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Technique, Ideology and Ethics of the Cinematographer

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Declaration

I declare that I have prepared my Master's Thesis independently on the following topic:

<p>Cinematography in the Colombian Amazon, Technique, Ideology and Ethics of the Cinematographer.</p>

under the expert guidance of my thesis advisor and with the use of the cited literature and sources.

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ABSTRACT

The present research intends to go through significant contemporary productions done in the Colombian Amazon Rainforest in a time where historical changes are driving the country towards very difficult decisions. In this context, the cinematographer as an artist has a responsibility with his or her culture and society where technological choices are absolutely bounded with the motives of the craft and the construction of an embracing identity that can fit all the post colonial miscegenation. Is the jungle a place to protect and leave untouched? Is it there for the cinematographer with the tools of the profession to exploit its imagery? To whom is the author talking and what is his or her aim with the piece done, particularly in a place with millenary cultural heritage and one of the most important, if not the most, ecosystem in the earth to fight climate change. Technology becomes as an aesthetical and ethical decision as the place where the camera is placed.

ABSTRAKT

Výzkum prováděný v rámci diplomové práce se zabývá významnými současnými projekty z deštného pralesa v Kolumbijské Amazonii v době, kdy je Kolumbie v důsledku historických změn na prahu nelehkých rozhodnutí. V tomto kontextu má kameraman jako umělec odpovědnost vůči své kultuře a společnosti, kdy se volba technologie absolutně řídí principy řemesla a konstrukcí všeobjímající identity, která postihne veškeré postkoloniální mísení. Představuje džungle něco, co bychom měli chránit bez jakéhokoli zásahu? Nebo je tu pro kameramana, který s použitím nástrojů své profese využívá její obrazové bohatství? Ke komu autor promlouvá, co je záměrem jeho díla, zejména v místech s tisíciletou kulturní tradicí a jedním z veledůležitých, ne-li pro boj se změnou klimatu nejdůležitějších, ekosystémů na světě? Technologie se stává estetickým a etickým rozhodnutím stejně jako místo, kam je umístěna kamera.

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1. INTRODUCTION AND THEORETICAL FRAMEWORK

When Werner Herzog came to the Amazon in the search for his own brave new world, not so brave, not so new, he encountered a huge landscape ruled by completely different logics than the ones he was used to, at least to a certain extent. In his diary, he records this experience from a, say, *human* perspective. Quite Herzog: the poet that focuses more on aesthetics than the technique.

But for this time let's try to give a human approach to the technique. That is, how the technological matters of the film production interlace with the cultural and human dynamics of, for the matter of this work, the Amazon, in such a way that we can state ideology and technique are bond together; the first one understood as the projection of an individual mindset, agreeing with Arendt¹, that modernity refocused the attention of the human being from an exterior transcendence, not back to the world as in the middle age -and before-, but to the individual; and the second one as the whole technical apparatus designed to support the first one. Through the cases I selected, I will define how these technical decisions hold inside an ideological approach that can't be subtracted from it, and how cinematography, which is at the head of this bond, is determinant for the realization of the ideological platform inherent to any movie.

“At the market I ate a piece of a grilled monkey—it looked like a naked child.”, writes Herzog in his *Iquitos*, 28 / 6 / 79 entry². The impression is nothing but surprising

¹ Hannah Arendt, *The Human Condition* (Chicago: The University of Chicago. 1998), 254.

² Werner Herzog, *Conquest of the Useless* (New York: Harper Collins e-books. 2010), Entry: Iquitos, 28 June 1979. E-Book edition, position 4%
<https://www.harpercollins.com/9780061575532/conquest-of-the-useless/>

and shuddering. How could someone come up with that kind of comparison? Both funny and dark, it leaves the feeling that his adventure has brought him to a more than dareful place and he is coming at it from a European perspective, a foreigner. For the locals, the image of a roasted naked kid for a monkey might have been as well both morbid and offensive. How far was Fitzcarraldo from his creator? Not a question I would like to answer through this work but maybe to put into dialogue with a closer - not necessarily local- perspective. The German filmmaker either comes with or builds a construct of thoughts through his journey, probably based as well on the countless obstacles he faced along his productions, until the point he considers this Rain Forest a chaotic universe forgotten by the hand of god.³ Ideologically, the projection Herzog does regarding this encounter, drives the substrate on which his movies on the Amazon will be based.

After going through the cases I selected, I could nothing but realize that this vision was partially inherited by the western societies spread throughout the territory we call Colombia in our post-colonial history. The purpose of this work is to pay attention to some of these contemporary productions to understand how the technological device deployed for their productions are a reflection of a particular ideological agenda.

a. Technology and Ideology

History has given us uncountable examples on how technological developments have radically transformed societies and cultures. Fire started as a protection and cooking tool to be converted into a worshipping deity. Industrial revolution enhanced capitalism, computer sciences and internet completely transformed our communication age.

James W. Carey thinks about the telegraph as the first invention which greatly modified the way we communicate and think about the world.

“...the telegraph freed communication from the constraints of geography.

The telegraph, then, not only altered the relation between communication and transportation; it also changed the fundamental ways in which communication was thought about. [...] And it opened up new ways of thinking about communication within both the formal practice of theory and the practical consciousness of everyday life. In this sense the telegraph was not only a new tool of commerce but also a thing to think with, an agency for the alteration of ideas.”³

On his work, Carey shows how this invention was determinant to the subsequent development of capitalism, business rules, laws and even the relationship with a religious thinking, as time and space were shrank with an *invisible force* such as electricity. A somehow superstitious thought similar to that one of the camera stealing the soul of the subject it photographs⁴. This is not a thought to underestimate when Bazin reminds us that photographic image was the first one to actually and identically represent and replicate the shape and form of a humanity that has always been seeking for immortality. This form of relationship between ideology (human thoughts, ideas, religious thinking and ways to subjectively understand and relate to the world), with the technological development, can be updated to our times with the always changing and improving technology used by the cinematographer in his craft. Each of these developments have ideological implications and I intend to demonstrate how in the technical decisions during the process of making a film, this connection takes place.

³ James W. Carey, “Technology and Ideology: The Case of the Telegraph” *Communication as Culture: Essays on Media and Society*, (New York: Routledge. 2009), 3, accessed June 10, 2019, [available] <http://faculty.georgetown.edu/irvinem/theory/Carey-TechnologyandIdeology.pdf>

⁴ Ricardo Moraes, “Capturing Souls”, *Reuters*. May 12, 2011 [Available] <http://blogs.reuters.com/photographers-blog/2011/05/12/capturing-souls/> In his text about a native community in the Brazilian Amazon forest, Moraes brings attention into the expression “akaron kaba” which means both “take a photo” and “steal a soul”.

Finally, probably the cornerstone of this relationship is given by the Judeo-Christian tradition of our western societies. Technology is the means by which we extend our control desire over nature. A control human is entitled to by God himself.

“Science and technology arise when the will to know is grounded in an impulse to *control*, and when this control is felt to be possible through routine *work*. Both modern ideology, on the one side, and modern science and technology, on the other, have a certain affinity because both in part rest on Protestantism's assumption that work is anxiety relieving.”⁵

This is a pertinent issue as the following chapters will focus precisely in a very singular natural region that I will describe below. There is a way each country relates to their natural sites to preserve it and exploit it. I believe filmmaking is a device that has both faculties, and the technology employed to these purposes is determinant for the results of these process', as any machinery or policy would do.

In the terrain of arts, particularly cinematography, technology is a playground providing multiple options and tools to communicate an idea, to tell a story or to achieve a singular aesthetical goal. Here we have to understand that the relationship between technology and ideology is precisely beyond what the film is telling, but in the decision itself, in the use of the tool and its purpose. Type of camera, digital or analogue, lenses, type of film, postproduction process and lighting equipment among others, and the way they are used, depicting the place in a particular way, are part of this apparatus foreign to the jungle and its people, and they will place an inevitable relationship between the filmmaker and his or her environment that needs to be studied in order to bring new

⁵ Alvin W Gouldner, *The Dialectic of Ideology and Technology: The Origins, Grammar, and Future of Ideology* (New York: Seabury Press, 1976) section 1.4 [(The Dark Side of the Dialectic; v. 1) Chapter 2 (Ideological Discourse as Rationality and False Consciousness), beginning to section 5.3, pp. 23-57.] Accessed June 10, 2019, [Available] <http://www.autodidactproject.org/other/gouldner6/DIT-2a.html>

lights into the discussion about the ethical position of the cinematographer. Because not only the position of the camera is a moral issue.

b. Territory and Colombian case

Now a days, Colombian cinema, which has been always trying to catch up with its brother countries, is building up a new tradition of narrative that strongly both speaks and takes stories, to and from the people and populations that have been historically forgotten even by ourselves.

The importance of the region is getting a new relevance in all Colombian industries in the past few years. On the 25th of June 2016, after 4 years of negotiation with the government⁶, the biggest insurgent group in the country FARC-EP (Revolutionary Armed Forces of Colombia – People’s Army), and the biggest ever in the continent, laid down a total of 7.132 weapons⁷ putting an end to the largest conflict in the world so far, having lasted half a century. As Cote Rojas develops and warns throughout his whole research about, this event, which is one of the most important in

Map 1. Amazon Rain Forest and Colombian share



Colombia’s history, entails the paradox of finally soothing the wounds of human devastation while ensuring a sustainable peacebuilding which is, nonetheless, compromising the stability of a forest representing

⁶ Elizabet Reyes L., “Las Cifras del Conflicto Colombiano son las Cifras de la Ignominia”, *El País*, July 24, 2013 [Available] https://elpais.com/internacional/2013/07/24/actualidad/1374693173_145049.html

⁷ Luis Carlos Cote Rojas, *Will Peace Destroy the Colombian Amazon? Territories, ‘Post-conflict’ and Deforestation*. (Master thesis, Potsdam Center for Policy and Management University of Potsdam, Germany. 2016), 7, [Available] http://babel.banrepcultural.org/cdm/ref/collection/p17054coll23/id/805?fbclid=IwAR3iT8ZRwv9jqLAzLR- Up_H5wrDfzkuORwi-QFRIsyfyoSk9Tg8_AtTF3A

42,3% of the country's continental area (483.074 km², bigger than Germany, Czech Republic and Switzerland together), 6.6% of the whole Amazon⁸ and 14% of the planet's biodiversity inhabiting that forest.⁹

Such is the importance of this times in Colombia's history, that another purpose of this work is ethically binding, insomuch as artists are called to think their contexts and act according to it, understanding not only the aesthetics of the age but also the ethics which is included in it. Needless to say, the tools we use to come at it are but the very fundament of this issues. While the mining machine pillages the jungle's resources, and the killing machines fight to keep shooting, filmmaking technology must be a trench of resistance. How are we using these tools? How the technical decision becomes an aesthetical decision, and on that line, an ethical decision? That's how technology, ideology and ethics come into play in the craft of the cinematographer.

c. Selected films for analysis and methodology

There is a huge amount of films done in this rain forest. However, for the reasons given before, the small Colombian industry hasn't explored that much of its creative possibilities. In this regard, television has been far more copious with several chronicles, reportages, tv docs, etc, before the previously mentioned tradition of films emerged. Among these productions, I've selected two of them which I consider they address the issues of the forest from different perspectives in the technical, formal and cultural arena, and a TV Show about to be released.

The Embrace of the Serpent (Ciro Guerra, 2015), shot on Fuji Eterna 500T and 160T and converted to black and white, is an example that perfectly illustrates the clash of worlds and the rain forest as a keystone in the strategy of bellic affairs, spiritual

⁸ Cote Rojas, op. cit. 8

⁹ Cote Rojas, op. cit. 40

exploration and cultural mix. It's innovative and epic narrative called the attention of the world, pushed by a generous production provided by one of the biggest commercial production houses in Colombia responsible of the most basic comedies but biggest box-office success', getting a nomination to the Oscars, but compromising the approval of specialized critics who would disapprove its somehow hegemonic perspective of what the jungle is.

Along with it, two other productions I want to address here follow somehow the same line and help building a multiple perspective view of the region and the approaches towards it. While "The Embrace of the Serpent" deals with the Amazon from a historical and spiritual perspective, a Netflix production, "Green Frontier" (Dinamo Prod. 2019), shot entirely in the depth of the forest, brings into discussion the commercial exploitation of the rainforest, and the blockbuster-like production shot in Sony Venice Full frame 4K Raw. Naranjo's documentary "The Inflated Jungle" (Alejandro Naranjo, 2016) shot in a more *guerrilla* style, approaches the problem from the point of view of a westernized native community in which the problem of suicide among their teenagers has become a social problem to which we cannot turn our heads away at.

This text aims to establish a dialogue between the movies from a theoretical and technical point of view to analyse the particularities of the cinematography in such an extreme place like that, where the equatorial sun consistently travels over its maximum height, where the depth and density of the jungle can bring us from total light to a complete relative technical darkness, and where weather conditions and even spiritual disposition can influence the shooting plans. After going through the movies, I will contrast them to one another to output a direction towards which, on my opinion, Colombian cinema should be moving to.

To keep a methodological rigour and a certain order to understand the problem of this work, on each chapter I will first describe the technological components of the film while briefly discussing some ideological and ethical implications which will be actually expanded and treated properly in the last section of each chapter. In that way, the reader can have a first glance of the movie, the description of its technical device and then a deepening and synthesis of the issue.

2. “THE EMBRACE OF THE SERPENT” (David Gallego)¹⁰

The movie is based on the diaries and books by Theodore Koch-Grünberg and Richard Evans Schultes and tells the story of Karamakate, the last survivor of a tribe razed by western societies and his encounter with the above mentioned characters in different moments of his life, following a journey, a sort of road trip which will take them to unexpected adventures through the forest. Throughout the whole movie, guilt, resentment and search for either avenge or redemption are constantly fluctuating in the terrain of forgiveness and coping with the arrival of the so-called old world to the so-called new world.

This movie shakes the discussion about the encounter of two, even three worlds, counting the *colonos*¹¹, or settlers, and how they dealt with that clash from a perspective of an exchange further than -but not instead of- a pillaging.

Now, of course, in Latin America, cinema itself is colonization per se: if it wasn't for it, there would be no cinema in the continent. But further from such a reductive and counter historic argument, we would have to see how that language was appropriated there the same way religion, language and culture in general was appropriated and adapted. We cannot forget mixture and miscegenation played a huge role in the assimilation of the incoming technologies, tools and arts in three ways: the history of cinema in the former European colonies, done mainly by the inheritors of the colonizers, which includes every form of filmmaking from the commercial to the

¹⁰ See appendix 1

¹¹ After the independence of Colombia from the Spanish crown, several territories remained undiscovered or unclaimed by the new western nation of Colombia. The new colonization carried out by the *colonos* (in English, frontiersmen, but sometimes they are peasants looking for lands, sometimes big landholders like businessmen or politicians who take over lands) is an important phenomenon which is growing more important in the post-war scenario due to deforestation and the current state of political affairs. This is actually one of the main issues which has fed the belic conflict.

independent and experimental; the new waves of Latin-American filmmakers in the hegemonic industries like the Mexican wave in Hollywood where both directors and cinematographers have earned an important place like Cuarón, Iñárritu and del Toro with Lubezki, Prieto and Navarro on the camera, but also Chilean cinematographer Claudio Miranda and on the other side of the coin, Jodorovsky; and finally that hidden face occupied by the locals, natives, Amerindians who have used films as an expression and resistance tool.

This work is focused on the first one, where most of the contradictions and conflicts are found in regards to the assimilation of technologies, and where the most direct contact between the geopolitical conflict area and the filmmakers is given. As for the third way, there is an interesting bibliography and researches done regarding the indigenous cinema and, although this thesis somehow ends up pointing towards the importance of such cinema, the idea here is to describe and analyse what the mixed culture heir to the western world view is doing to its territory and the actual ancestral locals of the place.

a. The analogue jungle

After several tests with digital and film, director of photography David Gallego decided to go for Fuji Eterna 160t and 500t. A paradox, one would think, since the research had shown that the deeper inside the forest, the less EVs were reflected into the photometric device. Gallego himself expressed his fear when shooting “Violence” (Forero, 2015), which takes place in a thick forest -but not Amazon rainforest-, in digital, and having to force the ISO to 1250 on a Red Scarlet.

An obstacle that was thankfully overcome through the flexibility of the shooting plan, as they were shooting the scenes according to what the forest was giving them and it seemed to be helping them. When a deeper feeling was needed, cloudy days

were seized and brighter days were left for less dramatic effect. Also, Gallego was careful and risky to do close ups of dramatic scenes with wider T stops in the thicker jungle leaving the wider shots for the end, after 16:00, when the sun rapidly starts to hide and opening even more to get the master of the scene. This, to be able to give the actors the time to perform properly, prioritizing the characters and the story over the beauty of the place as in the opening scene (see Picture 1).



Picture 1. The embrace of the Serpent. Opening scene.

Careful because it was planned like that, and risky because it contradicts the standard of beginning with the master to save the scene, especially in such extreme light situations. While close-ups are possible to light to match the master shot lighting,

lighting equipment was reduced at its minimum. It would definitely be easier for the cinematographer to shoot them first, but it actually helps these actors to give their best performance in the closest most dramatic shot, leaving the “worn out” acting for a further placement. Let us remember two of them were natural actors rather than professional ones, and the spontaneity of their performance is quickly lost after few rehearsals and takes. On the natural lighting scenario, this faces up the cinematographer to the problem of a quickly setting sun. But if we look at the shot in the image, we notice a smart camera position against the river which has a higher reflectance than the rest of the jungle. Even having been shot later than the close-ups, the river is still thoroughly lit by the sun while the black and white neutralizes any

possible shift of colour temperature, resulting in a high contrast image with quite saturated highlights that easily overcomes the time issues.

Otherwise, not only it would've been extremely expensive bringing light to the jungle to fake the day or to prolong the existing light, as the access to the location is quite limited, but it would've also gone against a principle that was ruling the set: a primary and most careful respect for the places they were going. It's important to note that the use of lights was to a minimum inside the forest, and a generator was brought to keep batteries charged and to power small light boxes to support the fire during the night.

With available light, on a cloudy day, shooting was quite difficult. Gallego says he tried to keep his T Stop over 2 on his Zeiss Super Speed MK III. But exposing came with another challenge since some of his film had expired. He was correcting the exposure to 320 for the expired film and still underexposing sometimes due to the light conditions or intentionally. But this underexposure came pretty handy for some of the scenes: during pre-production, after laboratory tests, he decided to 100% Bleach Bypass the film on the negative, to give a certain depth to the jungle, an impenetrable feeling with a mysterious density that actually enhances the majesty of the forest. A respect given by the contrast of the results. Hence, the river sometimes feels like a great dark snake meandering slowly and peacefully, but solemn, along the landscape.

This underexposure helped to keep the highlights after the bleach bypass without compromising the blacks in an unappealing way, but rather thickening the darkness for the desired atmosphere, Nevertheless, he was still able to work with the contrast in the digital postproduction, after a double scan done by Cinecolor Argentina

to some of the shots which seemed to have highlights and shadows lost, confirming the astonishing versatility of film.¹²

The bleach bypass is clearly an attempt as well to follow the visual references of the movie. During their journeys in the forest, Theodor Koch-Grunberg and Richard Evans Schultes took several pictures as a record of their experiences. Schultes used to shoot with a Rolleiflex¹³ which makes it easy to guess, although this research couldn't prove it, that he's photographs were exposed in the Kodak Tri-x family. Introduced in 1940, rated at ASA 200 for daylight and 160 for tungsten, this was the first black and white high-speed films which made it famous among photographers. The great contrast of this photographic material was Gallego's attempt, wishing pure blacks and whites, and even risking some highlights in the process. It was quite a bold decision to prefer an unbleached film rather than a standard process to work in postproduction, and the results might have been close enough, but there is both a technical-aesthetical goal in terms of the filmic look, to come closer to the filmic reference, and a romanticism that has something to do with the ideological dimension I will talk about soon.

We can foresee that the idea of the cinematographer was to avoid a pristine, bucolic and romantic depiction of the Amazon, but a rather deep and dense feeling as I pointed out. That's why not only the material and lab decisions he did were directed towards this goal, but also his lenses.

¹² David Gallego, "Sobre la Fotografía del Abrazo de la Serpiente", *Autores de Fotografía Cinematográfica Argentina*, [Available] <http://adfcine.org/sys/sobre-la-fotografia-de-el-abrazo-de-la-serpiente/>

¹³ Exhibits Development Group, "The Lost Amazon + The Photographs of Richard Evan Schultes", Accessed April 20, 2019 [Available] <https://exhibitsdevelopmentgroup.app.box.com/s/n58hw9fwzodva6z75n0l6frgmjhqpu7j/file/139451630489>

Super Speeds are known for their particular bokeh and low definition. This rather old lenses give a rougher sensation to the image in contrast with newer lenses tending to be sharper and more corrected in terms of physical and chromatic aberrations. No doubts this set became quite popular with the boom of digital cinema, but this decision mixed with film material, is a clear statement about the preference for an older image. Chromatic aberrations are clearly not an issue in this case, due to the black and white, neither barrel aberration, since the movie was shot in 3-perf techniscope, avoiding the corners of the frame, where the aberration is far more evident. In addition to that, the widest T-Stops were generally avoided to keep the aberrations controlled overall, only used in darker scenes were the shadows conceal any of them. But the softness and vintage look of the lenses plus the material decision are a rather classic old combination.

The use of focal length was also determinant when portraying the jungle as they needed. Particularly the scene when the travellers get caught by a storm while rowing on the river (see Picture 2) They escape the rapids climbing on a rock which, by the use of lenses and framing, seems to be a huge platform, when it was barely 3 mts. long.

As for the material decision, Fuji offers a CTF graphic of their film which I compared to the MTF one of their Kodak's counterparts (see charts 1 and 2)¹⁴, trying to give an idea of this aesthetical choice. As the graphic shows, Fuji's Eterna 8547 500t has a lower spatial frequency response than its Kodak counterpart¹⁵. This will translate

¹⁴ Kodak Vision3 500T Color Negative Film 5219/7219 Technical data, [available] <https://www.kodak.com/uploadedfiles/motion/T12647.pdf> and Fujicolor Negative Film Eterna Vivid 500 8547/8647 Technical Sheet, [Available] https://www.fujifilm.com/products/motion_picture/pdf/eterna_vivid500.pdf

¹⁵ Norman B. Nill, *Conversion Between Sine Wave and Square Wave Spatial Frequency Response of an Imaging System*, (Bedford: The Mitre Corporation, 2001). 7-9. Accessed April 8, 2019 [Available] https://www.mitre.org/sites/default/files/pdf/nill_conversion.pdf Needless to say, they are not the same measurement, but offer a certain similarity which helps us understand the behaviour of the film in terms of imaging resolving capabilities. CTF and MTF curves behave similarly but the first one

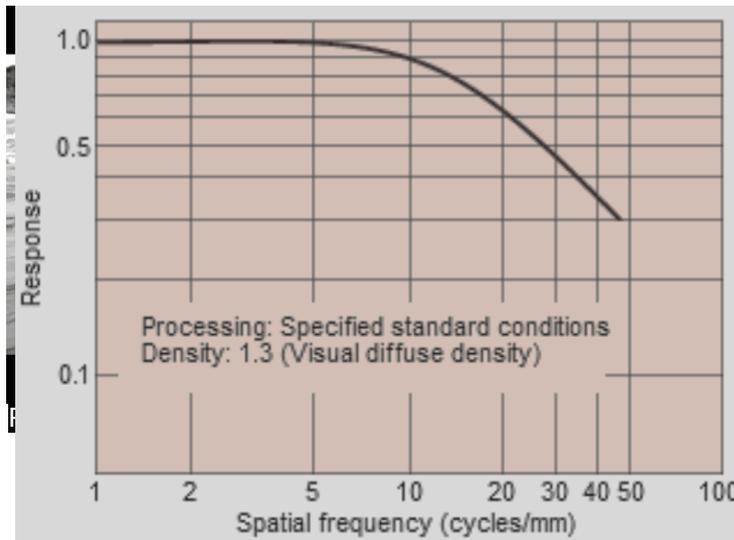


Chart 1. CTF for Fuji Eterna Vivid 500 8547

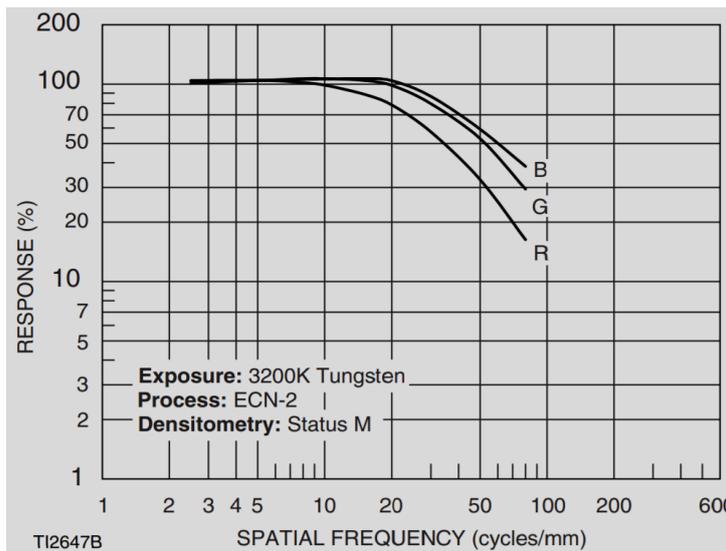


Chart 2. MTF for Kodak Vision 3 500t 5219

The Embrace of the Serpent in a less define image, independent from its latitude - one of the reasons Gallego picked the film for, giving to the image the perfect combination to achieve the closest feeling to the references: as “ancient” as possible. This technical decision between two different films with different image rendering then becomes a fundamental part of the image construction of the film because Kodak film would have delivered a sharper and more accurate image. We will see

later how this depiction of the jungle plays an important part in finding the ideological coordinates of the film when it comes to the portray of the Amazon.

relates to a square wave whereas the second one to a sine wave. In the study sponsored by the FBI, Nill defines CTF and MTF as different curves with an undoubtful mathematical correspondence and relates both curves with each other equivalent values, where we can see how CTF has usually a higher response than MTF. Hence, if Fuji’s CTF curve has a lower spatial frequency response than Kodak’s MTF curve (even for the Red layer), we can conclude that its MTF is going to be even lower than its counterpart.

MASAOKA K., ARAI K., NOMURA K., NAKAMURA T., TAKIGUCHI Y., *Real-Time Measurement of Ultra-High Definition Camera Modulation Transfer Function*. At conference: *SMPTE 2017 Annual Technical Conference and Exhibition, SMPTE 2017*, Accessed April 22, 2019. [Available] <https://www.youtube.com/watch?v=0Hp0qbBbLnc> From 19:10. Kenichiro Masaoka, whom I’ll present in the third chapter, relies on the Coltman’s formula for this purpose.

Camera Arricam LT was the device used to expose the film. A natural choice, even if the style of the movie has nothing to do with documentary or handheld production, since the shooting conditions demanded a light camera. And yet, compared to the current digital cameras which have gain a lot in size and weight, this factor was not prioritized by the cinematographer who needed to shoot the movie in 35mm. Nevertheless, camera work was not stopped by these conditions.

Precisely, one of the particular cinematographic elements we can notice in the movie is its camera movements. It is without any doubt a narrative camera stuck to the story and the characters. But from time to time, the camera will stop somehow paying attention to the actors and the story and will drift away into the river or into the jungle.

There's a couple of particular shots where the camera seems to embody itself and leaves the actors to make its own way into the nature. Reminds somehow how the camera holds and seem to have its own life in Wong Kar Wai's "In the Mood for Love" (2000). Keeping the distance and proportions, Ciro Guerra's camera doesn't represent himself and embodies his style as in the Chinese director, and might not be as evident and sort of tale breaking, but it does establish a relation with the audience that makes it feel inside and enchanted by the jungle.

b. The black and white jungle

A sometimes brilliant sometimes dark river and a dense and wild jungle was the aim of Gallego when shooting the movie. The bleach bypass was the main tool to give that dark feeling. But the intention of this palette went beyond: avoiding the deviation of the audience towards the saturating bucolic view of the overwhelming

landscape of the jungle, keeping instead a sober non-romantic perspective that would focus more on the history and the characters.

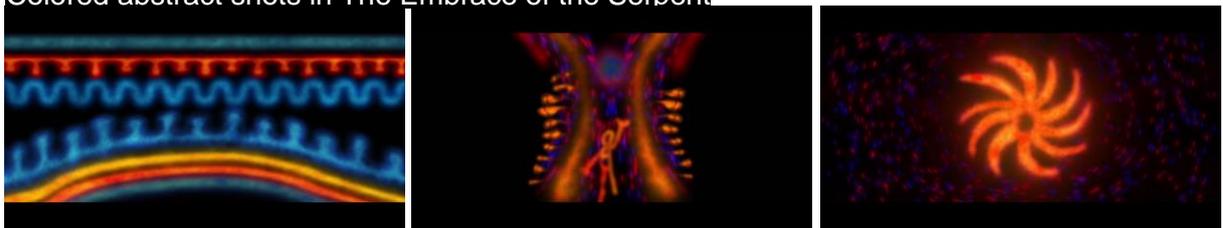
On the other hand, there is another moment of intimacy with the audience driven by an almost breaking of the 4th wall that leads to an actual total break of the aesthetic of the



movie and takes the audience to a completely different style for a couple of minutes. Almost at the end of the movie, in a close up, the main character faces the camera, eyes and mouth closed, a couple of

seconds before opening them in which moment beams of light come out of them and a sequence of stellar and random coloured shapes starts.

Colored abstract shots in The Embrace of the Serpent



In this sequence, after all the story behind, all the jungle, rivers, people, all the troubles narrated by a very careful, clean and somehow silent camera, everything is driven towards the stabilization of childish lines and a cosmic trip. Intentionally, the tale is completely broken as the tale of the character is “broken”, its goal and intentions. Colour is introduced as one of the main contrast points adding to the rupture a fundamental meaning: all the story is part of a fiction based on the diaries and studies of hegemonic cultures, but in the end reality and truth is nothing but the revelation that comes after a life changing experience.

Colour wise the movie does an intelligent move. They say one of the achievements of Chaplin's "Modern Times" (1936) is that the flag he is carrying in the sequence of the workers striking in the streets is automatically known to be red.



There is no need for the actual colour to recognize it as a red flag. Be it the context, the associations or the particular shade of grey, the audience recognizes it. Same is the jungle. We all know that the jungle is green. We all have seen it and even more with the huge dissemination of images in these times.

Rather than being obvious and easily effective with the green jungle, colour is used as a contrast tool with a real meaning in that last sequence. A sequence that recalls ancestral rituals that have been completely corrupted and misunderstood in the new world we live in, after the occidentalization of native cultures all around the globe.

In the same way, we could say, this movie retrieves the western and European tradition in filmmaking and makes it discuss with more local forms. Here, the classic tracking shots and long shots are not just determined by the action and the drama but by nature itself. It is the river which dictates how long, and fast the shot is, its cadence and pace: subjected to the river's swelling.

c. The symbolic jungle

In the previous pages we have established some ideas regarding the use of the tool and its meaning. The whole movie is a complete transformation of the space. Actually, it presents itself as a deep amazon, when actually the locations were in the north east of the Jungle in Colombian territory. Several indigenous communities complained about this fact, denouncing the lack of link between their space and the one they were portraying. In spite of that, the crew was blessed by the shamans of this

communities in a ritual that intends to ask permission to the jungle to come in and take what they need. It's vital to remember that the forest has a millenary tradition of communion between men and nature. If you are disrespectful, the forest will make your life impossible, as it has happened with several productions, "Green Frontier" which I will talk about later. There is a spiritual dimension which is been forgotten with time. It is precisely what the movie aims to say. According to Gallego, they tried to be as less invasive and as much respectful as they could and the jungle answered in an approving way.

When thinking about the colours of the movie Gallego says he read the script without having any reference from the director and the text gave him back black and white images as well. They discussed with Ciro Guerra and defined the reasons for this decision as mentioned before. One last one is there to say: showing a jungle that doesn't exist anymore.

The technicalities I've pointed out join this issue. All the tools used and the way they were used are meant to support this. The lenses fool the idea of the size of the jungle and the choice and processing of the film enhances the perspective of the authors about an unknown and unknowable jungle.

Here I have to stress the idea that even though the movie recalls ancestral rituals, pursues forgotten traditions and tries to rescue the rights and memory of several damaged native communities, it uses a budget that is low for international standards, but high for a Colombian production even being the kind of production it was. 1.5 million dollars¹⁶. Such a production answers to particular needs. Commercial needs. The production was done in association with Caracol TV -one of the biggest commercial

¹⁶ Redacción El País y Colprensa, "Lo que hay que saber sobre el Abrazo de la Serpiente", *El País*, February 26, 2016, Accessed March 7, 2019 [Available] <https://www.elpais.com.co/entretenimiento/lo-que-hay-que-saber-sobre-el-abrazo-de-la-serpiente.html>

media in Colombia- and Dago García Producciones -a production house known for its easy and quite popular comedies-. Conditions that naturally facilitates the possibility to an Oscar nomination.

This raises the question of to whom is the movie talking. The forest is a natural wonder holding resources, cultures and secrets of immense importance for the human being. The countries that share the Amazon forest in their territories have a clear responsibility towards it, as much as the artists working with and within it. To whom the artist is talking is, to my opinion, what can set a difference regarding the acts of a society towards itself as films should be their reflection.

In that way, this movie achieved some interesting steps. Several of the Amerindians who worked in the movie or were involved with the process somehow, started wondering about their languages and how that container of wisdom and memory is getting lost in benefit of the Spanish as a dominant language. A lot of them decided to look back into their own communities. That's not bad at all, and I don't pretend to expect a revolution starting from the movie, but small steps, although valuable, are not enough. A production of that magnitude, should be more giving. In fact, when they presented the movie to the community where it was shot, they did it, paradoxically, in a quite romanticized way: in a maloka (an ancestral house of knowledge in Amerindian tradition), far from the community and not much people went to see it, in contrast with "The Inflated Jungle", as we'll see further in this work.

I must question the personal projects compared to the collective ones. Here the personal ideology neglects the collective virtues of the movie, pursuing certain distribution circuits which can be opposite to the local needs, achieving a hegemonic narrative that will be enjoyable by the Academy or the critics. Call it Oscars or Cannes,

this, as many other Colombian productions, seem to be done to satisfy certain audiences rather than constructing an own idea of a multicultural nation.

I've written about the merits this film has, which are not few, but watched in perspective, it struggles to find a space where it speaks with a consistent and own voice. Rather than that, its technical approach gives us the key to understand the kind of jungle they want to portrait. A dangerous portrait of a jungle that, supposedly, doesn't exist anymore, a romanticized place to sell as an export product, opposite to the non-romantic perspective they were aiming for. By trying to do something, they end up going against it. In this way, it's proven that the technological footprint and its use, carefully studied, reveals different understanding layers that speak about the film sometimes better than their authors.

3. “GREEN FRONTIER” (Paulo Pérez)

There is still not much information about this tv show. Dynamo Productions, the most important commercial ads and film house in Colombia, wrote the story, Netflix bought it and asked them to make it happen. The cinematographer and the producer describe it as a spiritual mystical jungle thriller.

As a contrast with “The Embrace of the Serpent” this tv show is done with all the device of the digital cinema. Its commercial logics go way beyond *Ciro Guerra’s* movie. And yet, he is the director of some of the episodes, which again raises the question of the voice and the exploitation of the Amazon, with a director that was supposed to build a text of the jungle with his movie.

However, talking about a tv show has an interesting approach since, as said by the cinematographer, Paulo Pérez, the ones who were really there on set were the camera department and production. Production design department was intermittent and directors were constantly switching, so during the 3 months of production, he had to live in Leticia, capital city of the Amazonas department (state) in Colombia. A very particular place since it is a town very deep inside the forest, colonized by *criollos*¹⁷ from inside the country and in the triple frontier (Brazil, Perú, Colombia), where shady businesses are constantly happening. Just in Manaus, the main destination of illegal drugs entering through the frontier, the volume of seized drugs increased no less than 1324% between 2011 and 2015 according to the State Security Department.¹⁸

¹⁷ In the former cast system of the Spanish Crown, before the independence, *criollos* were Spaniards born in America. This would grant them not all, but almost all the privileges of a normal Spaniard.

¹⁸ Redacción Semana, “Un triángulo de drogas, armas y violencia: la terrible realidad de la frontera entre Brasil, Colombia y Perú”, *Semana*, July 3, 2017, Accessed March 28, 2019 [Available] <https://www.semana.com/nacion/articulo/narcotrafico-en-la-frontera-entre-brasil-colombia-y-peru/517753>

a. The digital jungle

I'm going to take the freedom to talk about this tv show, regardless of its release, since the issues that matter to us are the technological appliances that made the show possible. About the ideological and ethical matters, I'm going to refer to a document which analyses the relation between cinema and Netflix to put into consideration the depiction of the jungle depending on the screening platform behind it which is not less technological at all and, undoubtedly, not of less concern to the cinematographer.

“Green Frontier” was shot on Sony Venice, Sony’s new flagship camera. Its full frame up to 6K sensor, plus its cutting-edge flexible technology makes it one of the possible favourites for the coming years, achieving a spot among Alexa and Red’s now long-term rivalry. It’s claimed to have an astonishing colour management and latitude (-9/+5 over 18% grey) , with two native



ISOs in 500 and 2500, and 8 stops of mechanical ND filters, sensor cropping to S35 with different aspect ratios to use with 2x squeeze anamorphic, and a vast amount of system features to make it a champion in the industry and still quite user friendly.¹⁹

So why using this camera for this particular project? First and easiest answer: Netflix. Since the very top of the production there are certain rules that already establish the guidelines of the project, hence, its purpose and aims: the entertaining

¹⁹ Sony, Venice Brochure, Accessed April 2, 2019 [Available] https://pro.sony/ue_US/products/digital-cinema-cameras/venice

spectacle, showbiz and revenue. Nothing new, but still important to point out inasmuch it defines the scheme in the base of the storytelling.

Netflix won't accept a production done in less than Native 4K DCI 4096x2160 / UHD 3840x2160. It has, as a matter of fact, a list of cameras allowed to shoot with²⁰, and around 60 pages of technical demands.²¹

That's how Venice, after several camera tests, turned out to be the best option for the production. According to Pérez its colour reproduction and flexibility, low light response, noise perception and sensitivity were the perks that drove the call, and to be able to match the full frame, he used a set of Sigma FF High Speed Primes, most of them opening to T1.5 and closing to T16 (14mm and 135 from T2).

In the previous chapter I talked about the contemporary tendency to mix vintage lenses with newer sensors, to soften the image and age it. Not in this case. Pérez opts for new lenses which in conjunction with the 4K resolution they shot in, gives the sharpness and crispness the film industry somehow tries to avoid.

The difference is quite important between standard lenses and 4K lenses (actually 6K-8K class according to the manufacturer). Practice and logic easily supports the statement but an interesting SMPTE presentation on 2017 Annual Technical Conference and Exhibition Hollywood, CA. by colour scientist and digital imaging system engineer Kenichiro Masaoka about real-time MTF measurement and techniques, gives a clear illustration of this distinction.²² In the following screenshots,

²⁰ Netflix, Cameras and Image Capture, Accessed April 20, 2019 [Available] <https://partnerhelp.netflixstudios.com/hc/en-us/articles/360000579527-Cameras-and-Image-Capture>

²¹ Netflix, Netflix Licensed Content Delivery Specification and Operators Manual V. 9.0, Accessed April 20, 2019 [Available] <https://partnerhelp.netflixstudios.com/hc/en-us/articles/215148917-Full-Technical-Specification-v8-1>

²² MASAOKA K., ARAI K., NOMURA K., NAKAMURA T., TAKIGUCHI Y., *Real-Time Measurement of Ultra-High Definition Camera Modulation Transfer Function*. At conference: *SMPTE 2017 Annual Technical Conference and Exhibition*, SMPTE 2017 Accessed April 22, 2019 [Available] <https://www.youtube.com/watch?v=0Hp0gbBbLnc> Starting at 18:44. A manuscript of this research can be also found at <https://ieeexplore.ieee.org/document/8281427>

curves of the different sensors and lenses used for the test are presented, where the MTF of higher resolution is clearly crushing against lower resolution of sensor and lenses. Sadly, the presentation only mentions the lenses in the first camera, with a 2/3

inch 3-chip 4K Sensor. And leaves the other cameras with only the information of the sensor and the F stop. But still, it is possible to conclude that the resolving power of a 4K sensor plus 4K lenses will be able to catch so much more detail in the jungle than Gallego's combination for "The Embrace of

the Serpent".

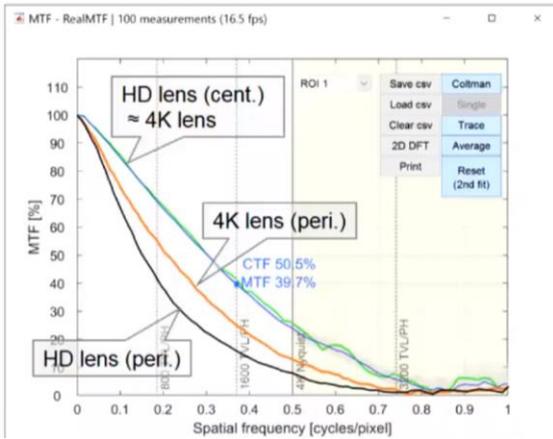


Chart 3. 4K Lens vs. HD lens. 2/3 inch 3-chip 4K Sensor

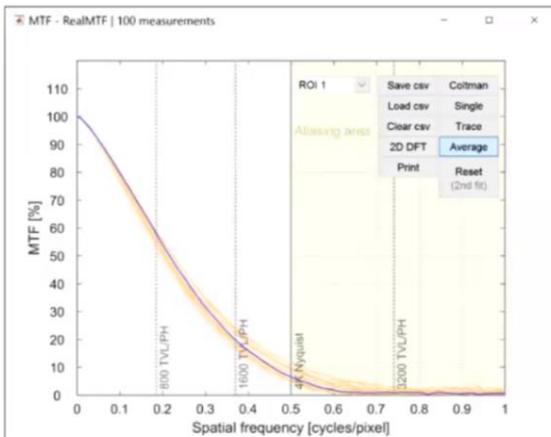


Chart 4. 2/3 inch 3-chip 4K sensor with low pass filter

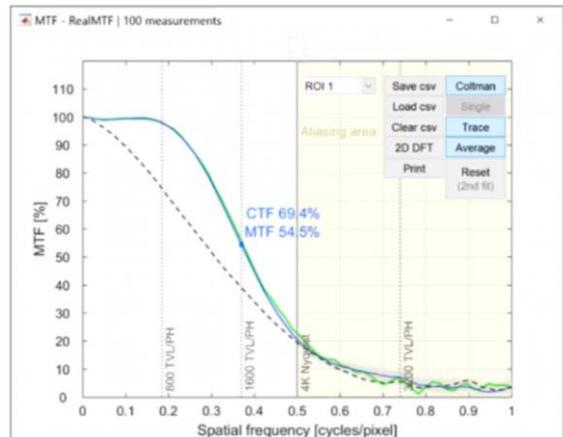


Chart 5. S35 single chip 4K

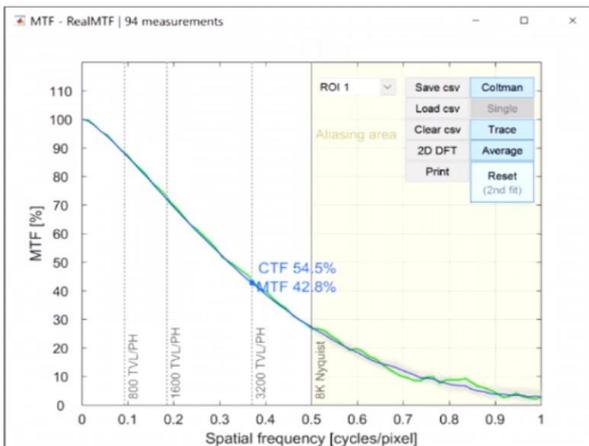
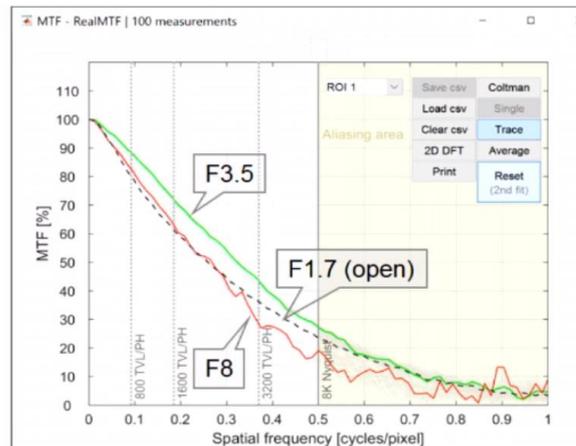


Chart 6 and 7. 1.7 inch 3-chip 8K Sensor



Each of the charts has a decadent MTF curve with vertical lines representing the different resolutions where they are resolving details. Naturally, the lower the resolution, the less capable to resolve they are, and the higher the resolution of the sensor and the lens, the more time it takes for it to drop to zero.

On Chart 3 we see a relative comparison between HD and 4K lenses on small sensor. On the centre, both lenses behave quite the same, but on the periphery, 4K lenses are way superior. Chart 4 shows the same sensor with low pass filter which several cameras have to prevent moiré and other aberrations. The resolving power significantly drops. Charts 5 and 6 show either a bigger sensor or a significantly higher resolution. We can assume, given the extremely better response, that 4K+ lenses were used for the test. Note that in the chart 5 the slope changes due to modifications to the “detail” setup of the camera. This kind of tricks are the ones which give that fine detail look to digital over the organic look of film, even when and, more importantly, the effect that the F stop has on the MTF in Chart 6, which of course would depend on the lens used.

The Amazon jungle is a place known for its biodiversity. The amount of different species of plants gives to the landscape a very rich environment full of different textures, details, patterns in trees and barks, grass and bushes, rocks and rivers, enhancing the overwhelming view on which the cinematographer has to decide how to portrait. We saw before how Gallego decided to go for a softer image to avoid distraction from the drama, to be faithful to the referents, to portray a non-existing jungle, whereas Pérez chooses to give colours and texture for the Netflix spectacle. After all, this is what the world is moving towards to: higher resolution pursuing a sense of immersion. But all this resolution is partly wasted when it comes to the device used by the consumer, be it a 75” TV at your place, or a smartphone in the metro. I will come back to this matter in the last segment of this chapter.

Now, this brief description of the curves gives us an evident understanding to the point of using high resolution lenses instead of the popular vintage ones. As said before, the logic by which this production is ruled is the mesmerizing imagery production, the spectacle and the possibility to portray an amazing jungle with all its textures and colours... for the right price. The numbers (resolution and prize) over the quality of the glass. I can't judge in a scientific and concluding way right now if Sigma High Speeds are worse than, let us say, Zeiss Supreme Primes, which is the newest line of the acclaimed company to compete on the large format high speed scene, already tested with the Sony Venice; but truth is Sigmas are close to 1/5 of the price²³ and deliver the desired resolution -regardless of the quality- which is what the production wants. While Gallego's jungle was a black and white not-longer-existing romantic jungle inspired in old references; Pérez' jungle is the showbiz jungle.

b. The colour jungle

There is a couple of things to say about the colour, as I have suggested in previous lines. I said already one of the virtues of the camera is its comfortable colour space allowing a lot of flexibility on the colour grading process. Comparing digital gamut to the analogue gamut and colour reproduction of film is rather unnecessary (not to say impossible, since a comparison would need at some point a digitalization of the analogue image and this gamut would depend on the digital translation).

But what has been a generalized feeling is the organic feeling of the film image against a more rigid and synthetic digital image. This is probably what Gallego refers to when he says that probably the separation of layers in film still gives a certain perspective and dimensionality that digital sensors lack of on their flat mosaic-based construction. Same happens with the grain vs. noise perception. Nevertheless,

²³ www.lensrentals.com, Accessed May 1, 2019

business developer manager at Diviexco, Daniel Cadavieco, at the International Hall of Light held at Bogotá, defended Venice's noise perception as a noise which doesn't "lie" to the spectator. It is a monochromatic noise which doesn't try and fail to reproduce a colour, giving that typical uncomfortable noise in consumer cameras. Regarding the pixels, we have to consider, although not stated by the cinematographer, that there is an advantage, in terms of imaging, digital cameras have. The array of the Bayer pattern is double sensitive to the green light -as human vision is-, than to blue and red²⁴, making it handy for such green conditions as the Amazon, where everything surrounding you is basically hundreds of shades of green. That is, as a matter of fact, what worried Pérez when shooting "Green Frontier". The amount of green in the colour pallet and how to harmonize it with the colours of the characters.

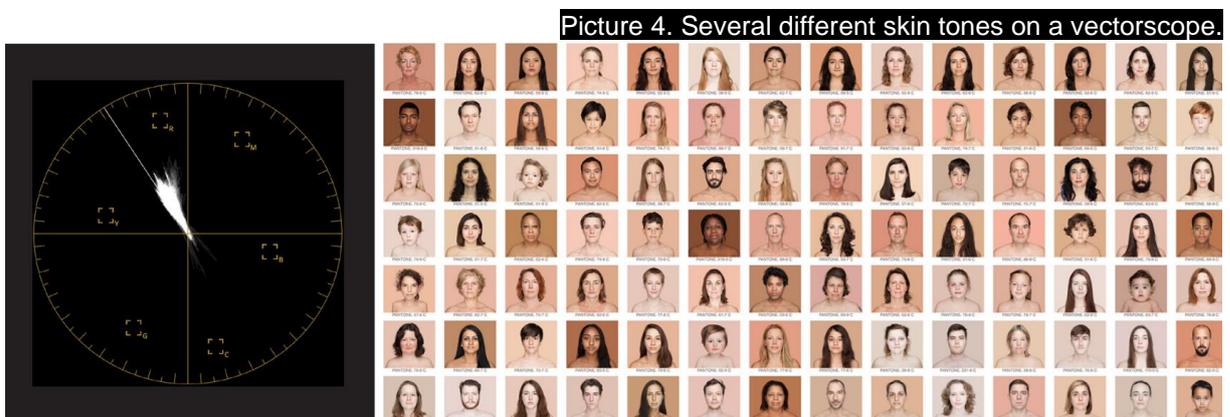
But another colour issue was there all the time as the story deals with every possible skin tone. On this regard, film has always been the unbeatable winner (probably Kodak's one), given the smooth and truthful rendering of skin tones. We have to remember how historically the technological developments have been biased to prioritize the colour reproduction of certain population. A matter of big relevance, where Caucasian pale skin was the standardized tone to calibrate the emulsion colour reproduction, at least for still photography, leaving out the calibration of other tones. As a consequence, for instance, darker skins were terribly depicted along with darker products like chocolate or dark wood, main reasons why they decided to correct the film. The racial problem has always been there at least in a subtle way.²⁵ Of course, this tv show was shot on digital, that's true, but also true the racial issues persist, racial

²⁴ Global Computer Vision, (Berlin: Free University of Berlin) Accessed August 9, 2019 [Available] inf.fu-berlin.de/lehre/WS02/robotik/Vorlesungen/Vorlesung2/ComputerVision-2.pdf p. 15

²⁵ Lorna Roth, "Looking at Shirley, the Ultimate Norm: Colour Balance, Image Technologies, and Cognitive Equity". *Canadian Journal of Communication*, Vol 34 (2009) 111-136 [Available] <https://www.cjc-online.ca/index.php/journal/article/view/2196/3069>

issues that have an important impact on what we want to portrait, even more given a production that is dealing with multiple skin tones.

It is claimed that these technological biases are still happening in modern technology: “HP’s MediaSmart webcam included facial recognition software so that the camera could move to follow the position of the user. In 2009, two co-workers in a retail store highlighted how the camera would pan to follow a white face, but stop as soon as her black co-worker entered the picture.”²⁶ We can’t omit the fact that vectorscopes in postproduction software show the skin tone reference at the spot where pale skin is best reproduced. The following, is an illustrative small experiment that was done about this very same issue.



Whereas it is arguably truth that every skin tone might be within the range of reds, disregarding saturation, as the Picture 4²⁷ shows, the shift is not insignificant. Any colour grader would agree that shifting the Hue tool to the left, so the far right side of that skin tone spectrum hits the mark, would dramatically change the atmosphere of

²⁶ Nellie Bowles, “I think my blackness is interfering’: does facial recognition show racial bias?” *The Guardian*. April 2016, Accessed May 10, 2019, [Available]

<https://www.theguardian.com/technology/2016/apr/08/facial-recognition-technology-racial-bias-police>

²⁷ Marina Starke, *The Visual Appearance of Skin in Motion Picture*. (Bachelor Thesis. Media University Stuttgart. Stuttgart, Germany. August 2017) p 54. [Available]

https://lowepost.com/uploads/pages_media/0_180509_Visual_Appearance_Of_Skin.pdf

the scene. The same research, with other purposes, tries the shift with a very famous movie.

The first stripe shows the value of the skin tone (highlighted with a picking tool) for that particular shot of *Amelie* (Jeunet, 2001). The two following are the changes between the original shot and the “graded-to-normal” skin tone shot. If we compare the shift of the skin tone, related to the mark, in the first stripe of Picture 5²⁸ with the shift in Picture 4, we can agree it is shifted almost the same but to the left; and I will dare to

Picture 5. Close skin tone shifts



affirm that, for the example presented in Picture 4, the change between original and a grading to skin tone mark, would have a similar effect as in Picture 5. Let us point that the grading done is

a basic Gain colour correction: “A simple white balance using the Gain control corrects for the overall greenish tint and gives us a nice natural skin tone that falls close to the skin tone line. The vectorscope refers to the whole image.”²⁹ We confirm with those two examples that modern technology sets up a hegemonic standard that has an ideological bias affecting the way we produce images from the very base of the technological design. In this particular case, as a matter of fact, any technical decision on the side of the cinematographer has already an ideological footprint, and one that is difficult to overcome, and as such, the problem affects the industry in general. I do

²⁸ Ibid. p 60

²⁹ Ibid. p 59-60

question and wonder about the possibilities to democratize the tools, even more in an age where everyone has access to them. But before that happens, it is important to acknowledge the usefulness for that matter that professional modern technology offers.

What is important for this discussion is, again, the fact that tools have been biased to privilege certain standards, beauty standards, racial and even political and economic standards by extension. Paradoxically, is at this point where extensive wide Gamut play a significant role. I would say RAW images instead, but a RAW image will need a delayering process anyways, so let's talk about the Gamut applied.

This image found on Sony's Technical guide about their new curves and colour gamut, shows how big S-Gamut3, bigger than S-Gamut3.cine which is supposed to imitate negative film scan used for TV production³⁰. On the other hand, S-Gamut3 is

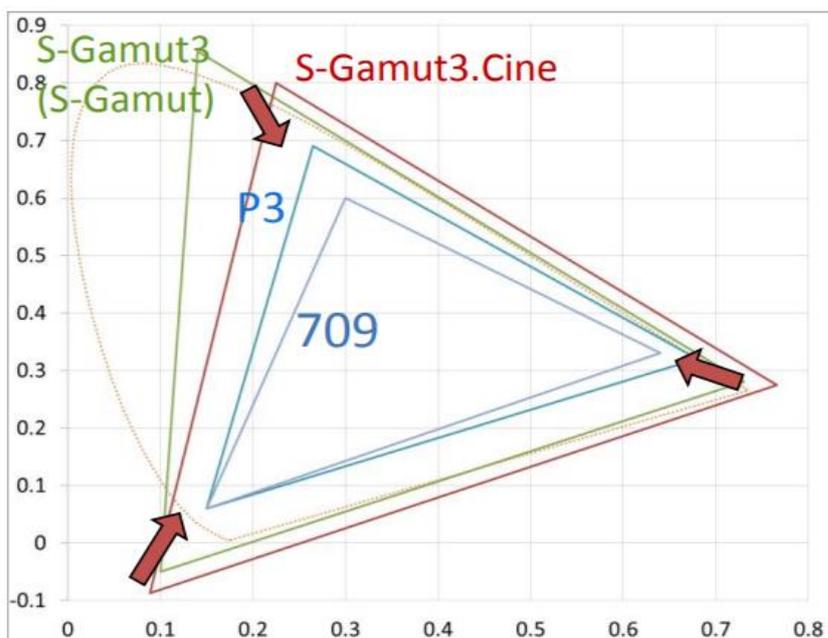


Chart 8. Comparison of Sony's Gamuts and standards

much wider and works better with ACES (one of the biggest colour spaces out there), ITU-R BT.2020, and for archiving purposes.

When working with this Gamut, it seems like colour reproduction stops

being a problem since everything is being displaced to the grading room. I asked Pérez

³⁰ Sony, Technical Summary for S-Gamut3.Cine/S-Log3 and S-Gamut3/S-Log3, Accessed May 13, 2019 [Available] <https://pro.sony/s3/cms-static-content/uploadfile/06/1237494271406.pdf>

about his opinion on Alexa's skin tone reproduction and how could he compare it to Venice's gamut and he couldn't really fight against Alexa's skin tone superiority but to argue the wide Gamut of this camera allows to play with colours in a more fruitful way (as long as properly exposed and encoded). Hence, this has been a way to address the issue of a technical "inequality" that has ruled technological development for decades. The wider Gamut on a proper exposure and codification allows to work with significantly more hues and manage them in a way that most ranges of skin tones are respected for the purpose of appropriate depiction.

The vast flexibility of the technology he had at grasp, allowed Pérez to



manipulate the image in the way he wanted, giving to the forest the tones and colours he desired. For him, the jungle was another character of the story so it needed a narrative and dramatic purpose

colour wise. The jungle can be a happy radiant place, or a glorious imposing monument, or a dangerous and chaotic tangle. Pérez decided to drop down its intensity and make it colder, more to give a little bit more of the thriller mood. A mysterious

feeling that has nothing to do with the mystery of Gallego's Amazon. In this sense, the cinematographer was able to keep a harmony between the skin tones, the colours of the forest and the costumes. The



latter ones, were thought around, precisely, the monochromacy of the jungle. Against

a place which is constantly full of shades of greens, the foreigners were portrait with creamy pastel colours, less saturated, whereas the indigenous people were depicted with akin to the forest.

Last consideration about colour is regarding the proficiency of Venice to render blacks in a strong yet smooth way. It is noticeable in the clean blacks of the camera. A pure black is more likely to be achieved on film due to the construction of the material. Black is no light at all, no grain exposed. In the negative it means a white unburnt area of the frame which translates into a black one once it's printed. Given that no silver halide reacted on that area, the resulting black is a pure unexposed projection. On a digital sensor, its electronic system is always working, a basic noise (which is inherent to any digital process) to signal ratio is constantly acting while the sensor is waiting for light. When it can't find enough, the sensor tries to "invent" this light or to push the gain



to come to an appropriate level and noise becomes visible. True blacks are constant struggle in digital cinematography which cameras as Venice have been able to overcome.

Furthermore, this black rendering is also evident when we look to the



characters coming from the total darkness into the light, as it happens with fireplace scenes. When the characters walk towards the bonfire from the jungle's darkness, we can feel very smoothly this

transition in their skin, with no artefacts or roughness. We must remember that one of the critical places for noise in digital image is those places where light reflected from

the scene is barely affecting the sensor. But this powerful sensor handles these zones very well and renders smooth greys.

Compared to film, this is a great achievement in terms of the organicity to render pure blacks. There is still a matter to account for in digital cinematography which is the projection, where, as opposed to analogue projection, the black is digital and usually bleached to some extent. But on the other hand, we have to acknowledge most of the screenings now a days are digital. Even productions done in filmic material are later digitalized to fit the new standards of commercial and almost all non-commercial screenings. During that process some of the virtues of film are equalized to the digital logic but some of them are kept, as we saw with the double scan done for “The Embrace of the serpent”. In this one, the unbleached film was able to keep enough information to save the expired material and the extreme light situation achieving a perfect combination between the filmic experience and the digitalization. In the case of “Green Frontier” Venice is arguably walking towards that direction right away from the uncompressed file thanks to its low noise design, its high sensitivity and the wide gamut processing the image.

In any case, looking to both productions and their purposes, we can still understand each of them turned to the camera/film, they required for their specific needs. “Green Frontier” is a sort of thriller which needs deep blacks in a way, for dramatic scenes and atmospheres, whereas the deep blacks in “The Embrace of the Serpent” intended a dramatism in the jungle itself, in the river, rather than the characters or the dramatic goal of the characters.

In both cases, there is a fictionalization of the forest driving away the perspective of the place and its cultural background towards, precisely, those dramatic purposes held on the mind of the artists. Both technical approaches attempt to, on one

hand turn the place into a spectacle, and on the other hand, to portray a supposedly non-existent rain forest romanticizing its reality.

c. The exploited jungle

There is still no information about the budget spent during the shooting of “Green Frontier” or for the whole series for that matter. But for the 3 months that the shooting lasted and its pre-production, I can easily estimate that it is arguably the biggest production done in the Colombian Amazon so far. Up to 200 people on set including extras, costumes, catering, accommodation, transportation, picture dailies (delivering the dailies to Bogotá) and postproduction, they all make this a kind of blockbuster production.

The question that comes in this case, further than the narrative expectations and the goals of the authors -whoever the author is in this cases-, is about what they get from the forest and what they give back. A transaction that I find necessary if there's an intention of building an identity around Colombian cinema and its multicultural issues.

During a conference about the TV show, a funny anecdote of the crew came out when talking about the conditions of the shooting. While getting one of the shots done, for reasons unknown a honeycomb was disturbed causing hundreds of bees to attack the no less than 50 people who were on set at the moment. All of them had to run away from the set and the scene had to be postponed. Now, I don't want to be superstitious, but there was evidently something wrong, a bad movement. Surpassing the limits of what is permitted inside the forest. This is not just a spiritual matter, although it is not something I would discard. I can't help but to put it into relationship, keeping the proportions, with Herzog's experiences into the Amazon. There is clearly a violation of the terms of the place. A misuse of the means for the end which ended

up taking the lives of some of the Amerindians working in the production in Herzog's case. It is as if the forest reacted against certain ambitions.

Both crews in the movies that we have talked about so far, were blessed by the leaders of the communities in a ritual that, disregarding the mystical purposes, tries to bring some attention into the basic respect needed when stepping into such a place. Actually, both Pérez and Gallego shot their works in a similar way, naturally, trying to adapt to the jungles light condition, shooting the closeups first and the wide shots later and even using the least equipment possible. Nonetheless, the least equipment possible for Pérez meant, several dedolights, a couple of kinos, at least 6 Velvet led lights, 2 Arri D12, several Skypanels and all the grip needed for the case. Considering the difficulty to bring equipment from Bogotá, the movement required from the base to set, which was from Leticia towards inside, having to walk for at least 10 minutes in most of the cases, this is not the lightest setup in terms of lighting equipment, specially having a camera which is 2 stops and $\frac{1}{3}$ -probably 3 stops- more sensitive than the expired film Gallego had, who barely brought some small lights inside the jungle, as we saw on the first chapter.

This technological difference between both of them lies on the mechanics ruling each of them, being, for Pérez' movie, a Netflix production. The whole technical system involved in getting a TV show done for this kind of new streaming platforms both shapes and is shaped by the logics of the market, of a consumerism industry. Now, I could expand endlessly the idea of how capitalism has affected audio-visual production since its beginning but that's not what takes on my effort right now, at least in a direct way. What we can say is how that consumerism, which is based on the subtraction of raw material from a place (usually the third world) to manufacture a product that will be sold to the consumers and ultimately discarded most of the times, is perfectly akin to the mechanism of the so called now *content* consumption. I'm talking

here about an imaging mining and it works under the same conditions. A huge multinational enters a territory -although in this case it commissions a local company-, usually, as in this case, endorsed by the government with some juicy laws enhancing the benefits of the heads, and encouraged by the peace agreement with FARC, so they can exploit a resource to take it out, brand it and sell it back to the place it was shot, but “double” the price. Of course, the royalties are kept by the big industrial. They usually sell the idea of bringing new jobs and modernization to the sector and that has proven to be false in almost every case, and even if it was, what is the territorial cost?

When nothing is at least being left to the community, there is not a reciprocity that provides mutual growth but just alienation. It was three months (January-March 2019) of some jobs for the community, but a month ago (April 2019) the production office, where arguably not much people was working, was closed because they can't know right now if there'll be a second season. As far as we know, the first one, even if successful, will be disposable. The experience for the audience will be fleeting and lost in the huge number of product offer.

Part of this ephemeral experience is the environment provided to the audience as a result of the multiplication of screens. People has now the chance to watch a movie on their phones while going from work to home, stop it while you get something else done, forward it rewind it or just quit. The big screen used to give the ritual feeling of assuming the next hour and half/two hours were going to be dedicated to the screen in front. It is true that television and computers already started that trend, but mobiles have intensified it and brought it to a next level, where the action of watching is completely unlinked from the act of sitting down and focus.

“...Netflix fights the ‘theatrical window’. This term refers to the time that movie theatres have the exclusive right to show a film. Netflix has released movies in theatres, but

launches them on their site simultaneously. Viewers can watch Netflix movies at the cinema or at home. This choice nullifies the theatrical window.”³¹

I would add, they can watch it on the bus, walking somewhere, while doing the line for something, even while avoiding your daily tasks at job. In this way, the experience is nothing but short-lived, which is not a problem for the industry since new content is created every time. So, no loss for the industrial, but questionable profits for the community (as in the case of the payment to the stars compared to the locals), in this particular case the Amazonian communities or any other place of visual interest in the world where there's a need for a careful approach given its cultural conditions. Another possible discussion here about how television, and now Netflix, has transformed cinema, or how television didn't kill radio or books is also possible, but let's focus on the screen.

The classics of cinema, either from the Hollywood commercial side or the rest of the worlds independent or authorial shore, were built in the big screen. This might be a subjective appreciation, but those epics like Ben Hur, Star Wars; or on the other hand Solaris, Persona or Italian neorealism, were all movies, filmmakers or movements that were immortalized thanks to the big screen. The more the audio-visual experience moves away from it, the less legends like those we see, in benefit of epic productions where the name that outstands is a huge production house HBO, Netflix, Amazon (the company), very much like it happened in the 50s with the trademarks of FOX, Warner and Disney, where the production company becomes the quality standard rather than the point of view, perspective, visual style or whatever a director/cinematographer or any other creative in the production process wants to say. History comes back with a

³¹ Djoeke Hannah Vielen, *The Netflix Effect? On Updating the Cinematic Apparatus Theory*. (Thesis, University of Utrecht, Netherlands, 2018), 4.
<https://dspace.library.uu.nl/bitstream/handle/1874/364324/The%20Netflix%20Effect%20about%20updating%20the%20cinematic%20apparatus%20theory.pdf?sequence=>

renewed face with alienation fully moving to the moving picture in a way the technological issue of the resolution and screen affects the depiction of the Amazon as much as the disposable productions take advantage of it while leaving the place where they shot to its own.

No doubts the sensor is growing bigger with time and resolution is the field where several companies are struggling in a technological battle. While 8K is almost here as the standard, people reduce the experience to 7 inches screens, a screen were the magnificent Amazon Rainforest will be reduced and ultimately forgotten.

A question on the shooting style raises here: it was -and still is somehow- an accepted rule for shooting that the higher the resolution or the bigger the film format, the further from a close-up a shot should be, avoiding a harsh impression of the talent's face given the strong details the device could capture that would show every pore or defect on it, as opposed to smaller formats, better on this scenario, but failing to portray a good-looking landscape or wider shots. Now that screens are far smaller than the huge theatrical cinemas and the "newer" multiplex, we should wonder if these shooting rules should change to adapt to the new media. Even more when movies are being thought for both the theatrical release and Netflix release as is the case of "Roma" (Cuarón, 2018). In the case of the Amazon rain forest, and other places of similar size and grandeur, going for the close-ups, aiming for the small details of the forest, seems to me an approach that would increase its greatness

After this analysis of two fictional major productions and their relationship with this particular geography, let us cover a smaller production, documentary one, which should bring new insights on a different approach to the jungle and a more rooted process.

4. “THE INFLATED JUNGLE”³² (Alejandro Naranjo)



Alejandro Naranjo's opera prima has its origins on a newspaper article he read when he was studying his bachelor in communication sciences in Bogotá. The note denounced a growing and worrying tendency of indigenous teenagers from a region in the Amazon to commit suicide. With a background in philosophy and journalism but not in the craft of filmmaking per se, and from that moment on, a 4-year research process started, involving field research with constant trips to the region as well as academic research. On the lack of cinematography experience, he commits to the project going to Argentine to take an intensive one-year diploma on cinematography technique in the SICA (Argentinian Cinematography Guild) with the purpose of being ready to face the shooting in the best way.

The documentary follows the daily life of a group of teenagers on a boarding school in Mitú, capital city of Vaupés department (state), a department with less than 45.000 inhabitants (out of the almost 50'000.000 people in Colombia) and a population density of 0.83 inhabitants per square km. a majority of which is indigenous people. A quite unpopulated place where young men are taking their life.

³² See appendix 2

a. The documentary jungle

Documentaries are probably the main thing that has been done in this region. Since the early 30s documentarists have done expeditions of several different interests. To name a few, in 1930-31 César Uribe Piedrahita shoots “Expedition to Caquetá”, a short documentary depicting the landscape and the Amerindian communities of this department which, by that time, was even less accessible than today. In 1932, Acevedo brothers -quite known in the archives of Colombian cinema- travel to the deep jungle close to the border to shoot the last events of the conflict known as *The Colombia-Perú War* ultimately edited in a homonymous documentary and another one called “Victorious Colombia”³³. After some other records and films, political and social affairs in the country begin to collapse, again, resulting in the isolation of several different regions of the country and their productions. These are very primitive documentaries with no purpose further than having a record of the places and traditions, or even as an early film journalism.

Specially during the last decade, the Amazon has been progressively accessible again allowing filmmakers to take their crews there. Apaporis (Dorado, 2010) and Amazona (Weiskopf, 2016) stand out as films with certain relevance in the contemporary panorama. The first is a classic documentary following the steps of the same Richard Evans Schultes on which “The Embrace of the Serpent” is partly based and sharing all the romanticized beauty of the rainforest. The second one is an intimate portrait of a British woman who leaves everything and goes deep into the forest to live on her own, where the Amazon is nothing but the landscape that happens to be there, barely decorative.

³³ Cinemateca Distrital, ed. Angélica Mateus Mora. *Cuadernos de Cine Colombiano. Cine y video indígena: del descubrimiento al autodescubrimiento* 17a. Cinemateca Distrital.

Naranjo's documentary is not far from all of these previous descriptions. The film is a little bit of a journalist chronic, a classic narrative documentary following some interviews, an exaltation of the rivers, flora and landscapes of the region. The way he exposes the camera leaves no space for doubt that he is interested in characters more than in locations, leaving the well exposed images for some sequences of contextualization, as decorative as they are, for audience service. Other than that, the movie exposes for the faces instead of the set. In certain situations, you can see how the windows and the light that comes through the wooden walls just blows out in benefit of a good record of the people in the frame.



Due to the budget and nature of the film, he shot most of it with a Sony Z7: an early hybrid HD Sony camera capable of shooting in mini DV and on compact flash cards. It has already CMOS technology but arrayed in three $\frac{1}{3}$ " sensors -the same way older camcorders were-, instead of only a big one like modern cameras. This translates into a nicer colour reproduction, insomuch as each sensor is sensible to one primary colour. But there is nothing else to it. The decision was taken on no other reason than the budget. It was available, and of course, it does the job. On the other hand, there was a Nikon D7100 with a set of a 24mm, 50mm and 135mm Nikkor lenses with iris ring, and a GoPro for tricky shots in crowded places. The Nikon was a later acquisition after the documentary got several different funds. Naranjo, having already the flexibility to get professional equipment, decides to keep on with his little camera which was

already accepted by the community, which was going to output at least 30% of the movie shot so far and still versatile enough to work around. Getting an Amira, for instance, would have meant having 1 or 2 more people on set in a crew that never surpassed 4 members at most, plus immediately increasing all costs of transportation,



storage and maintenance. Batteries were already quite difficult to charge whenever they went to the boy's communities inside the forest.

For him it was starting a new movie and losing the spirit of the things done until then. Guerrilla filmmaking is a common term used in Colombia to define a low budget style that compensates the issues of money with invention and resourcefulness. Opposite to that, a bigger camera was a reflection of the inflation he was criticizing in the movie. Not just the inflated jungle now, but also the inflated equipment.

The idea of keeping a somehow low-profile presence in the town allowed him to sneak in and fully gain the trust of the inhabitants. His four years of shooting



overlapped with Gallego and Guerra's shooting of "The Embrace of the Serpent", and after that, the town was quite annoyed by the size of the production, the apparently low payment to the extras and several other issues

that bounce between reality and gossip. So, Naranjo had the challenge of blending in

and not disturbing. The Technological decision is both strategic and ideological. In the end, the solution was to get the DSLR and an Atomos Ninja they could plug to both cameras to enhance the image and be able to work it better on post production.

b. The empowered jungle.

Naranjo is quite conscious of his position in front of this community. He doesn't even hide it. There is a specific and only moment in the movie where we can hear his voice asking the questions to the characters during one of the most important interviews, the one about the friend of them who committed suicide. His presence in the film rather than being presumptuous is a deliberate act of breaking the fourth wall in its own way. A statement to have the audience realize there is an external agent producing and guiding the tale, and in that way, he somehow cancels the idea of subtracting, underhanded, the knowledge he is looking for -agreeing that every movie and art itself is an epistemological attempt.

The cinematography during this interview follows the same intention. Following Bill Nichols' analysis on the documentary genre and the categories he establishes³⁴, the characters are looking at the interviewer as in a classic expositive documentary, which is paradoxically the most narrative and less reflexive of them (since breaking the fourth wall is a classic reflexive technique), but in contrast with the more observational style the movie has been undertaking all along. This kind of setup becomes a breaking point where the artificial light, almost frontal and direct, quite harsh and evident as we hadn't seen before, clearly unveils the mechanism, the apparatus, becomes reflexive and gives another dimension to the film which the other two lack of: self-consciousness. He acknowledges himself as a western capital city man who has a distance with the people

³⁴ Bill Nichols. *La Representación de la Realidad. Cuestiones y Conceptos Sobre el Documental*. Primera Parte. (Barcelona: Paidós Ibérica S.A., 1997). On his book, Nichols proposes a division of the documentary styles in 4 categories: Expositive, Observational, Interactive and Reflexive, describing each of them.

and whom he can't pretend to educate or save -if there's any need to. He presents himself not as a charity agent nor as a job bringer or any other promise.

While the cinematography of "The Embrace of the Serpent" and "Green Frontier" are designed to seduce the audience with their artefacts, focused on using the fiction to build fictions around the jungle, its structure, its people, its reality, "The Inflated Jungle" works in an opposite way. The documentary language has nothing to



do with it. It is the way the tool is used and the meaning placed on it. As a matter of fact, we've seen for ages this Brechtian technique, a very reflexive one, which is not the only element making this film outstand (it's barely used), neither the only way to deliver that self-consciousness I mentioned before.

While talking to him, Naranjo even accepts that there

was a certain extent of usage of the people for his documentarist purpose. There was no blessing for him coming into the jungle, which suddenly seems to be a kind of trend done just because. He premiered his movie not in a Maloka outside of the town, but brought it to the people in the main square of the town, close to the canteens and the shops and the noise of the people. Everyone went to watch it.

After the end of the screening, mothers came crying to him thanking him for the job he just did. One of the main teachers of the boarding school who was an obstacle to the process, believing he was just another man coming to disturb and work

with social wounds he couldn't handle, came to him to acknowledge his mistake and thank as well. And the boys, during the process and after the screening were left with a feeling of empowerment, the feeling that they matter, that their life count, beyond cultures, languages and traditions.

After the release of the documentary, Alejandro Naranjo has been constantly called and consulted by organizations, teachers, government offices and more to share his experience on how to construct a better understanding with natives of Vaupés.

5. CONSIDERATIONS ON ANOTHER JUNGLE

Before concluding, let us shortly review, for comparative purposes that could illustrate better the proportions and purposes of the previous analysed productions, one of the biggest jungle-related films ever made, through the eye of the acclaimed cinematographer Vittorio Storaro.

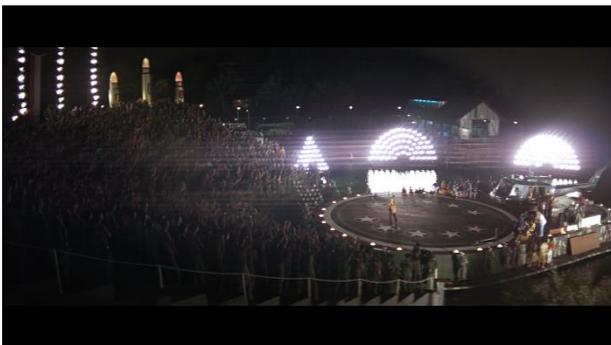
Apocalypse Now is one of the most important films in the history of cinema. A curious position considering the ridiculous amount of issues the shooting had. Among these issues, the particular frenzy the crew fell into was a major determinant for these obstacles. Marlon Brando completely overweighed, unprepared and at enmity with co-star Dennis Hopper, whom in turn was absorbed by cocaine and alcohol; a crew that was given to full party time till a typhon hit the country; Martin Sheen's heart attack, Coppola's nervous breakdowns and suicide intentions and, what I found the most astonishing, a set designer who wouldn't mind using real corpses on set, supplied by a grave robber, to give a realistic atmosphere.³⁵

This short summary of unfortunate events relates somehow to that thing I've been trying to talk about regarding ideology and also how certain people approach a different culture, a different geography. In this case a dominant culture facing not particularly the jungle, but a foreign country, the Philippines, to be portrayed as a recently out of war Vietnam, the latter one probably too destroyed and close to the drama to actually use as a set. Actually, the shooting was firstly conceived to happen in Vietnam, in 1970 and directed by George Lucas, guerrilla style in a probably more

³⁵ Robert Sellers, "The strained making of 'Apocalypse Now'", *Independent*, July 24, 2019 [Available] <https://www.independent.co.uk/arts-entertainment/films/features/the-strained-making-of-apocalypse-now-1758689.html>

documentary style³⁶. Extremely different implications would be there to think about in terms of technology and ideology, perhaps closer to “The Inflated Jungle”? Hard to say. But the solution found by Coppola was the extreme opposite, shooting in a different country, closer to USA influence area, with similar geography and people’s physiognomy (very different than the Amazon jungle, to put an example), with a huge technical display. Apparently, the reason not to shoot in Lucas’ way, was more about the safety of Martin Sheen than any other impossibility. But it is not a secret to anyone that Hollywood has no issues with portraying foreign stories/cultures wherever they want and even in English language if it makes it easier. All of this definitely rung my alarms, but there is a chance to think at least cinematography, or Storaro, was really focused on his job.

As it is proper of his style, he approached the movie from a psychological-philosophical perspective based, precisely and paradoxically, on the thought of a dominant nation invading and imposing itself over another. In that way, darkness was a main aesthetic resource that was also in line with the relative low budget lighting he was counting with: 1000-amp generator, which equals a huge amount of light compared to the movies previously studied. Darkness as that hidden purpose of a culture who thinks it’s bringing good to another when it’s actually bringing horror.³⁷ In that sense, even though the light supply was rather big, it was not enough to light a jungle and/or the vast areas of set where the film was happening. The same strategy



³⁶ Ibid.

³⁷ Stephen Pizzello, “Flashback: Apocalypse Now”, *American Cinematographer*, August 24, 2017. [Available] <https://ascmag.com/articles/flashback-apocalypse-now>

of natural light was commonly used, with classic bounces and negative fills. But for certain scenes like the Play Boy show or the Do Lung Bridge, where Captain Willard gets the mail, clever position of lights was fundamental.

As well as the darkness idea, Storaro wanted to portray the invasion with a disruption of artificial light among the jungle.³⁸ The coloured military smoke was already giving saturated unnatural colours in contrast with the natural landscape of the jungle and the same idea was applied to the lights, mainly photo floods blended into the set design and brute arcs, enhanced by the flares and aberrations of the anamorphic Cooke Hobson Taylor to be placed on an adapted Mitchell Reflex camera. The result is a completely dark jungle with an artificial scenario that becomes aesthetically uncomfortable, intrusive. It is indeed the depiction of an invasive behaviour.



The harsh lighting conditions under which Storaro was shooting in those nights in the river, plus the meaning of darkness specially for Marlon Brando's

character were probably the reasons he decided to flash the negative. He was not happy with the rendition of blacks from the recently released Kodak 5247 so along with his laboratory technician he decided to flash it before development and after

³⁸ Ibid.

exposure³⁹, probably to keep enough information among those dark areas. We must remember that the EI of this film was 125, tungsten calibrated and 80 filtered for day light. Quite the opposite process to Gallego's unbleached film, which was more sensitive and more advanced technologically than Storaro's one. On the other hand, the Italian master was risking his blacks from the very exposure of the film, while the Colombian cinematographer was adapting them with the bypass according to the scene and the intention.



Given the low speed of the film Storaro had, we can deduct that the amount of light during the day was more than enough for such a low sensitivity, even in the few scenes deep inside the jungle. In contrast with the most expired film Gallego used for "The Embrace of the Serpent", Storaro was counting with 2 stops less of light and far less than Paulo Pérez in "Green Frontier", and yet his

blacks are pure without compromising any details on the image that would affect the narrative. However, to be fair, most of the movie happens in the journey along the river, and in the moments he gets inside the jungle, like the tiger scene, the faces are underexposed to match the time of the day, the density of the forest and as part of the puzzle he's slowly revealing to the audience. This underexposure follows as well the "low key" of several scenes of this movie, as in the above mentioned Do Lung Bridge, which heavily relied on silhouettes.

³⁹ Ibid.

This is probably one of the greatest achievements in modern cinematography and it answers to the size of the project Coppola was building. Compared to the movies this thesis focuses in, the technological apparatus here is that of a Hollywood production. With a budget of USD 31.5 million in the 70s, it is completely out of any budget ever possible in a Colombian production. The Embrace of the Serpent can be done 30 times with the same money, and 30 is not even the number of movies with a theatrical release during a year in the country. A comparison between them is rather unnecessary from a material perspective. And an ideological comparison is somehow out of my scope since, on one hand, the time, the place and the context of both the story and the set, requires a huge research; and on the other, in this case the point of view from which the movie is speaking to the audience, matches the point of view of the author, and that particular factor displaces the discussion to a new sphere, which is where Gallego's movie fails and where Naranjo's "The Inflated Jungle" comes up with a fair strategy. But a reflexion upon the invasion and extraction is set up. Let us not forget the set was supposed to be as realistic as possible: real corpses, a real stone temple for Colonel Kurtz, real explosions and loads of lights, as opposed to all the other productions analysed.

6. CONCLUSIONS

I have gone through three modern productions which I think are representative of the contemporary audio-visual work in the Colombian Amazon to find myself discovering the different layers and variables that play a role in how these films interact with the rainforest they were shot in, its communities and its life. It is certainly difficult to make certain moral statements regarding how these productions objectify the jungle; there's no doubt "The Embrace of the Serpent" and "Green Frontier" did some good in their process, but in the mid and long term, there is no real solution to the dangers threatening the Amazon and the forest is left there as a thing which help them raise a good profit.

I must admit that, likewise a documentary process, my thoughts changed during the construction of this paper which, at the beginning was meant to draw attention on the huge value of Guerra's movie which I still consider a Colombian jewel in many different aspects, but I kept finding similarities with the technical system of "Green Frontier", keeping the proportions, which I consider loud and clear gold mining. And as much as its story is quite reconciling, the technical decisions are there to depict the jungle in a convenient way that doesn't really speak to the people or builds up an empowering narrative of the Amazon but ends up falling in the romantic view. There is not an own voice. Instead of taking the cultural heritage to produce a new form, it becomes an imitation.

On the other hand, after knowing Naranjo's points of view, my first impression was of a guy who doesn't really care about the subject of his documentary. But I understood, by the guerrilla means he decided to shoot and keep shooting despite the funds he got, by the way he breaks the narrative with the camera and the light and his

voice, that he was being honest rather than rude and offhand, and he grasps the reality of the jungle rather than its symbolic ideas. And these grasps are done in a mixture that seems to me to have an origin in the miscegenation. The movie is capable of dialoguing with different referents and with itself, breaking the tale, it devours everything on its path, including the subjects, including the author, and unveils itself as an anthropophagic act.

Through the process of writing I've grown aware of the importance of participative and constitutive processes seeded and rooted in the community's initiatives as a part of the empowerment needed in these lands where colonization has strongly nullified the self-consciousness of these communities with a clear loss of their value system. There's an urge to bring these tools to the people who actually live there and struggle with their own issues. Issues that are quite far from the central cities we live in. We cannot give them the voice they already have, but they need to own it. We need to give them back the possibility to break the rules imposed to create a new totem.

The indigenous/native/Amerindian cinema is a matter of research that has occupied some anthropologist in the past years. Cinema can be a resistance tool used by the original cultures against a disorganized colonization constantly going on in the area, especially after the peace agreement with the FARC. It is beyond the scope of this work to discuss this issue thoroughly and properly, but the research process is constantly pushing in that direction. It would be ridiculous to forbid the west to shoot there for their own reasons and purposes, but hopefully some awareness can be arisen in the way they do.

By the time this thesis was printed more than 7000 km² of Brazilian Amazon was burnt to ashes in the biggest fire the forest has had. With 80% more of fire spots than the previous year, this crisis has alarmed the whole world along with the African

and Siberian fires. The international community is either helping Brazil or pressing them to stop its expansionist agroindustrial policies which are one of the main causes of the conflagrations. In this sense, the influence of western filmmakers with interest in the amazon should be focused towards the awareness of this imminent tragedies and the protection of the ancestral forest.

Even more, local communities could be given the place they deserve as keepers of their ancestral territories, which has one of the biggest biological and ecological importance for the world.

Let us remember that one of the reasons of the black and white was to portray a forest that doesn't exist anymore. Well, it does, it is there. With its people and its fauna and flora. The fact that it's not the epic moment of the clash of cultures doesn't mean that clash is not constantly happening and being updated to our reality, and as artists, we must act accordingly.

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8. APPENDICES

A. The Embrace of The Serpent

I. Synopsis

EL ABRAZO DE LA SERPIENTE cuenta la épica historia del primer contacto, encuentro, acercamiento, traición, y posible amistad que trasciende la vida, entre Karamakate, un Chamán Amazónico, último sobreviviente de su tribu, y dos científicos que con cuarenta años de diferencia, recorren el Amazonas en busca de una planta sagrada que podría curar sus males. Inspirada en los diarios de los primeros exploradores que recorrieron la Amazonía Colombiana, Theodor Koch-Grunberg y Richard Evan Schultes.

THE EMBRACE OF THE SERPENT tells the epic story about the first contact, encounter, approach, treason and possible friendship that transcends life, between Karamakate, an Amazon Chaman, last survivor of his tribe, and two scientists who, with 40 years in between, traverse the Amazon in search of a sacred plant that could cure their discontents. Inspired in Theodor Koch-Grunberg and Richard Evan Schultes' diaries, first explorers traversing the Colombian Amazon.⁴⁰

II. Awards⁴¹

Academy Awards	Best Foreign Language Film	Nominated
Australian Film Critics Association	Best International Film (Foreign Language)	Nominated
Cannes Film Festival	Art Cinema Award	Won
Hamptons International Film Festival	Golden Starfish for Narrative Feature – Honorable Mention	Won
Independent Spirit Awards	Best International Film	Nominated
India International		

⁴⁰ Proimágenes Colombia. Accessed March 30, 2019 [Available]: http://www.proimagenescolombia.com/secciones/cine_colombiano/peliculas_colombianas/pelicula_plantilla.php?id_pelicula=2106 May 15, 2019. Personal Translation

⁴¹ Wikipedia Contributors, *Wikipedia, The Free Encyclopedia*, Accessed May 15, 2019 [Available]: https://en.wikipedia.org/wiki/Embrace_of_the_Serpent

Film Festival	Golden Peacock Award	Won
Lima Film Festival	Best Fiction Featured Film	Won
Mar del Plata International Film Festival	Golden Ástor	Won
Munich Film Festival	Best International Film	Nominated
Odessa International Film Festival	International Competition Program - Special Jury Mention	Won
Pacific Meridian International Film Festival	Special Jury Award	Won
Rotterdam International Film Festival	Dioraphte Award	Won
San Sebastián International Film Festival	Best Latin-American Film	Nominated
Sundance Film Festival	Alfred P. Sloan Prize	Won
Yerevan International Film Festival	Golden Apricot Award	Won
Riviera International Film Festival	Grand Jury Prize for Best Picture Jury Prize for Best Director	Won Nominated

B. The Inflated Jungle⁴²

I. Synopsis

La amazonia colombiana está sufriendo una ola de suicidios entre los jóvenes indígenas de sus comunidades ancestrales, al verde espeso de esta selva también llegó el capital, la ciudad y sus hombres de piel clara. Son culturas diferentes en la fricción frenética de nuestra época, es una generación de jóvenes nacidos de este encuentro que se están ahorcando ante los espejismos de un mundo extranjero.

Colombian Amazon is suffering a wave of suicides among young indigenous people from its ancestral communities. The capital also arrived to the thick green of this jungle along with the cities and its pale skin men. Both of them different cultures in the frenetic friction of our age. It is the generation of a youth that were born from this encounter who is hanging themselves before the mirages of a foreign world.

II. Awards

NATIONAL AWARDS

- Incentive for feature film writing, Fund for Cinematographic Development -FDC-, 2012.
- Incentive for short film production, Fund for Cinematographic Development -FDC-, 2013.
- Fund for Visual Anthropology, Colombian Institute of Anthropology and History, 2013.

INTERNATIONAL AWARDS

- Ibermedia Program, 2014.
- Special mention of the jury, Munich International Documentary Film Festival, Germany, 2015.
- Special mention of the jury, Seminci - International Film Week of Valladolid, Spain, 2015.

WITH THE SUPPORT

Proimágenes Colombia, ICANH (Colombian Institute of Anthropology and History),
IBERMEDIA

PARTICIPATION IN FESTIVALS

- Official Selection, Bogotá filmmaker workshop, Tribeca Film Institute, Colombia, 2014.
- Official selection, Cartagena de Indias International Film Festival, Colombia, 2015.
- Official selection, Visions du Réel, Switzerland, 2015.
- Official Selection, Oaxaca Film Festival, Mexico, 2015.
- Official Selection, Huelva Ibero-American Film Festival, Spain, 2015.
- Official selection, Finland Cinemaissí Latin American Film Festival, 2015.
- Official Selection, Valladolid Seminci - International Film Week, Spain, 2015.
- Latin America Selection in Perspective, Havana Festival of New Latin American Cinema, Cuba, 2015.

⁴² Proimágenes Colombia. Accessed March 30, 2019 [Available]:
http://www.proimagenescolombia.com/secciones/cine_colombiano/peliculas_colombianas/pelicula_plantilla.php?id_película=2138 May 15, 2019. Personal Translation