opus II-IV* (1922-24) and Richter's *Rhythm 21* (c.1924) is that the apparent motion in these films is due to an engagement with the edge of the screen rather the animation of given forms. This was key for Richter especially: 'When I say that there is no Form in *Rhythm 21*, I mean that by taking the whole movie screen, pressing it together and opening it up, top, bottom, sides, right, left, you don't perceive form anymore but movement [6]. The contingent nature of form in *Rhythm 21* and Ruttmann's *Opus II-IV*

prompt numerous questions concerning the object of perception. In my own work I have been interested in the paradoxical nature of the moving image, rather than the movement per se, which was clearly a preoccupation for Richter. At the same time, in problematizing the perception of form, *Rhythm 21* does also suggest a inquiry into the way that movement is perceived: motion is usually attributed to form for example.

Thirds

Thirds is a piece that I made during my involvement with the *Moving Frame* research group at the Royal College of Art; a project that involved staff and research students who came together to look at the 'changing concept of the "frame" as it migrates from film through to its more abstract and even mysterious fate in video and digital media' [7]. *Thirds* refers to two types of frame: the frame as the edge of the projected image, and the frame as a timebase. It is a piece that was specifically made for superimposed projection, involving two projectors that are aligned so that their frames overlap by a third. Each projector shows a cycle of color fields made up from the same set of primary and secondary colors (plus black and white) that are used in *Colour Bars*. A third set of colors is mixed by the overlap of the two projected images. In the first cycle of color fields each image lasts 21 frames; in subsequent cycles the duration is reduced to 13 frames, then 8, 5, 3, 2 frames and finally 1 frame.

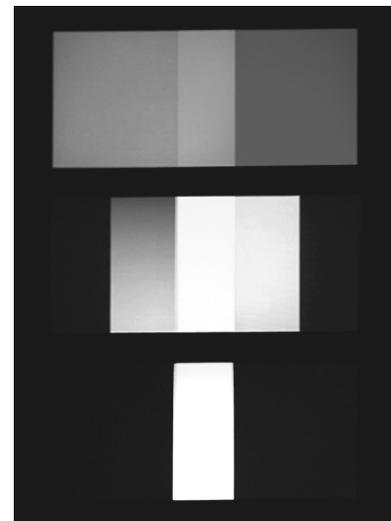


Fig. 2. *Thirds* (2006, two-screen video projection, 9 mins) © Simon Payne

At first the color fields are rectangles that fill the full 4:3 dimensions of each of the two projections. They begin to

contract and then expand again in a concertina-like fashion, alternating between full frame, two-thirds size and one-third size. By the end of the piece it is only the central superimposed section that remains. The overlapping projections and the effect of visual persistence both make for a form of color mixing that is 'additional', but it's as if one occurs on the surface of the screen and the other in the eye. As the pace of the color cycles increase, the overlapping region of the screen becomes progressively brighter, and by the end of the piece, when it's nearly white, it seems to stand out as if raised from the rest of the picture plane.

The nature of the movement that's perceived in *Thirds* changes over the course of the work's duration. The timing of the left and right channels is slightly offset, and it is this discrepancy that effects the first sense of movement. In the opening passage of the piece, a domino effect sweeps across the screen from one side to the other, by way of the two edges that define the superimposed section. (As in *Colour Bars*, the motion seems to be attached to edges rather than the shapes that contain the color). In the later phases of the piece, the illusions of lateral movement also begin to incorporate depth: the darting movements across the surface of the screen, which become increasingly frenzied, sometimes appear to circle the central region of the screen. It doesn't seem possible to adequately account for the apparent motion that one sees in *Thirds*, but it is the uncertainty surrounding what one perceives that is most interesting to me [8].

The characteristics of *Thirds* that relate to color, shape and duration are all reliant on calculated (digital) structures: each color is derived from a palette where hue, brightness and saturation have a specific value; the shape of the color fields are rectangles measured in pixels; and the overall structure of the work involves the counting and sequencing of frames. All this is evident when watching the piece. But as it unfolds, the color fields cease to be discrete in value or shape, and the separate cycles give rise to illusions of movement that the viewer isn't able to fully grasp. What's apparent, therefore, is a tension between the structure of the work and its effects – a tension that induces a reflexive form of spectatorship.

The expanded frame that the two projectors describe, at the beginning of the piece, approaches 'wide-screen' proportions that incorporate the viewer to some degree. In addition, the color that is re-

flected from the screen affects the space in which it's projected. But rather than reproducing the conditions and environment of an immersive encounter, which is a characteristic of mainstream cinema, the edges of the image are reinforced by the centripetal and concentrated dynamic of the work. This is another characteristic of the piece that implicates a reflexive relationship between the viewer and the screen, and it is a strategy that I reused in my next video *New Ratio*.

New Ratio

New Ratio is the first piece that I've made that explicitly explores the move from the 4:3 screen ratio to 16:9, which is now effectively the standard for broadcast television and video. The color fields that comprise the work involve a tense relationship with the edge of the screen. Each color is on-screen for 2 frames and its dimensions are in the ratio of either 16:9 or 4:3. They either fill the screen, or are scaled down, as in the diagram below.

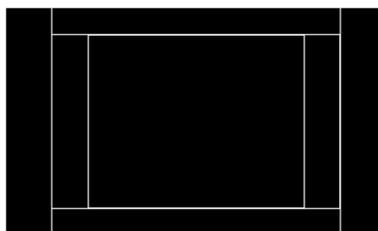


Fig. 3. *New Ratio* (2007, video, stereo sound, 2 mins) © Simon Payne

Each color was also assigned a particular tone: white was attributed a standard 1KHz test tone; the pitch of the tone attributed to blue was half that of the test tone; and each of the colors in between (in the color bars spectrum) were attributed tones at intervals between these values. There is also a 'pip' in the soundtrack every time there is a cut. This sound was the result of a glitch, but it has become an integral part of the soundtrack. The video comprises two simple repeating sequences, which are fundamentally the same duration. However, one sequence includes one extra frame of black, which throws them out of synch, causing a phasing that effects different mixtures of color, a range of tone combinations, and various pulsations in the soundtrack as well as within the frame.

New Ratio has much in common with the preceding video pieces that I've discussed: the relationship between form and framing is interdependent; the apparent expansion and contraction of the

color fields is akin to the motion effects evident with *Colour Bars* and *Thirds*; and eight colors are used to generate a multitude of hues via quick cutting. The key additional element in *New Ratio* is the sound. What's crucial in this video is the fundamental structure of the soundtrack. The pattern of the soundtrack correlates with the structure of the colour field sequences, but it works as a counterpoint, rather than as an illustration.

My work does correspond to certain principles associated with constructivist aesthetics (as did the films of Richter and Ruttmann) but what I have been interested to investigate are perceptual conundrums rather than the derivation and manipulation of underlying technological characteristics [9]. I work with, and foreground, certain aspects associated with the technology: the ratio of the screen; a timebase of 25 fps; and the palette of six colors plus black and white. At the same time, I'm keen for my work to set up an experience that leads the viewer to question what they perceive, and hence their interaction with the screen; making for a distanced and reflexive form of spectatorship. In this respect the ethos of Peter Gidal's "Theory and Definition of Structural/Materialist Film" and the related writings of Malcolm Le Grice have always been an important point of reference for me. The three videos that I have discussed here, however, represent an attempt to think through strategies that are appropriate and specific to digital abstraction.

References and Notes

1. There are clips of these videos on my website <www.simonrpayne.co.uk>
2. Peter Gidal's "Theory and Definition of Structural/Materialist Film" which has had a significant influence on debates concerning experimental film, and video, was originally published in *Studio International* 190, No.978 (Nov. 1975) pp.189-196.
3. In conversation with the author.
4. Josef Albers *Interaction of Color* Revised Ed. (New Haven: Yale University Press, 1975) p. 49
5. The 'theory of the interval' is attributable to the Russian filmmaker Dziga Vertov. Given the difference between film and video technology, the concept of the interval in video needs nuancing.
6. Hans Richter, *Hans Richter by Hans Richter*, Cleve Grey ed. (New York: Holt, Rhinehart and Winston, 1971) p.132.
7. A.L. Rees, *Moving Frame*, exh. cat. (London, U.K.: Royal College of Art, 2006).
8. Apparent motion is often defined as either 'phi' or 'beta', but neither model is sufficient to describe the illusions of movement that this video gives rise to.
9. In contrast, Norbert Pfaffenbichler's video 36 (2001) is characteristic of a branch of contemporary video art that is very much about plotting the forms and patterns that digital video has given rise to.