

The Road to El Dorado - Cave Scene Analysis

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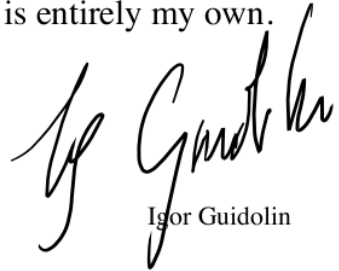
The Road to El Dorado – Cave Scene Analysis

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Igor Guidolin

Abstract

Even if The Road to El Dorado was not successful in the box office, it remains a complex and artistic media product. In this study a sequence of this movie will be thoroughly analysed and breakdown into the different parts of the production pipeline necessary to its completion, and how the technologies developed at that time influenced today's techniques and software of graphic visual effects.



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Introduction

This analysis is focused on the production pipeline of the cave scene at the entrance of El Dorado. I've chosen this section due to the number of effects it has on it, from the lighting, audio and all the 3D models present.

El Dorado Clip – Art4D

<https://www.youtube.com/watch?v=YrnD0MkP4nA>

The Road to El Dorado was not successful when released in the box office, even if many great artists such as James Baxter, Craig Mullins and many others have worked on it. This movie has quite a few questionable decisions and rushed executions but remains a solid piece of animation and a great case study to analyse and learn from.

If links or GIFs not working check:

<https://wordpress.com/view/igoranimationuwtsd.wordpress.com>



Pre-Production

Idea / Story

Don Paul, co-director of the movie, sustains that one of the inspirations was the "Road to" movies, a series of seven comedies starring Bing Cosby, Bob Hope and Dorothy Lamour. In these comedies from the forties there was no hero or leading figure, but the characters that are usually treated as comic release are elevated to role of protagonist, something new at the time in the animation scene.

Not only inspired by comedy, the movie also draws inspiration from *The Man Who Would Be King* (J. Huston, 1975) where two foreigners were considered Gods. (Felperin, 2000)

More focused on the specific clip there is a clear connection with Dante's *Divine Comedy*, as when he is entering hell with Virgilio, they are carried in a boat by Caronte (*Inferno*: III, 82-87).

As Canto III starts with Dante reading the famous line "Abandon all hope, ye who enter here." (*Inferno*: III, 9) written on the doors of Hell at the shore of the Acheronte river, also Tulio and Miguel, as prisoners and scared for their lives, cross a door to a mysterious place at 0:17.

"Through me the way into the suffering city, through me the way to the eternal pain, through me the way that runs among the lost."
(*Inferno*: III, 1-3)

Very fitting to the protagonists situation and feelings when crossing the door.

Chel is with them on the boat, and throughout the movie she will be the guide of the protagonists into this extraordinary city. Same role that Virgilio have in Dante's story as he guides him through literally hell.

"Here sighs and lamentations and loud cries
were echoing across the starless air," (*Inferno*: III, 22-23)



Here there are two elements connect with this sequence, one is the sound, as Dante can hear the echo of the damned's sobs also there is an echo effect and airy sounds throughout the segment from 0:00 to 0:45 with an ominous music.

When Dante speaks about starless air, he refers to the darkness of the place, that looks like a sky without stars, that is also present throughout this sequence and emphasize with colour correction, something that have been there since pre-production as we can see from this storyboard and how it emphasizes light and shadow.



The Road to El Dorado. (2000). DreamWorks SKG.

"And here, advancing toward us, in a boat, an aged man-his hair was white with years-was shouting: "Woe to you, corrupted souls!"



Forget your hope of ever seeing Heaven:
I come to lead you to the other shore,
to the eternal dark, to fire and frost." (Inferno: III 82-87)

This is the introduction of Caronte, the helmsman that transport the damned to hell. Depictions of him also reminds a lot about the boat that carries the protagonists.



Doré, G. (1868). Caronte. The Doré Illustrations for Dante's Divine Comedy.



Research and Development

At the beginning of the movie's development, there was two expeditions to the Yucatan peninsula, where artists could sketch the flora, fauna and ruins of these old civilizations. Dr. John Paul, an UCLA archaeologist, also helped during these journeys. (Watson, 2016)

Script / Screenplay

There is a subtle, but important, difference between script and screenplay.

The most common and used type of script is the Master scene script, where it gives more freedom to directors as it is more focus on readability and storytelling, giving fewer specific instructions on techniques compared older versions and describing only what can be visually seen in the shot. This form of script is called the master script, and it has quite a few formatting conventions created through the years. It conventionally starts with the header specifying location and time of the shot.

While scripts look more like instructions to use when shooting, a screenplay is made with less on-set commands as it is often made to generate interest and enthusiasm from investors by focusing on the story. (Abreu, 2022)



Character Design

Its 2D style is too similar to previous Disney animated movies. Is impossible to not notice how DreamWorks took plenty of inspiration from Disney, trying to compete in the same exact playfield. There are so many similarities among the two companies 2D animations that makes the comparison almost impossible to not be made and, due to the century of experience, Disney is a clear winner with better design and animation.

There are a few aspects on the character design that could be defined as style choices but to me is more like an error in proportions.

For example, in this frame the eyes of the characters are positioned too high (in a human head the eyes sit halfway of the cranium) giving no space for the forehead. Plus the top of the ears should follow the line of the eyes but, especially in Tulio, the ears are too low.



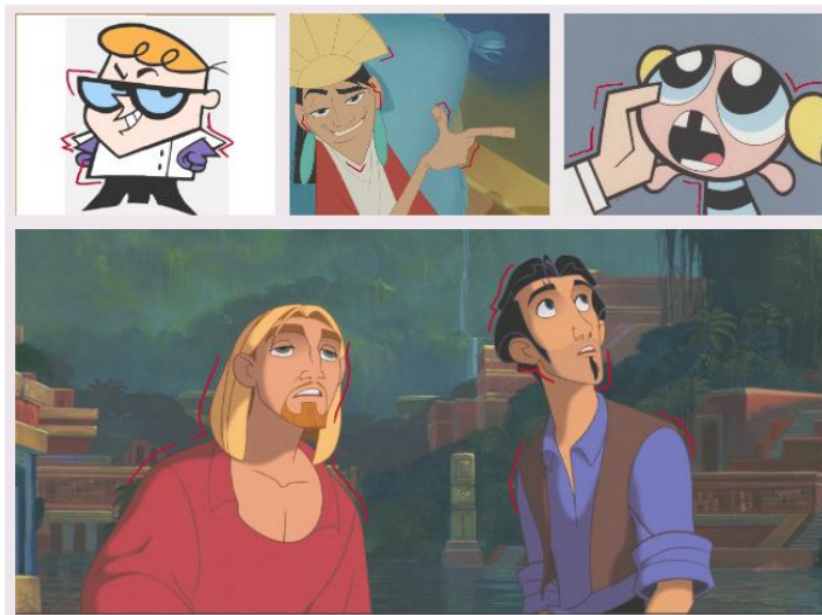
The Road to El Dorado. (2000). DreamWorks SKG.



Aladdin. (1992). Walt Disney Pictures.



In the same year (2000) Disney released *The Emperor's New Groove*, a direct competitor to *El Dorado*, as both are set in Pre-Columbian Latin America and, while *El Dorado* tried to emulate previous movies, *The Emperor* came out with a modern and fresh design, with more straight edges and less curves, a design similar to popular cartoon network shows at the time such as *The Powerpuff Girls* and *Dexter's Laboratory*.



Dexter's Laboratory. (1995). Cartoon Network.

The Emperor's New Groove. (2000). Walt Disney Pictures.

The Powerpuff Girls. (1998). Cartoon Network.

The Road to El Dorado. (2000). DreamWorks SKG.



James Baxter, a British animator from Bristol, worked in this movie and created this animation:



Baxter, J. (2016). *Chel comfy chair*. YouTube. Available at:
<https://www.youtube.com/watch?v=rZVMmZXotn0> [Accessed 15 Dec. 2023].

This animation was done in pre-production to show the personality and the way the character moves. In a character expression sheet that probably was made after the short there are very clear specifications on the earrings, so the animators working for DreamWorks that probably have seen this piece don't mix it up during production.



The Road to El Dorado. (2000). DreamWorks SKG.



Storyboard



The Road to El Dorado. (2000). DreamWorks SKG.

This is the storyboard of the specific section I am analysing. In the first panel the background is a bit different than the one in the final product, what could imply that the backgrounds were not ready at the moment they created this storyboard. In the second panel there is another boat in front of the protagonist's one, this boat at the front is not present in the final product which may indicate that it was superfluous and not essential to the storytelling, so the studio decided to not invest resources in that element of the scene.

In the final product there is a shot between panel 008_1-021 and 008_1-023, which is also indicated by the numeration of the panels, and probably the storyboard artist knew that it was necessary another shot to connect both panels and left it empty so further along the pipeline, with the two other shots, would be easier to create this transitional panel.



On the three panels at the middle (008_1-025) there is the description of a subtle but effective technique, where in the first panel Chel is complete covered in darkness, then at the second panel light reflects in the object she is holding, which is revealed being a gold object that serves as a prelude to the city of gold and showcase their new technology to render gold, and at the third panel she covers it, but the colours do not go back to the first 008_1-025 panel, as now she is illuminated by the light cast from the door in panel 008_1-024, a very clever way to tell the story as now the two protagonists, who were facing Chel, realize that there is a light sources behind them and when they turn around the door to El Dorado burst into sight.

Backgrounds

Is interesting to notice how most background artists, Kevin Turcotte affirms, where working with Photoshop for the first time. A software that are essential to basically every production nowadays but at the time was a novelty and speeded up the times of production. (Lyons, 2000)



The Road to El Dorado. (2000). DreamWorks SKG.

Backgrounds were still hand drawn with traditional tools, then enhanced digitally but, after having a good quantity of traditional drawings, they could recycle the ones already made, putting different drawn images together and creating new backgrounds for a total of 858 of which 480 were digitally composed. (Peszko, 2000)



Many digital artists worked on the backgrounds of El Dorado, such as Craig Mullins and Christian Schellewald, who has great examples on how he has taken the Mayans design motives and applied to backgrounds, using nature as patterns and giving indications of flow and movement in the designs. (see Appendix A)



Production

Layout

One really interesting aspect is the way they have animated the characters, they have chosen the lead character of the scene and animate him, then they added other characters following how much action they have in each scene, reacting to the acting of the lead, something that I want to introduce in my own animation as it seems like a good structure to animate more than one character.

Animatic segment:

<https://youtu.be/qcdhj3QPe1Q>

Animation

Here is an animation breakdown of a short sequence from the section selected:



The Road to El Dorado. (2000). DreamWorks SKG.



Is also possible to notice the change in lights from frame one to frame sixty, as illustrated before in the storyboard.

3D visual effects

The team that worked at The Road to El Dorado not only used digital effects for the background, as James William explains, it was also used to create camera movements, as having the characters in a 3D environment allowed for more active camera movements as DreamWorks developed their own software for camera movements which also added motion blur. (Peszko, 2000)

DreamWorks worked with Silicon Graphics Inc. for the development of this movie, one of the most advanced companies at the time on creating hardware and software for 3D graphics, (Einstein, 1995) this company also worked in movies such as Jurassic Park and collaborated with Nintendo. (Jeffrey, 2022)

In the specific clip chosen, the gate or door at the beginning is made using polygons, at this point of the story it could have been done with traditional animation, but this door will have a fundamental part in the ending and having it 3D would definitely help the animation, so to maintain continuity they had to do it digitally.

When the characters are passing underneath the doors, pieces of it are falling in the water, indicating that it is not stable. The splashes in this case are 2D and the door reflects the water and is well blend into the animation, even if noticeable that is a digital asset.



Lighting

In the specific clip chosen the water reflection on the rocks is not constant, at some parts of the sequence is sometimes overwhelming, and in other parts not present at all. I suspect these reflections were made using 3D software as in the hand-drawn background there are no indication of those.



The Road to El Dorado. (2000). DreamWorks SKG.

Firstly it looked like the reflections came from the waterfall, what would make sense to not having them at the end of the sequence, but in the end there is a close-up of Altino the horse, with reflections on the walls, proving a disparity between traditional and digital and a mismanagement in blending the two styles of animation.



Using Production Tools

At the time DreamWorks was quite a new company, having only two movies under its belt: Antz and Prince of Egypt. (Roswell, 2014)

While Antz was a full CG production and Prince of Egypt was mainly a 2D animation, The Road to El Dorado was a traditional animation project but, as Don Paul sustains, mixed with CG techniques in order to render the process more efficient and reduce production time, in line with Katzenberg's vision of 2D/3D seamless integration. (Goldman, 2000)



Post-Production

Compositing

Being an older movie is hard to find out exactly how they have done it, but from what I can deduce by looking at the scene, the background and animation have been added first, then effects such as highlights and shadows have been added in the compositing part of the pipeline, also the light from the torch that illuminates the backgrounds has been done in this process and the rays of light that come from the entrance to the city and illuminate the character's face has also been done in compositing.

The water reflection previously mentioned and the reflection of the characters in the water (which is simply the drawing of the characters mirrored and blurred) is also made at this point. It is interesting to notice how their reflection changes following the position of the camera, also the effects of the water, which is 3D, is also done in this process.

Water Splash VFX

Water has always been a problem in animation, as having full 2D animation effects would be a lot of work. These days there are a lot of ways to render water, but twenty years ago it was a problem. Doug Ikler, head of digital effects, used a technique called "Spriticle" to recreate the splashes of the water.



Hand drawn splashes of water have been positioned in the spots generated by a 3D particle generator that would simulate the different forces acting such as gravity, wind and turbulence. (Peszko, 2000)

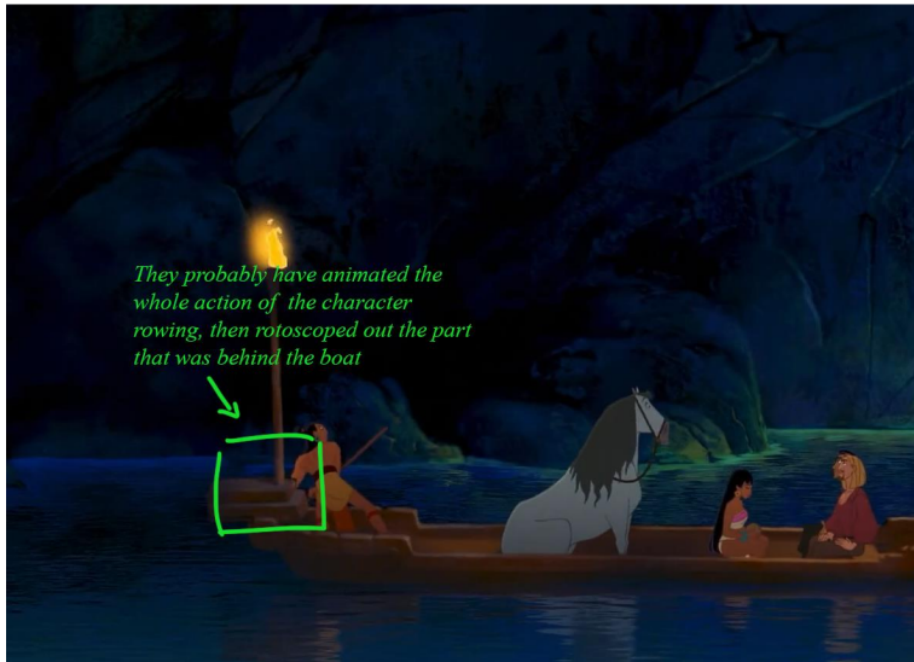
Rotoscoping

If rotoscoping is meant as drawing on top of footage, I do not believe has been used in this movie, as it is not real animation and AI these days can do a great job at it, and even if at this point is still preferred to be supervised by a real animator, I believe soon it will not be necessary.

If rotoscoping is meant as using the roto-brush tool in After Effects, for example, then they used this technique in a few parts of the section analysed. As the boat is in 3D they had to make the traditional animation and add the animation on top of it in a way that looks like the characters are inside the boat, here are a few shots where I believe rotoscope could have been used:



The Road to El Dorado. (2000). DreamWorks SKG.



The Road to El Dorado. (2000). DreamWorks SKG.

Colour Correction

Inside the cave and at its entrance, blue is the main hue colour of the sequence as it gives a sense of coldness and isolation, which will soon change to its complementary colour, orange, when the characters cross the door. This transition in colour helps to emphasize the vibrant and exotic scenery of the next scene, as the contrast between the two makes the orange scenes even brighter. (Rothstein, 2020)

The saturation makes the colours muddier, as the grey helps to tone down the scene and gives a more serious tone to the sequence.

The sequence also has low brightness, as having more black helps to emphasize the high saturation and evoke a feeling of dread and despair. (StudioBinder, 2020)



Conclusion

The Road to El Dorado have been produced over twenty years ago, making it difficult to find relevant information about it. But by looking and analysing the information present in the artwork and knowing how the animation pipeline works is possible to deduce what have been done in each section of the pipeline as 2D, 3D and live action movies often have a similar structure of production.

Is almost impossible to create Gantt Chart for this movie, as it is quite old so the information is not present in the internet and it also had problems and delays during production, but by analysing the data is possible to notice that the pre-production part was longer and more intense, while the post-production part was rushed, as there are a high quantity of backgrounds and character sheets, while the effects that are usually created in post contain quite a few errors.

This movie is a great example on how each section of the pipeline is important and being able to manage it well timewise is fundamental to the success of a movie.

Pre-production is extremely important as if the idea is not interesting to the audiences no amount of effects will make it appealing, and in the case of this movie the pre-production work is what makes it still popular to this day, but also having time for production and post-production is also fundamental, as if it is not visually appealing when released it will not attract the public and it can bomb at the box office and not make enough money to cover expenses, as is the case with this movie.



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Appendix A : Schellewald background design inspiration



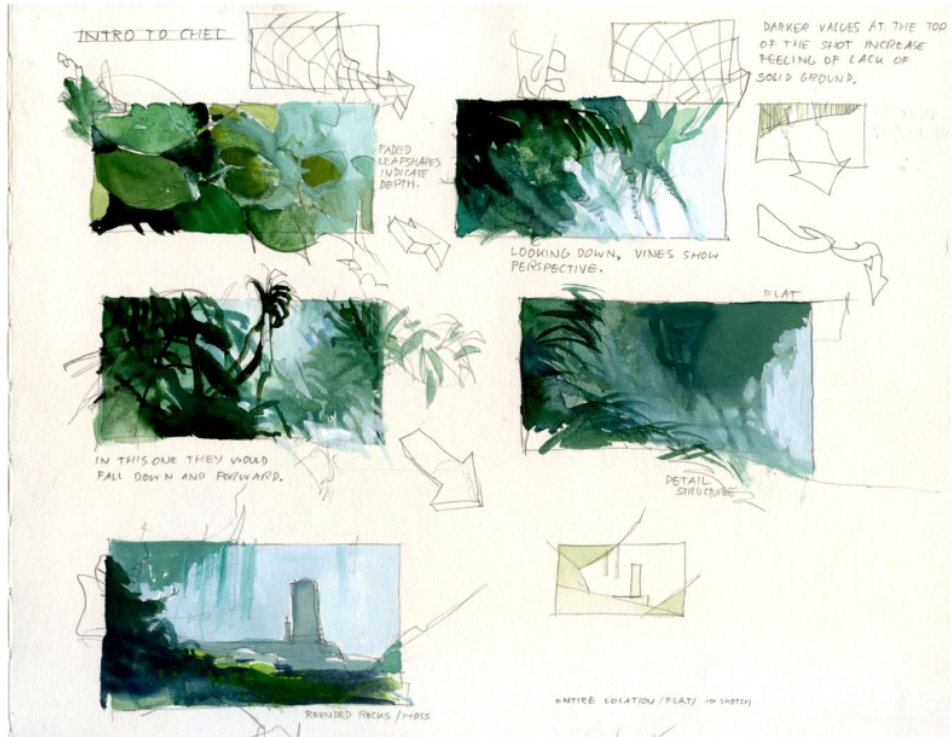
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<https://cwschellewald.art/the-road-to-eldorado/>.





Schellewald, C. (n.d.). *Cave entrance design*. <https://cwschellewald.art/the-road-to-eldorado/>.



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The Road to El Dorado - Cave Scene Analysis

GRADEMARK REPORT

FINAL GRADE

76/100

GENERAL COMMENTS

Your analysis provides an extensive exploration of various facets within the production pipeline, spanning from pre-production to post-production. Detailed insights into inspiration, script, character design, research, development, and various production stages are thoroughly examined.

Use of References:

Incorporating references, such as quotes from Dante's Divine Comedy, images from storyboards, and examples from other animated films, enriches your analysis, showcasing meticulous research and bolstering your arguments.

Visual Aids:

Including visual aids like images, links to YouTube clips, and references to storyboards and animations significantly enhances reader comprehension. Ensure these visual aids are easily accessible and viewable for optimal effectiveness.

Technical Details:

The technical details you provide, such as the utilisation of 3D visual effects, compositing, and production tools, demonstrate a solid understanding of the animation process. Consider breaking down complex technical terms or processes for readers who may not be familiar with animation production.

Overall, your analysis demonstrates thoroughness and a clear passion for the subject matter. Keep up the excellent work!

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