CINEMATOGRAPHY IN CINEMA: RELATIONSHIP BETWEEN TEACHING CONTEXTS AND ITS APPLICATION

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Abstract

This paper approaches the two situations by being part of a conference on teaching cinematography and the real experience of being one shooting in a remote areas like Africa with very little resources and conditions to do so. This article divides itself into two distinct moments: 1) one where an account of the teaching of cinematography is elaborated against the backdrop of the conclusions of the Teaching Cinematography Conference of 2017, of which the author was one of the organizers; and 2) a concrete case study of the author's experience as a cinematographer for the film A Ilha dos Cães [The Island of Dogs], which premiered in theatres in Portugal in April 2017, and which corresponds precisely to an illustration of what the exercise of cinematography is today, in the European context. The articulation between these two cases allows us to understand how, while the essential nature of the relationship between artistic practice and teaching has not changed in the case of the cinematography, a very significant set of transformations requires a rethinking of the methods and processes in which this relationship might be built.

Keywords: cinematography, teaching, artistic practice, director of photography

Both as a cinematographer and teacher it seemed to me opportune to write a text where these two components come together and where one could, from that crossing over, reflect on that intimate but always complex relationship between the teaching of a craft and an art in the context of the creative industries. Such a relationship is assumed in the most varied fields of art—one does not teach what one does not practice—the case of cinematography assumes particular interest in a context where, through technological transformation but also through the changes and circumstances of the economic and artistic activity itself where this activity develops, the exercise of the activity has profoundly transformed. This, of course, calls for an equivalent transformation of the teaching methods and processes. This theme is particularly relevant in the context of this special issue where the relationship between cinema and technology is so present. This article divides itself into two distinct moments: 1) One where an account of the teaching of cinematography is elaborated against the backdrop of the conclusions of the Teaching Cinematography Conference of 2017, of which the author was one of the organizers; and 2) A concrete case study of the author's experience as a cinematographer for the film

A Ilha dos Cães [*The Island of Dogs*], which premiered in theatres in Portugal in April 2017, and which corresponds precisely to an illustration of what is today, and in the European context, the exercise of cinematography. We hope that the articulation between these two cases will allow us to understand how, while the essential nature of the relationship between artistic practice and teaching has not changed in the case of the cinematography, a very significant set of transformations requires a rethinking of the methods and processes in which this relationship might be built.

The teaching of cinematography

in March 2017, the European Federation IMAGO held its 2nd Conference on "Teaching Cinematography" in Munich (Germany) on the premises of the HFF School. The previous conference had taken place in Brussels in 2014. The conference entitled "Teaching Cinematography" focused on new and diverse aspects of the image capture technology that have emerged in recent years.

Teaching Cinematography today is a very different task from the methodology of just over 5 or 6 years ago. The current image capture format rests overwhelmingly on the digital format and not on the classic film system. With this change, the paradigm becomes very different, forcing us to adopt other methods and new teaching approaches by both the schools and the teachers.

In 2006, when Ted Schilowitz appeared in the NAB (National Association of Broadcasters) car park in Las Vegas with the RED ONE prototype, few predicted the sudden radical change that would occur thereafter. The wooden box with a full frame sensor ("Mysterium") would transform and revolutionize the image world for Cinema.

Ted Schilowitz, the Head of the Rebellion

In 2011, five years later, we witness the collapse of the film, which is reflected in the closure of development laboratories and the replacement of the overwhelming majority of cinema rooms by electronic projectors. Fujifilm's end-of-film manufacturing and cameras by manufacturers, ARRI, Aaton and Panavision was over. Suddenly, a whole industry that was based on the capture in film crumbled crudely, taking with it practically all of Kodak that ends up being saved at the last moment leaving a very small part of its production.

Only 6 years have gone by since the fateful year of 2011 and it seems to us that it was a long time ago. Times have changed and both the schools and the image teachers have also had to readapt and learn new ways. Many teachers gave up because they lacked the motivation to learn another technique, others held on to their conviction in defending the film as the best learning method, but all, in general, had to change and adapt to a new era.

It was in this context that IMAGO, the European Federation of Cinematographers, held the Teaching Cinematography Conference to discuss new teaching methods.

What appeared to be immediately apparent at the Conference was the fact that the technology almost immediately facilitated image capture, and for that, no particular in-depth knowledge was required to obtain a static or moving image.

This factor changes the entire teaching chain considerably.

First, in the classical system, the need to know all the steps that must be taken to obtain the image were essential. It was then necessary to master the treatment of the exposure of the negative, reading the diaphragm with photometers, knowledge of colour temperatures with thermocouples, camera manipulation, exposure analysis, revelation and positivation. All this required one to gather knowledge with great accuracy of the chain of treatment of the image. Today with the digital system a great part of all this is done as a shortcut, that surpasses practically all those steps.

The image becomes immediate and one does not have to wait days to know what state the image is in. All that is over. Even the spotlight correction, which left any picture assistant startling before the revelation, now being checked immediately with the help of high definition monitors.

However, the mystery of the image was lost. The photographer's magic was lost. That is why many point out that these are the reasons for the lack of discipline and rigor that are felt today on the plateau, and in the students' learning.

"Teaching Cinematography"
Conference poster

Tony Costa (ULHT) at the Conference opening

Unlike other times, the digital shortcut releases the burden of responsibility. Previously, it was utterly compulsory to know how to do it. It was mandatory to adequately perform what was imposed by the film system, that is, accuracy in different stages. First, image handling, as well as cost-relatedness. The filming was done only after it was assured that the rehearsals' problems were all solved, and, at the same rehearsals actors had to be fit to play the scene in accordance with the film makers' requirements and demands.

Currently, both pressures are not experienced. Neither in handling, due to the image being directly analyzed without any intermediate treatment and cost, because recording to cards is free.

The easiness in obtaining the image makes everything fluent and less disciplined. In other times, this method assumed the plateau's discipline because film was expensive and could not be spent for nothing. But today, no cost concerning support, such discipline and working method were lost.

Thus, there is a shortcut in the plateau's discipline.

And, not only, there is also a shortcut in the teaching of image capturing, because since the emergence of low-cost DSLR (Digital Single-Lens Reflex) cameras, which many students buy even before beginning school, many times, part of the learning process has already started autonomously even before the students begin their course, and to them such is a major part of their learning. It's sufficient for a student interested in image to have a camera and the help of internet tutorials to acquire

sufficient knowledge to understand the nature and editing of digital image. The post-production software, such as Photoshop for photography, or Première, Final Cut and others for video editing, as well as the free downloading of colour correctors such as DaVinci Resolve and BlackMagic, are tools of easy use and adjustment.

What to teach students then? What is new?

It is up to the Schools to teach the artistic method and to develop the capacity to use tools to serve the art. To educate the eye, as discussed in one of the conference's panels. The students need to educate their critical eye and build up their creative skills. It is understood that students nowadays are too entwined with the technique and everything centers on the use of new gadgets and new technologies. They are to detach from the technique.

While on the one hand learning is accessible even before school, on the other hand, the students fixate too much on technology and new equipment and show little interest in art and history, particularly in the case of topics that deal with museum tours or historical matters. It is not unusual to spot total disinterest in contrast to a presentation of a Drone, Gimbal or any gadget introduced in the market in the meantime.

Stephen Lighthill (ASC) in his presentation

A digital camera, regardless of its brand, with more than 3 years is technologically outdated. If the first RED was placed on the market in April 2006, it was only just over eleven years since the revolution and six since the laboratories' collapse, we can verify that the same brand has launched, since then, 5 new models, giving an average of 2 years per model. From this has resulted, as well, a need of approaching the issue of the re-equipment of Schools.

It is almost impossible to the overwhelming majority of schools to accompany changes, compelling them to resort to rental homes for students to have access to modern equipment. This requires class management and resource utilization often hardly compatible with the school year's timing.

In addition to technical issues and image capturing democratization, there is a sense of freedom that wasn't felt before. This freedom of expression and the use of equipment brought an aesthetic style into the present day. Many shots without care and no formality of the frame; the frequent blurring of plans; images and composition's minimal formality; poor accuracy in the framework and camera operation; lack of respect for filming norms; little or no rule regarding the line-of-sight; no accuracy in editing between shots; in short, many aspects would be considered, under the preceding classicism, aberrations and pure amateurism.

There is consequently an attempt from teachers partly to keep the lost discipline and bring into the classroom some formality concerning techniques and composition that distinguishes a professional from an amateur.

Beside these aspects, the conference covered, in particular, the issue of future, not so much on teaching methodologies but on technique.

Who is a Director of Photography nowadays? Who will they have to be tomorrow? What makes them a Director of Photography?

And this is where all agree. The Director of Photography by intending to preserve their copyright on the image will have to master the entire chain from capturing to colour correction.


Audience

Peter Slansky (HFF)

The classical idea that a Director of Photography has the role of capturing, and then the image processing is made at the laboratory by a technician under their supervision, is completely out of date. In Digital cinema, what is proposed for the future is precisely the Director of Photography operating machinery and being responsible for colour correction, without any other member involved. Over time, and in the very near future, the Director of Photography themselves have to take the role of colourist and to have knowledge about treatment of image and handling of various software, this part being particularly revolutionary.

Formerly, in the classical system, the Director of Photography built an image by combining filters, switching the color temperature, making capture masks, forcing and changing the photo's revelation and seeking other ways of processing the image in the laboratory, therefore making the image at the point of capture.

Stefan Grandinetti and the HDR
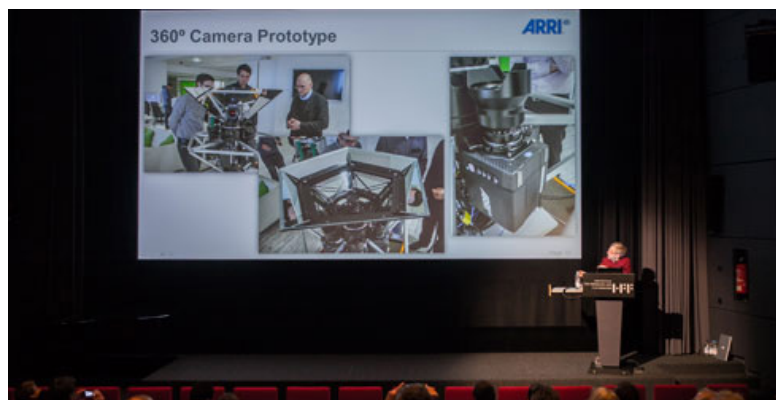
Prof. Ludger Pfanz (HfG/ZKM) and the 360°image

This is no longer the correct method. Now the capture is done with the highest quality possible leaving the necessary treatment to the post-production phase.

The digital format allows, from a properly registered image, to make any necessary changes and intended amendments. The center of the Director of Photography's art is in post-production in the domain of image display. While capturing, the Director of Photography has to control the light to the effect that they wish, as well as contrast control, this becoming crucial while capturing because it cannot be amended in post-production. The important things about upward capture are image composition, light direction and the execution of camera movements. This theme was discussed at this conference «Educating the Eye» which Charles Poynton, Canadian scientist, also endorsed in a more technical way.

Returning to the lost discipline, Peter Slansky, professor of technology at the HFF German School in Munich, presented various technical tests which are imposed upon students in their classes. Such as testing lenses, sensors and all image parameters until the technical capacities of each camera are exhausted, resulting in a series of learning possibilities concerning image capturing.

By doing so, the students become better acquainted with the nature of

technology and particularly the digital image (also includes film image) covering the full technical spectrum of the image treatment chain. It is shown the issue about capture and sensor size; sampling's logarithmic values from one camera to another; sensor's capacity between light and dark; video signal dynamic; in sum, all the settings of image exposure. These are matters that are not very attractive to students, given that they are specific technical tests which are not entertainment, and for this reason it's difficult to make them enthusiastic.

Another very interesting proposal, presented at this conference, concerned the involvement of students in research activities. The teachers Stefan Grandinetti and Jan Frolich HDM (Stuttgart Media School) tested during two years the use of multiple systems and image capturing methods in HDR (High Dynamic Range) upon which a big part of their doctoral theses relied.

Both stated that student engagement has been mainly educational in multiple senses. In the aspect of technique learning and the usage of devices at disposal, as well as in methodology, and rigorous discipline in research as learning tool for future masters and doctoral courses. The students' enthusiasm was compelling given the blend of theory and practice involved in technical trials.

Along the same vein, *Marijke van Kets (NTU-ADM Singapore)* involved students in creating a scene for part of her doctoral thesis where she filmed the same scene twice, alternating from a long to a focal short, and with that experience to answer to the influence that the choice of the objective may have to obtain certain emotional effects.

In a different manner, focusing on the technologies now in vogue, *Ilsa Schooneknaep* of the *VUB* School (*Belgium)* has used new content distribution technologies for her work: virtual reality, street panels, video streaming, immersive video and 360º inevitably. It is necessary to find a new look for these new techniques present in the market, since these are very attractive for the new generations.

It is a new challenge before us. The most important video-streaming platforms such as *You Tube* since 2015, and now *Vimeo*, do offer now accommodation for the distribution of *VR* and 360° content.

The dissemination of these contents is still very embryonic and we hope that one can take advantage of this technology in the very near future. Not so much for the fiction that poses some problems, but in the documentary field as one can conclude after seeing the video presented by *Vimeo* in the presentation of the 360th application about the visit of former United Nations Secretary General Ban Ki-Moon.

The application of the 360° for fiction does not seem to capture great enthusiasm, however, it is necessary to experiment and be open to new ideas and proposals, as suggested by Professor *Ludger Pfanz* (*HfG / ZKM*) of the Karlsruhe University of Arts and Design.

Even if the lighting and the team are in the field, this will not be an obstacle to trying to make a work of fiction in 360°. On the contrary, Immersive Virtual Reality with glasses, combined with 3D images, seems, at this moment, to have primacy for video games and for fiction, as well as the innovative experience presented by Disney, in which the combination of virtual image with physical interaction was made.

There is, therefore, a wide window of opportunity to investigate new narrative models that can be found, as well as for cinematographers, who not only have their knowledge applied to the Digital Cinema but also to virtual design such as video games and others that use the same platform.

In conclusion, it will be useful to consider that the themes discussed at the conference make perfect sense, taking into account some technical aspects, the change to digital, and the change that this provokes in approaching the work at the moment of the gathering images, and finally in the Classical aspect, if we want to call the experience acquired in

the times of the analogue format. In the next part, we shall opt for an approach in which these two conditions are allied. The first relates to the moment of image capture. In production, instead of constructing the image at the time of its capture, the same will be constructed and even rebuilt in post-production, during colour correction. This factor greatly alters the work of the cinematographer since he/she does not need to deal with aspects such as special filters on the lenses, precise exposures at certain points of the frame, namely contrast levels, and colour temperatures, limiting him/herself to dealing with the direction of the light, and essentially obtaining a technically adequate image within the technical standards of the electronic signal. In the background, the experience acquired with the rigor that the use of film imposed is essential for a more adequate organization of the filmed shots. Instead of recording in a register without limits, the rigor used in the film allowed us a greater management of time, as well as acquiring the necessary shots within the budget.

Finally, one should emphasize that the film *The Island of the Dogs* would never have been possible to be produce within the available budget, nor the photographic result would have been the same.

2. A ILHA DOS CÃES [*THE ISland of dogs*] — The Film PHOTOGRAPHY. cinematography today

After reporting the theoretical aspects that today function as challenges to the teaching of photography resorting to some of the conclusions of the aforementioned conference, we now turn to the report of a concrete experience of the author with the exercise of the responsibility of a film's cinematography. This process required diverse approaches that only the cinema that uses the already discussed digital technology may allow us to execute. One of the main reasons for this is not technological or artistic but rather economic. *The Island of Dogs* is a film that would be impossible to execute with the budget that it had using a classic system of production.

Picture 1-Nicolau Breyner plays the farmer role, the scene in the film which marks the 1950s. In picture 1, the original image and in Picture 2 is warmer and more orange to transmit the ageing feeling.

Not so much because the capture is in digital format, but rather due to the possibility of effects and manipulation processes on the image that did not exist, or were not available at low cost just over 3 or 4 years ago.

Inspired by the novel by the Angolan writer Henrique Abranches *Os Senhores do Areal* [*The Lords of the Sand*], The *Island of Dogs* is a film made by Jorge António and produced by *Ana Costa* (Cinemate). The filming took place in three countries: São Tomé and Príncipe, Angola and Portugal, and now it will be in the theatres after a long period in the making by Filipe Roque do Vale and special digital effects by Pedro Louro.

After becoming aware of the Director's intentions and production conditions, my choice of camera fell to the SONY PMW-F55. From my point of view, the camera best suited the conditions that were presented.

We had many scenes and very little time to film in São Tomé and Príncipe, so it was necessary to have a light structure with equipment that could respond as quickly as possible. The SONY F55 is similar in size to a 16 mm camera but much better since it allows you to register in RAW format, 16-bit and in *4: 4: 4.*

I chose to use classic Zeiss T2.1 lenses. I have tried other models, but I decided to use them because they are not very

clear and at the same time, they offer a softer image than the modern ones for the digital format, which I particularly like.

I opted for registering in S-log3, although I did not see differences with S-log2 between the two, when I first tested the camera. I had read in other articles that S-log3 would be better for the dark areas and would have a higher latitude of exposure, which was appropriate in some circumstances in this film, particularly in filming in the forest at night.

The camera is easy to handle, fast to assemble, and quick to connect. The batteries have a very reasonable duration capability in 4K RAW recording, quick to prepare for
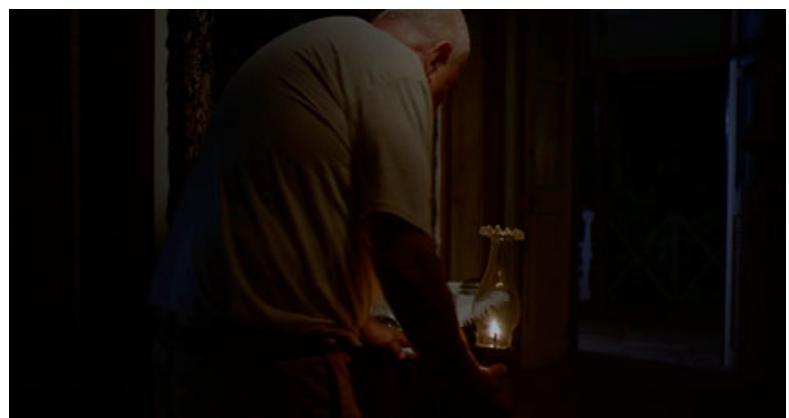
Picture 3 was taken from the raw recording and Picture 4 after colour correction. It was decided to leave only the lamp light, which is actually the Fresnel's light which is creating the lamp effect. The light *perche* was oriented by Pedro Paiva, the Lighting Chief.

Picture 5- Example of a shot without depth of field. The character stands out from the background and gives depth as three- dimensionality to the image.

Picture 6– Framed to the centre. Giving relevance and importance to his narrative and the story he is telling us.

Picture 7– Frame respecting the thirds rule with the camera slightly lower than the height of the eyes, giving him importance and power at the moment he is ordering his men.

situations one needs to operate with the camera at the shoulder, offering a viewfinder with clear sharpness and with the framing marks of our choice, waveform and display where all the necessary information is, without disturbing the field of vision of the camera operator.

These characteristics were very important since the team was very small. He had only Rui Rodrigues as Image Assistant and Pedro Louro as Second Assistant accumulating the functions of data wrangler, which is not at all advisable or professional. Taking into account all these factors, the choice of the camera would be fundamental for a better working fluidity, greater flexibility and greater speed, not jeopardizing the quality of the image and, at the same time, the need to comply with the work plan.

This was a film that required great technical ability and mastery of the image. It would have scenes composed of shots that were distant in time and in place, and had to be inserted directly in the assembly, as was the case of the scene in which *Pedro Mbala* (*Miguel Hurst*) wakes up from his sleep in the car and sees a marmoset on top of the windshield. The marmoset was filmed in Angola, *Miguel* in São Tomé and Príncipe and Angola, several months apart and mounted in the same scene directly. It was a very interesting challenge that I enjoyed in particular to carry out and with colour correction in DaVinci Resolve with the contribution and the talent of the colourist Nuno Garcia.

During the preparation, I did not have much time with the director Jorge António to work on an aesthetic concept. He gave me some generic directions and left the responsibility of the image entirely up to me. The most important would be the feasibility of the project, since in principle the film was supposed to be supported by a co-production between Portugal and Angola, something that ended, nonetheless, given the circumstances of the crisis, being done only with ICA financing.

After a second and careful reading of the script, together with Jorge António, I realized that the film did not have a well-delineated genre. In fact, it was composed of several genres. In a less formal conversation with Jorge, we concluded that the movie would be... an adventure film. This allowed us to have the freedom to create the photographic aesthetic with some ease.

The film covers three different periods, a first one in the fifties, another in the late seventies and, finally, in the present time. The periods should be marked, but not very much so, just enough for us to be able to distinguish one from the other. In the period reporting to the 1950s, I was concerned that the image should be at least warmer and more orange-toned, to give the impression of the passage of time and of aging.

I always oriented myself by the «waveform» to ensure that the image would never exceed the zero point of blacks, and never 100% of the video signal, always avoiding clipping in any circumstance. I knew this would be essential in the post-production work.

This film required a great deal of attention to technical issues and light *raccords*, particularly because some scenes were taken with filming in different places, which would require some technical attention and among them, of course, the issue of the exposure of the digital signal. In this particular, the issue of blacks is fundamental even more than the highlights. Black cannot be a deep black. It is very difficult, if not impossible, to correct colour because the video noise would be obvious to any change in the brightness or contrast of the image. Thus, for the period of the 1950s, and in the work of colour correction done with Nuno Garcia, we tried several possibilities and in some of them, we wanted to go beyond the reasonable. Soon, however, we saw that the film would not tolerate such daring and extremes, so we opted for a warmer and more orange classic as Nuno proposed.

In another scene, the farmer is awakened by the sound of falling coins and rises from the bed with the oil lamp in his hand. As the lamp is the only source of light, the Chief Lighting Designer Pedro Paiva prepared a studio giraffe (hooking several extensors Zeferino) and, on the tip, placed a 150 W Fresnel projector connected to a dimmer inside a Chinese ball. The light from the projector emulated the light coming from the lamp.

As the actor walked away, Pedro would accompany him with the studio giraffe putting the light in front of the character along the corridor and then outside, when he descends the stairs and goes into the stables. For Pedro Paiva, it was a time of some difficulty given that the space was small and the framing was too open, which forced us to build that studio giraffe too long and heavy. With his mastery, however, he was able to get the effect he wanted.

I have always tried, in all shots, not to have depth of field. That is why I filmed practically the whole film with the diaphragm all open to T 2.1, which made the Focus-Puller's work of Rui Rodrigues a little harder, but it did very well given the little depth of focus he had many times and during the few essays, something that should be pointed out.

I intended the background to be always unfocused, with that pastel effect, which I especially like, but this was only possible with the diaphragm all open. If it reached, for example, T 4, it would lose all effect and often even T 2.8 would do the same. I do not like having depth of field in fiction. In a documentary, I like it, yet for fiction I cannot stand it and I have some difficulty in using wide angle lenses (only if aesthetically obliged to use them) given their great depth of field and the resulting curvilinear distortion. Thus, I always prefer to use a full frame focal sensor camera, above 35 mm, for faces and movements.

In the image composition, I have always tried to obey the rules and sometimes change them according to the situation of the scene. For example, in prison I placed the central figure in the centre of the frame. *Garcia* (*Daniel Martinho*), personified the father figure respected by his cellmates, and that is why I placed him at the centre of the framework. This character acquired importance and relief by framing him in a low-angle shot when he returns to the cell as a transcendent figure.

Photographing the forest at night is always a tricky task for a photographer. The placement of projectors generally gives the feeling of it being false and unrealistic. There is, therefore, a challenge to circumvent this. Using projectors, the image gets very hard and there is no justification to prove its origin. Thus, I outlined another approach strategy despite having some fears, because my lighting strategy could fail if there was too much wind.

I was inspired by an effect I first saw made by Robert Richardson, ASC, in Oliver Stone's 1986 film *Platoon*, which consists in putting smoke in the background and using a strong light against it to illuminate smoke and trees. The characters are thus silhouetted. I was lucky and there was no wind, so I used a smoke machine and an ARRI M18 backlit projector and added a side 800W projector to highlight the outline of the characters. There was no more power to be had, the generator was limited, but fortunately,

there was no wind in the African forest that night and the smoke kept up over time for each take.

Still, in the same scene in the forest, the solution to illuminate the faces of the two henchmen who chase the fugitive, consisted in placing a small battery-powered LED, made with mastery by Pedro Paiva, in the lanterns hidden from the camera. This additional light served to illuminate the faces of the two characters chasing the fugitive. The face light was made with lower colour temperature. Pedro Paiva covered the LED with a CTO filter. It would be necessary and appropriate to try to have a warmer colour temperature as if the light were coming from the flashlight. Sometimes during the action, the actors turned the LED to the camera and appeared several times in the field. Pedro Louro erased this problem in After Effects.

By an aesthetic option, I also inspired myself in *Day for Night*. Jorge wanted the chase scene in the forest to end at the seashore on a beach with the protagonist caressing the dog, the pack leader. I always have a problem in doing and seeing night scenes at beaches where the light source comes from an invented place. Motivated light can only come from the moonlight. Using projectors gives the image an artificial and false look.

I proposed that it be done in the same way as *Day for Night*, which was accepted by all with some reluctance is true,

but it was worth the risk. I intended this to be so because it would blend in perfectly with the scenes filmed in the forest and the whole blue, night and cold environment could be reached even by resorting to the effects used in *Day for Night*.

It was the most difficult scene to balance in the colour corrector and here too the SONY F55 was positively surprising with its 16-bit encoding of samplings and the sensitivity of Nuno Garcia to manipulate the colours.

Cinematography plays a key role in the intended narrative. It should aid the narrative of the film, creating environments in order to help the audience's perception.

In *The Island of Dogs,* I highlight two emotionally opposed moments in which photography and décor, worked by *Bruno Caldeira* (*Grão*), combined, and helped created by the manner light is create sensations for the audience. In prison, the tense, heavy environment is produced from a single source that actually exists in the field, from a tiny window at the top of the cell. This factor created in the décor in the studio allowed to construct a light that could meet the tension of those men incarcerated there I used a single light source from the window and I only used spheres to reflect the light

Picture 8 and picture 9- The night at the forest lightened with a *ARRI- M18* against the smoke and a lateral *800W* for cutting.

Pictures 10 and 11 - In the two images it can be seen the lightening in the forest made with smoke and an *ARRI M/18* in backlight. Lanterns were equipped by *Pedro Paiva*, the chief electrician, with a LED powered with a battery and covered with a *CTO* filter to enlighten the face.

Pictures 12, 13, 14 and 15 - Images of the Forest previous and after the colour correction. It was fundamental to control the o *waveform* at the capture moment. The blacks were too low and here the *S-log 3* was fundamental for the exposure, allowing to obtain a larger latitude in the colour and a best signal in the black areas. It's in this particular one that *SONY F55* is excellent.

Picture 16 - American night. At the beachfront the clouds were worked by Pedro Louro in special effects as in the inclusion of a dog in the image. The dog was recorded on studio in Chroma Key and Nuno Garcia's colour correction enhanced the clouds and achieved a silhouette. The image was made in broad daylight. In the background it isn't the moon it is the sun.

Picture 17 and Picture 18 - The raw images obtained in broad daylight, prior to special effects and colour correction that transformed them into night time. Bruno Caldeira places the dog's head to adjust the framing. Afterwards, the digital special effects replace it with the dog recorded on studio in Lisbon.

Picture 19– The heavy and intense environment in the cell, created by the light direction and the space darkness.

Picture 20 - The intensity of the cell environment where the central character stands out from the group of prisoners. The importance of the wardrobe designed by *Silvia Grabowski* in contrast with the remaining elements highlights the scene's main character.

Picture 22 – Image of the prison, filmed in the studio. The *RAW* image (picture 21) captured with a *4K* resolution and the 16 bits samples coding and after the colour correction (Picture 20). Here at this scene, supposedly at night, has a colder tone in the narrative than other moment in the cell. The main light, coming from the window in a frontal and tall way, projects the shadows to the ground and leaves the backgrounds black.

whenever I needed it on the faces. The light to one side of the prison served as against the light, at other times of main light frontally for the main character *Pêra d'Aço* (*Ângelo Torres*), highlighting him from the background and the environment differently from his cellmates.

On the other hand, the importance of the wardrobe, made by *Silvia Grabowski*, was present in a fundamental detail in the film in which the paternalistic figure of the companions of cell, Garcia, stands out of the rest for having lighter clothing than the others have. In another scene in total contrast with the tension of the prison is the humorous and romantic moment of the film, when *Pedro MBala* goes to the bar in search of *Lena* (*Ciomara Morais*).

Picture 23 – The implementation of the three point lights rule to praise the actress *Ciomara Morais* beauty, who interprets the character *Lena,* which helps supporting the spectators perception that the scene gathers a lighter and more relaxing environment, allowing to develop an engaging romantic feeling between the two characters. Here also the importance of the wardrobe design where, once more, using vivid and attractive colours has a determining role.

Picture 24 – *Pedro MBala* is looking for *Lena* and the couple's reencounter is at the island. The scene has a *high key* approach to respect the romantic feeling of the scene.

Both have lived an old relationship, and now, the moment of their reunion is in the photographic point of view approached in a much more open way with high key instead of the low key of the scene of the cell. The photographic approach, in this case, aims to enhance the beauty of the actors with light by applying the rule of three points.

In contrast to this scene, where lighting helps us feel closer to the characters, there is another scene that draws us away. In the scene in which *Bordalo* (*João Cabral*), a prison guard, speaks to the prisoners, the lighting has the shadows of the bars projected in his face to hide it and cause in the audience a feeling of repulsion for his being bad, provoking a sense of intrigue and frustration in the spectator.

The Fortress in São Tomé and Príncipe, a building built by the Portuguese in colonial times, was the place chosen to film the final scene. Of all the décors I have visited, it was the one that least pleased me. It would be difficult to give continuity to the photograph given the poverty of elements, the background would be flat and without contrast, since we would always be filming against the white walls of the fortress or against the sky that in Africa is always grey.

On the other hand, it served in full for the final scene. However, it was necessary to work the image in order to build tension and disguise part of the poverty of

Picture 25– The low angle shot giving power to the prison guard *Bordalo*. Additionally, the character's face deep shadows highlight his bad character and passes on a feeling of discomfort to the spectator.

elements that the site offered. So it was thought at the outset with Pedro Louro, responsible for the visual effects, to add clouds loaded in the sky along with Jorge's choice to use rain in the various shots.

Given that we only had one local fire department hose, it was then necessary in post-production to add more rain to the digital effect, thus giving more drama to the scene.

The clouds were filmed with a Panasonic Lumix GH4 camera, as well as other landscapes with vegetation on the island, which were later introduced in several shots, filling and enriching the framing.

In the video https://vimeo.com/213415959 you can see the progress of the cleaning effects of cables and pole in this scene.

It was a technically demanding film that forced us to synchronize each one in their specialties in order to arrive at the final image. The performance of each of the elements in this film and in others is absolutely fundamental. The harmony between achievement, production and technical means are elementary in the construction of a film. *The Island of the Dogs* is the result of the dedication employed by the several departments that together and in tune built the image and the film.

3. Conclusions

In seeking to draw conclusions from the discussions in these two parts of our work, it seems to me important to begin by highlighting two points: first of all, to note that past experience gained from film was essential for the development of the work in the film *The Island of the Dogs*. Without this knowledge, it would not have been possible to approach the film with the demands of speed that the conditions of production imposed. It is important to mention that the ease of use and manipulation that the digital support allows were fundamental factors for us to be able to conclude positively the project. Secondly, it is important to mention that the fact that digital support allows downstream capture, create and recreate the image in much quieter

Picture 27- Special effects: in picture 26 the raw image, where a post and electrical cables on the site can be seen and the final image in picture 27. The scene is filmed with rain coming from a hose belonging to São Tomé's fire fighters and in postproduction more artificial rain was added, as well as the clouds were reinforced to dramatize the film's last scene. Special effects by Pedro Louro and Filipe Luz.

environments, without the pressure of schedules and without the pressure of equipment management, climate change and position of the sun, is a great example of what was one of the main conclusions of our reflection on the teaching of cinematography: that more than the change of technology, it is the essential change of the role and position of the cinematographer in the value chain of production which is the great transformation of our day. This is an extraordinarily important factor in the creation of the modern image, where allied digital capability allows us the freedom to create the image almost entirely from an initial gathering.

At the "Teaching Cinematography Conference", we reached the unanimous conclusion that a new "complete learning circuit" for a cinematographer needs to be implemented in the education system. The director of modern photography must master and manipulate post-production and preview tools. The actual production experience we have reported can only lead us to agree fully with this new methodological approach to photography teaching, while noting how important it remains to master the classical formalism of photography and the photographic operations connected with the use of the film. Today, we see the emergence of a type of cinematography where capture, colour correction and post-production are integral parts of processes that, in the past, either did not exist or were separated. Without awareness of this fact, it is not possible today to teach cinematography.

Picture 28 – The raw flat image with outbound in S-log3

Picture 29 – The final scene of the film is dramatized with rain and stormy clouds and enhanced with artificial rain.

Picture 30 – a picture of the work being developed at the studio recording the dogs in *Chroma Key*
to then introduce in the images collected in Africa.