

Movement and Potential in analog futures

Walter Benjamin, evolution of technologies, past nostalgia for present anxieties, the digital and analog dichotomy. We've heard it all a million times. The trope is as tired in experimental film circles as Boris Johnson is to British politics. How then to breathe new life into the topic? Movement and potential, concepts taken from the psychoanalytic field of affect theory, offer new scope to the field of digital to analog experimentation.

'Affect' refers to the biologically pre-programmed reactions humans have toward the intensity of new information. A wholly separate occurrence to a conscious emotional reaction. Silvan Tomkins developed this idea through close observation of infants in 1955, finding expressions of shame at a period before the infant could have any emotional concept of prohibition.¹ The delineation between affect and emotion not only occurs as we grow into self-aware beings, but also temporally in the moment. There is an observable split-second delay between receiving information (affect – the intensity of an image) and being aware to exert will upon it (emotion – subjective content). This gap in time is understood by social theorist Brian Massumi as an 'additive space' between impression and emotion. The 'additive space' allows for an accumulation of relative perspectives and the passages between them: movement and potential. Movement in the passages between the relative perspectives and potential within the unlimited perceptions that the space enlivens. Intuitively, it resounds with our experience of never resting entirely still, as too the world around us is unstill. Our eye continuously collects multiple visual impressions, and our brain transforms them simultaneously into perception. Additionally, the anticipation in-between visual impressions, extends the actual moment beyond itself, superimposing one moment on to the next.

Cross digital and analog experimentation breeds fertile ground when we apply the concepts of movement and potential. Going by definitions - Digital is associated with discrete on/off units, while analog can be defined by quantifiable and continuously variable units. Yet the distinction between the two is not so clear-cut.² Digital is inherently visual, and screen based. Even, if it is made by numbers/algorithms it needs hardware on which it can be processed. Moreover, when it comes to images, films, and our perception, the digital must connect with the realm of senses. And this is, of course, materially processed through our body and mind. Taking the example of digital sound;³ it is only the coding of the sound that is digital. The digital is sandwiched between an analog disappearance of the code and

¹ Sedgwick et al., *Touching Feeling*. p 93

² "Shaky Distinctions.", p 14

³ Massumi, *Parables for the Virtual*.

an analog appearance out of code at the listening end. We can think of them as working together - Cooperation of digital and analog in self-varying continuity.

The digital input can be seen as a derivative of the analog. Yet digital and analog imagery carry different historical expectations and associations. Analog Film reels are made of gelatin film and over time there is a chemically encoded process of entropy. The material decay marks analog film as a historical document. Artist Edd Carr iterates the feelings of physical loss situated in the past. In his public survey on the mental associations with analog film images⁴; the overwhelming answer was of a 'nostalgia for the past'. On the other hand, digital cinema lacks the same material association. The digital image is instead linked to ideas of the 'Poor Image'⁵ coined by Hito Steyerl. Anything but material, it is infinitely replicable, shareable, and compressible.

Let us now distinguish analog and digital as two different electronic impulses. They share the same ontological basis but differ in their historical association and aesthetic. There is a similarity in affect and intensity, but the emotional subjective content diverges. Flickering between digital and analog impulses, we find tension in the continuity of affect and discontinuity of emotional association. The tension and anticipation between analog and digital impulses opens up the additive space of movement and potential.

Paul Vester's 'Picnic' (1987), a music clip made for the 'Residents', demonstrates the use of movement and potential in action. Vester uses a multiplanar, to layer digital and analog impulses. We see a superimposing of 2D animated graphic characters and lines (analog) onto live-action architectural shots (digital). Digital and analog are enacted on the same image, yet they seem strangely distant, not merging seamlessly together. Photographs and illustrated figures enter a dialogue but are still ultimately meant to be read as themselves. This discontinuity between the two signals translates to Vester's messages of urban anxiety and the faceless workers that occupy American urban spaces. The layered graphic figures also operate at separate frame rates than the photographed backgrounds. The various time structures inherent to the work create disunity, both in terms of the imagined space within the work and to any sense of linear time. Movement and potential are used to both illicit emotional tension and demonstrate narrative points.

⁴ Maughan-Carr, "The Ecology of Grain."

⁵ Hito, "In Defense of the Poor Image - Journal #10 November 2009 - e-Flux."



Figure 11: Picnic – Paul Vester ⁶

Pushing the idea of flickering between digital and analog impulses I experimented with a technique of ‘filmless’ 16mm animation. A process gleaned from the coding tutorials at *sixteenmillimeters.com*. The process is called ‘filmless’ because it creates 16mm strips not from gelatinous film, but from any available material. This is great for costs, accessibility, and unexpected textural results. Albeit, specialized printers and laser cutters are needed.

I chose an area close to Canary Wharf for the thematic relevance: the urban anxiety evident in its erasure of Historical spaces, the ‘uncanny’ unhomeliness of the aesthetic and the pervasive dislocation of time. I animated a disembodied movement through space, along which, digital and analog versions flicker from one to the next. Below are examples of the analog and digital variations of the same frame.



Stills from ‘God Luck Hope’ animation. In order:

3D digital impulse. 16mm projection analog impulse. Distressed 16mm scan analog impulse

Analog Cookbook recipe overleaf:

An attempt to pollinate movement and potential into the ‘filmless’ animation workflow

⁶ Image from “Picnic.jpeg.”

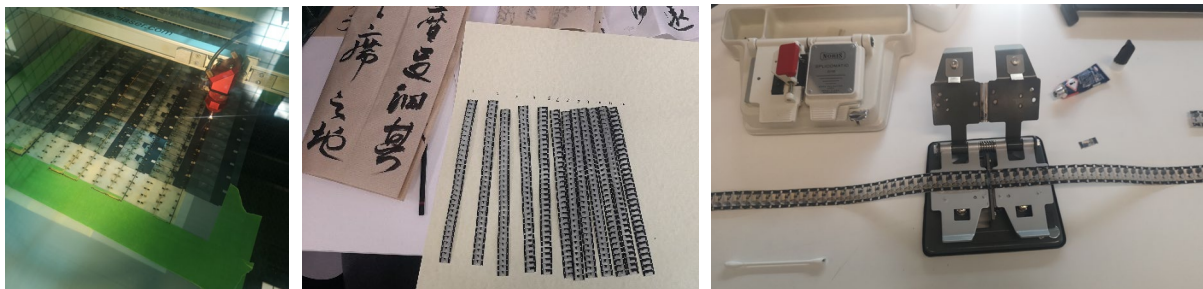
Step 1: Create your digital mise-en-scène

The starting point was extracting the 3D geometry of the city using satellite data from Google Maps. With the 3D city intact (albeit, intentionally deformed), the animation was rendered through a 3D animation programme (Cinema 4D) to create a digital image sequence



Step 2: Coding and cutting

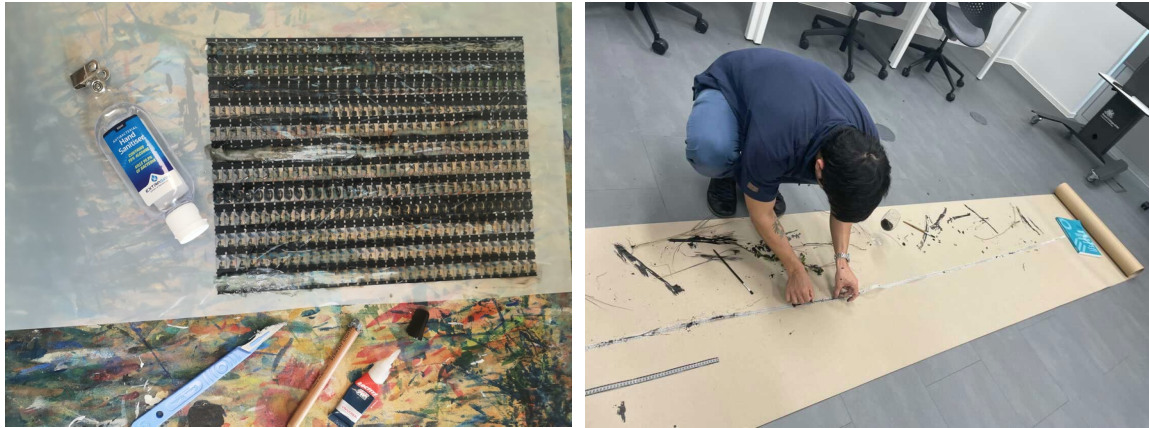
Using the code on sixteenmillimeters.com the image sequence is coded into 16mm film strip sizes and printed on to polyester film (any suitable material can be used). Finally, the print is laser cut into film strips, cleaned, and spliced together with super glue into a usable film roll.



Step 3: Distress the film strips

the film strips can be distressed or marked organically. I used several techniques. Hand sanitizer both changed colour values unpredictably and had a corrosive effect. Super glue erased the image altogether. To layer foliage textures on the film, I used foraged leaves, first dipping them in black ink and subsequently pressing the leaves directly onto the 16mm film.





Step 4: Re-digitize the 16mm film

The material 16mm strips can be either scanned on a flatbed scanner or for a more vibrant result the film roll can be projected through an analog film projector. The analog output is recorded by a digital video camera. The limitation here is that the projector is designed for standard gelatinous film. Other materials can easily break. Trust me this can be frustrating as heck. The recording of the footage also offers further room for digital analog pollination.



Ultimately by layering impulses of the same image we can create a disunity and tension in the representational quality between the analog and digital. The surface becomes a site of potential where the image can cross media between digital or analog impulse. Through this interruption in-between images, a spacing in the image itself opens. The 'spaces in-between' are filled by movement and potential.

Most curiously, the recipe allows for repetition and continuous re-inputting. Afterall, the final digital result can always be input back into step 2. The digital and analog can fold in on each other a potentially infinite number of terms. Or at least until the white noise of compression.

Hito, Steyerl. "In Defense of the Poor Image - Journal #10 November 2009 - e-Flux."
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<https://doi.org/10.1515/9781478021971>.

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Duke University Press, 2003.
<http://ebookcentral.proquest.com/lib/rcauk/detail.action?docID=1167951>.

"Shaky Distinctions: A Dialogue on the Digital and the Analog - Journal #121 October 2021 - e-Flux." Accessed April 4, 2022. <https://www.e-flux.com/journal/121/423015/shaky-distinctions-a-dialogue-on-the-digital-and-the-analog/>.