Hungarian Academy of Fine Arts
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The history of Matte Painting: From brush to film

DLA thesis

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The matte paintigs were large, realistic paintings painted with brush, acrylic and oil paint onto glass sheet, made to be shot as a separate component, then composited with live-action scenes. Many of them were spectacular backgrounds in the film. A movie projector is placed behind a painting done on glass. If live action is desired in a portion of the shot, the paint is removed from that part of the glass, leaving a 'small window' in the painting. As the camera photographs the painting, the rephotographed live-action scene is projected through the painting, from behind, is visible on the glass.

Today's matte artists 'paint' their works by compositor softwares onto digital canvases, that's why we call the technique: digital matte painting.

In my thesis I took examining studies of that era, what was called 'analogue' and was dominated the world of special effects between the mid 70s and the fist third of the 80s.

The first laterna magica was built by *Leone Battista Alberti* in 1437, though the highly developed version of it had to be waiting for till the begining of the 17th century. The first creator of the photographic image, *Daguerre* invented the diorama and represented it to the theater visitors in 1822, Paris. Generally a landscape and an inner space of a church were shown in the diorama theater, which were enlighted by multicoloured filters and directed lights.

In the begining it was called 'moonlight transparent images' – because they imitated the moonlight's enigmatical light effects. Those night landscapes referred to *Caspar David Friedrich*'s paintings, who were the mysterious painter of the romanticism. Besides, I call the attention for the pictorialism, which were a leader tendency in the turning of the century. Those photograhs were imitating paintings and coloured posters of the secession style.

Meanwhile, *Norman Dawn* photographer used first paintings to enhance his still photographs in 1905. He invented how to improve on buildings to be photographed by placing a sheet of glass between the camera and the subject and painting the improvements on the glass. Later he put his skill to work on films, using it as a trick. He went ont o work for *MGM* (*Metro-Goldwyn-Mayer*) and *Universal* studios and he trained many artists who followed his technigue, painting thousands of matte paintings between the 1920s and 50s. This tradition continued through the 70s and the first third of the 80s, when the Computer Generated Imagery reached that level of technology what took over the leadership in visual effects' world.

When a film scene needed a set or location that was impractical or even impossible to find or build – the time had come to explore the special effect: matte painting.

The main fact in the effectiveness of the matte painting is the skill of the painter. The painter must have the ability to duplicate actual scenes near photographic realism, futhermore a good matte artist must have the ability to match colours so that when photographed the edge of the painting will blend perfectly with the action on the film.

In the early trick photography still pictures on an actual glass plate were used. Later the term 'plate' was used in motion picture special effects work to mean shots on film that served as a part of a composit image shot.

Although it was effective enough moving the camera over a painting which cointained projected images – there was always the danger that the shot would reveal itself remaining flat and fake, because a the lines of perspective didn't change at all.

Why did some modelled scenes were able to drive our sight completely crazy on the screen while imitating the sense of reality?

Mélies was the first who told stories by showing moving images to his audience using breathtaking visual tricks for more effectiveness. So he created the basis of the movie. Further on, in the late 50s, a Hungarian born man and his team worked on visual effects when there were no computers at all. He was called *George Pal* (*Pál György*) – unfortunately his name was hardly known in the Hungarian film making industry.

There were many elements that contribute to the successful photography of a miniature. The most important of those were the apparent atmosphere of the 'technical picture'. Usually the diffused quality of the picture were in use.

Understanding clearly for the people was hard enough what cameramen meant when said to film the shot at a 'faster than normal' or 'slower than normal' speed. The 'slow motion' is

taken when filming at a faster than normal speed, and then the filmed action at a normal speed (24 frames per second) projection ran faster on screen. Reversely, when an action scene desired more speed than normal – the camera ran slower at filming, and while was projected at 24f/s: tha action seemed to happen more rapidly.

The animation scene in cartoons were also filmed that way. We differentiate they by their traditional filming technique. The first was called object animation, with small puppets or animated objects through the scene. And the second method was the collage and paper animation. The pixillation was that way when small objects or moving actors in space were filmed frame by frame. Scotch director *Normann McLaren* represented the peak performers' place in the rank with his artistry between the mid 70s and 80s – that's why 'pixillation' was sticked to his name in history of animation.

Nowadays tricks mostly are created and composited into films in VFX (Visual Effects) studios, where computer artist are using the most artful softvers which are developed by big film making companies. (Hungary with its skilled digital compositor and matte artists is in a really good position in this industry.)

Optical composition was, in a traditional meaning, a procedure of projecting backgrounds behind real figures, miniature modells and actors, or using mirrors the figures were projected to a painted image. So the most common optical composites place actors, photographed on a stage, into imaginary environments that combine actual live shots with matte paintings. Tools of the technical operation were the optical printers. The term printer was a bit misunderstable – an optical printer was essentially a device what had a mounted camera on a fixed tripod and one or more projectors facing to it from the other side. The film ran through the projector and the camera was rephotographing it. So the camera rephotographed and combined (composited) separate images of the motion film. Printers later were controlled electronically, allowing strings of commands to be carried out with great accuracy. The Blue Screen process was also be in use to enhance more subtle effects.

There were those who would argue that concern is uncalled for – that high-tech effects were simply a fad of the 80s that would soon pass by short of time. Though everyone knew that visual effects had been around for far more than the last decade. They had been playing very important role of motion pictures since the 19th century and still remain always used whenever imaginary scenes desired on the screen.

If we think of visual effects 'today' - we must consider that using special effects would have to be considerably more sophisticated then the effects 'today'. Future audience wouldn't accept effects that 'now' seem wonderfully advanced.

However, we shouldn't forget about the trick's original role: its task to 'serve' the film, what tells us a story. We need them to move our fantasy towards to the infinite or deeper inside our mind - leading us even to the common unconsciousness knowledge and creativity.