Interactive Documentary
Prof. Martin Roberts
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Little Movies: from the Kinetoscope to Quicktime

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"Little Movies" (www.manovich.net/little-movies) is a web piece by Lev Manovich in which he explores the contrasts and similarities between the first years of cinema (film movies) and the first years of digital movies.

Separated by a hundred years, according to Manovich these two events have many common features, almost as if the movies were being reborn inside the computer screen following the original recipe and mimicking the steps of their "material" predecessor.

> "Exactly one hundred years after its birth, cinema is being reborn on a computer screen. CD-ROM technology has progressed from a slide show format, to the superimposition of small moving elements over static backgrounds, and finally to full-frame moving images.
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> This evolution repeats a similar nineteenth century progression: from sequences of still images (magic lantern slides presentations), to moving characters over static backgrounds (for instance, in Reynaud's Praxinoscope Theater), to full motion (the Lumieres' cinematograph).
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> Moreover, the introduction of QuickTime in 1991 can be compared to the introduction of the Kinetoscope in 1892: both were used to present short

loops, both featured the images approximately two by three inches in size, both called for private viewing rather than collective exhibition.

The Lumieres' first film screenings of 1895, which shocked their audiences with huge moving images, eventually found their parallel in 1995 CD-ROM titles where the moving image finally fills the entire computer screen. Thus, during cinema's centennial, it was reinvented on a computer screen."

<div align="right">(Manovich, 2000)</div>

The similarities are indeed impressive. The technological limitations of the first movie cameras and projectors were responsible for the short duration of 1890's movies. In the same fashion, the limited processor speed and disk capacity of 1990's computers also called for small movies with low frame rates. We could even go further and compare the advent of wide format movies with today's DVDs.

But some important differences between the little movies of yor and nowadays little Quicktimes are not mentioned in Manovich's article. Two important limitations of the incipient cinema were the lack of color and sound. On the other hand, digital movies were colorful and noisy since the beginning. Even though, we can see a small evolution in the color aspect, when computer screens moved from displaying 256 colors in average to thousands and then millions of them. The screen resolution also improved. The pixel, a digital image unit that can be compared to the film's grain, became smaller and smaller. Nowadays a typical computer screen has approximately one third of the resolution of a 35 mm movie.

Manovich's Little Movies borrows footage from the Brothers Lumiere's firs movies and uses them to draw attention to the characteristics of digital movies.

"The project was begun in 1994 when the World Wide Web was just beginning to gain mass exposure. From the beginning, my intention was to create cinema for the Web. I wanted to turn the network limitations into a new aesthetic. Is it possible to create films with the resolution of 1 pixel? Is it possible to have a meaningful and an emotional experience under 1 MB in size?"

(Manovich, 2000)

Ironically enough, none of Manovich's little movies managed to stay under 1 Mb, but with sizes ranging from 1.1 to 3.3 Mb they came very close to it.

The first of the movies, "binary code", begins with pulses of light (maybe an analogy for bits moving through a network?) that slowly come into focus and reveal the image of a train. The train then gains motion, simulating the first projections, which started with a still image that suddenly "gained life" and moved. This specific footage of a train approaching is said to have caused panic in the audience, who fled away from the projection room in fear of being run over by the train. Manovich's version though, grows smaller and smaller in size. The train not anymore seems to be approaching, but instead receding. We can get lost into possible interpretations: is he saying there's no need to fear the digital movies? Or maybe this is an attempt to approach the one-pixel minimalism: how small can a movie be? Another thing to notice is the transition from the round unit in the beginning to the square one at the end (from grain to pixel?). Setting aside all interpretations, this first movie is intended to be the opening of a series called "prolegomena to digital cinema".

"On the Ephemeral Nature of Little Movies" is the title of the second movie in the series. Manovich is well aware that the digital technologies are changing fast, and these very movies he's producing between 1994 and 1997 are going to be obsolete soon, thus the

"ephemeral" nature of them. The movie goes from the demonstration of a kinetoscope and a newspaper advertising featuring old-style typefaces, to a Macintosh computer screen with its bitmapped system fonts and a floating window showing "trip to the moon" in Quicktime format. The intertitles say "A Kinetoscope, one of pre-cinematic forms of display which was replaced by cinema... which itself is about to be replaced by something else... Little computer movies I offer for your entertainment will also be soon obsolete... artifacts of the early days of digital media". Here Manovich hints to the replacement of film cinema by digital cinema. Even though the subjects of his piece are digital movies meant to be viewed in a personal computer screen, the digital technology is about to invade large projection rooms as well. In his book "The Language of New Media", Manovich talks about digital theaters and beyond: "We should not assume that the history of illusion ends with 35mm frames projected on the screen across the movie hall - even if a film camera is replaced with computer software, a film projector is replaced with a digital projector, and the film reel itself is replaced with data transmitted over a computer network" (Manovich, 2001. p.199)

The third movie, "single pixel", shows a man performing exercises with a rod. He stands in the same spot, tilts his arms and squats during an eight-second sequence. The movie starts with a resolution of 120 by 100 pixels and becomes smaller and smaller. In the last loop, the movie is 6 by 5 pixels and the man himself is sometimes reduced to one pixel. Even in such a tiny size we can perceive the movement, and having our memories impressed beforehand with the larger version, we see a man moving inside the flickering of a half a dozen of pixels. Manovich proves his minimalist theory right.

In the fourth movie, "Classical Cinema I" Manovich continues to play with very low resolution movies. Again, our memory is stimulated by a famous movie scene, this time reduced to an even smaller size of five by four pixels. But instead of being tiny, the pixels

are now huge, creating a strange "digital blur" effect like the one used by television to cover the faces of juvenile criminals and sexually explicit images. "Classical Cinema II", the next movie in the series, is shown through a moving window that changes size, orientation and place, following what would be the natural movement of our eyes through points of interest on the screen. Even though we know film makers design their movies to produce such an effect, being forcefully and consciously guided inside the screen makes us feel restless. To enhance this effect, the sequence ends exactly when the suspense is about to unfold into the climax. In these two sequences, our memory of the large-screen version of the same scenes makes the limitations emphasized by Manovich really stand up.

The last movie, "On the Transient Nature of an Electronic Image" compares the different ways in which the illusion of a moving image is achieved in film and in computer screen. "In older, photographic technologies, all parts of an image are exposed simultaneously, whereas now the image is produced through sequential scanning [...] Therefore, the different parts of the image correspond to different moments in time" (Manovich, 2001. p.99). While we hear Manovich's voice talking about the electronic screen, in our Quicktime movie inside our screen, still images appear vertically, line by line, in a slow motion simulation of the process we're experiencing but which is invisible to our perception. The electronic image creates an important new possibility: the real-time image update. Film need to be developed after being exposed, in order to be viewed, while the electronic image can travel at the speed of light to our screen.

On a last note, all of Manovich's little movies are presented as looped Quicktimes. Early forms of cinema as the Magic Lantern and the Kinetoscope displayed looped images, and today's videogames and Internet movies resort to the same artifice to get around the limited storage space and bandwidth available. Modern, feature-length movies replaced

short loops and virtually created a whole new language for cinema, but Manovich asks: "Can the loop be a new narrative form appropriate for the computer age?" (Manovich, 2001. p.317) Maybe not, but it's certainly appropriate for this already obsolete era of little matchbox-sized Quicktime movies. As Manovich points out, Quicktime software comes with a built-in loop feature so we can amuse ourselves for hours with a tiny looped moving image.

Today, in July 2001, Manovich's little movies are not yet obsolete if compared to other examples of Internet movies. The broadband Internet seems to be as close than ever, but has not yet arrived to the majority of users. The DVD version of the Lumiere Brothers first movies has more resolution than Manovich's Quicktimes. On the other hand, the DVDs available on the shelves right now don't have as much resolution and detail as "the big screen".

We are undoubtedly in the middle of a transitional time, when the moving image technologies are changing fast and not only the technique but also the language is going through considerable modifications. "Little Movies" comments on that shift, at the same time drawing from historical examples and its parallels to the current state-of-art technology, and declaring itself "obsolete", forecasting new possibilities in the close future.

References:

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