difference. An algorithmic culture is not an immaterial culture, but a factory where the work process abides in different layers of code and algorithms.

If we juxtapose the two images, the old Niepce heliograph and Müller-Pohle's *Digital Scores*, the question is, what controls the move or the transition between these two images? By using information theory, we can say that we see two types of information and two different types of media. They both direct attention toward a material substratum of production: dots in the case of Niepce and numbers in the case of Müller-Pohle. We move from dots to digits. If we formalize the impression we can put it this way: it is the same image, but represented differently. The first we would call a photograph, the second is a numerical representation of the photograph. The identity of media itself has changed fundamentally. Put more simply, we could say that in the case of Niepce, there is a causal relationship between storage and display, but in Müller-Pohle's case, the new storage medium of digital codes has itself become what is displayed. Müller-Pohle's experiment addresses the new "non-visual" layer of visual culture by arresting the technological nature of image processing at the stage "before" it becomes an image in the ordinary sense. He implicitly criticizes Bolter and Grusin's idea that the digital image essentially remediates earlier media, for example, realistic photography or analog film, but the heart of the matter is more complex: the diffusion of informatics within the production and recirculation of images actually – and essentially – negates and postpones the phenomenological output "level" of the image. In a paradoxical maneuver, Müller-Pohle displays the non-visual machinery of the before-the-image as a multiple, as eight potential images, as codes to be reprogrammed. The machinic ground of the image (codes and algorithms) has become a reservoir for a plurality of expressions.[20] The digital image becomes a new (non)ground for unprecedented spatio-temporal explorations.

The Image as Projectile

Ken Jacobs has used both analog and digital technologies in his found-footage film experiments. His Tom, Tom, the Piper's Son (1969/1970) rephotographed Billy Bitzer's ten-minute silent short from 1905 into a 110-minute delayed exploration of the material. He uses what could be called an analog technique (rephotographing off the screen) to create a vertical effect. A recurring stylistic effect is namely the ways in which he digs deeply into each frame of the film to excavate the hidden life of the grain of the image.[21] Jacobs' film is widely recognized as a classic structural film and was added to the US National Film Registry by the Library of Congress in 2007. In 2008, Jacobs reworked Bitzer's old

short with the aid of digital tools. He calls this version, RETURN TO THE SCENE OF THE CRIME. This time he limits it to reworking the film's short opening scene where the pig is stolen. However, this version is 93 minutes long, but instead of digging deeply into the frames in a vertical manner, he uses a technique that is comparative and horizontal. It is not primarily the grain of the image that he studies here; his comparative analysis of images and sequences often juxtaposes images or a series of images in different technical (digital) attires. In a fabulous sequence, the juggler's balls are transformed into still images "captured" from different fractions of the opening scene (fig. 1). It is as if the whole opening scene is folded into a spectacular explosion of past and present moments, creating an intensive time-space. The juggler scene suddenly comes to a halt, is then run backwards and then forward again. The sequence intensifies time and space in ways that eclipse the analog version of the same material.

Fig. 1. Still from Ken Jacobs's RETURN TO THE SCENE OF THE CRIME *(2008)*

These intensities have been further explored by Jacobs' student Gregg Biermann, who also refashions found footage, often using Hitchcock classics. I call his works "software cinema" because they so insistently explore a found sequence of film images according to a preprogrammed software feature or "spe-

Fig. 2. Still from Gregg Biermann's LABYRINTHINE *(2010)*

cial effect". In LABYRINTHINE (2010) Biermann works with 41 memorable and iconographic shots in Hitchcock's classic VERTIGO (1958). The shots are superimposed on top of each other, creating a hypnotic labyrinth of repetitions and transformations (fig. 2). The different moments overlap in a kind of contrapunctual proliferation lasting 15 minutes. This superimposition of images is unlike how we remember it from the classical (analog) techniques, where the images are partly transparent. The images are composite sequences of concentric rectangles. The rectangular screen no longer frames one shot at a time, rather, the screen becomes a theatre for a multiplicity of images where each new shot is born within the previous shot as a new rectangle, which gradually increase in size and finally covers the last shot. As it grows, new shots are born within the shot and this goes on according to a rhythmical scheme where each shot is repeated four or five times. As the film develops, several series of shots overlap. Cinematic motion as the movement of objects in space *within* the image is here competing with the movement *between* blocks of floating images. The blocks float like moving pictures *through* the screen like an approaching bullet or projectile. Ultimately, a labyrinth of movements appears both within the image (the image within the image) and between the images (the changing relationship between the images within the image). Continuity editing is replaced by a discontinuous and labyrinthine editing process, and the screen no longer displays one image at a time, but several.

In spite of the rhythmical slowness of the floating concentric rectangles, it is sometimes confusing to distinguish between them as if this virtual multiplicity

of time folding images *indexes* in intangible ways the constant confusion and dizziness of the protagonist of the film, Scottie (James Stewart) – and the viewer – who both are sometimes unable to distinguish between the different women (the woman remembered and the woman seen) as played by Kim Novak. Biermann's hypnotic repetition and manipulation of the characteristic soundtrack together with the "floating" iconography of the film highlights the entire repertoire of genres at play in VERTIGO, which itself floats in between a detective mystery thriller, a romantic melodrama and a horror movie. Most of the shots are of Scottie as he is observing or thinking; he hardly moves during these sequences. The images have a stuttering and discontinuous logic that arrests and focuses on perceptual phenomena, which slips away when we view the film. Biermann opens these intervals of the imperceptible, enlarges them and turns them into an art form of their own. It is as if he is using the technologically enhanced quality of the images to explore the optical unconscious in a way never envisioned by Walter Benjamin.

Fig. 3. Still from Gregg Biermann's SPHERICAL COORDINATES *(2005)*

This feature of the unconscious is taken to a different vein in SPHERICAL COORDINATES (2005), which remakes a short scene from Hitchcock's PSYCHO. Here, we concentrate on Janet Leigh who is driving. The image twists, bends, folds and turns around (sometimes still, sometimes moving) as she steers the wheel (fig. 3). "The camera moves in a variety of ways, examining the inside of a 3D

animated sphere on the inside of which a scene from PSYCHO is wrapped", explains Biermann.[22] It is as if a camera is analyzing the manipulation of the image itself. SPHERICAL COORDINATES and LABYRINTHINE foreground the digital imaging tools in ways that turn the films into sensitive systems. He manipulates well-known found footage, that is, he intervenes in our memory, a collective system where images have become "emoticons" of sorts, and alters the very threads of this system. The exploration of abnormal movements between the still and the moving image create a system of post-cinematic "emoticons" mapping and altering the coordinates of a sensitive system which is collective or more than human.

The Time of Technology

These new spatio-temporal explorations seem to reveal a new potential for the visual. We need to question the relationship between images and the body, between the inhuman and the human in new ways. I will show how Mark B.N. Hansen does this with regards to the digital image, but first, Rodowick's critique of the digital image. He laments the inability of the digital image to convey an experience of time passing, and he continues:

> It might be clarifying at this point to insist on the rather radical point that in the digital universe there is no cinema, no photography, no images, and no sounds. The cosmogony of computers only recognizes symbolic notation and algorithmic operations, and is totally agnostic as to outputs. We are used to thinking of images on the model of painting or photography, as limited extensions of space present to us as a whole, and we want to think of digital or electronic "images" in this familiar way. But an electronic image is not "one" – it is never wholly present to us because screens are being constantly refreshed and rewritten. And again, the code writing this output to the screen can just as easily take the form of text, a sound, or an abstract symbolic notation. This is why I say in *The Virtual Life of Film* that the reconstitution of an image from digital information is something like making a very detailed painting from the information given in a very precise description. Or, to refer to a wonderful early text by Roland Barthes, digital "photography" cannot be considered as a "message without a code" – it is only code and nothing else.[23]

Rodowick poses a radical opposition between the analog and the digital image. He asserts that the radical otherness of the digital image creates a "naming crisis". We need a new name for the image, or for the no-longer-an-image-as-we-used-to-know-it. In *The Virtual Life of Film*, Rodowick argues that the specific quality of the analog image resides in the fact that it conveys a unique impres-