

## 11. TECHNICAL RESOLUTION: THE CELLULOID CANVAS

*'UNLESS'*

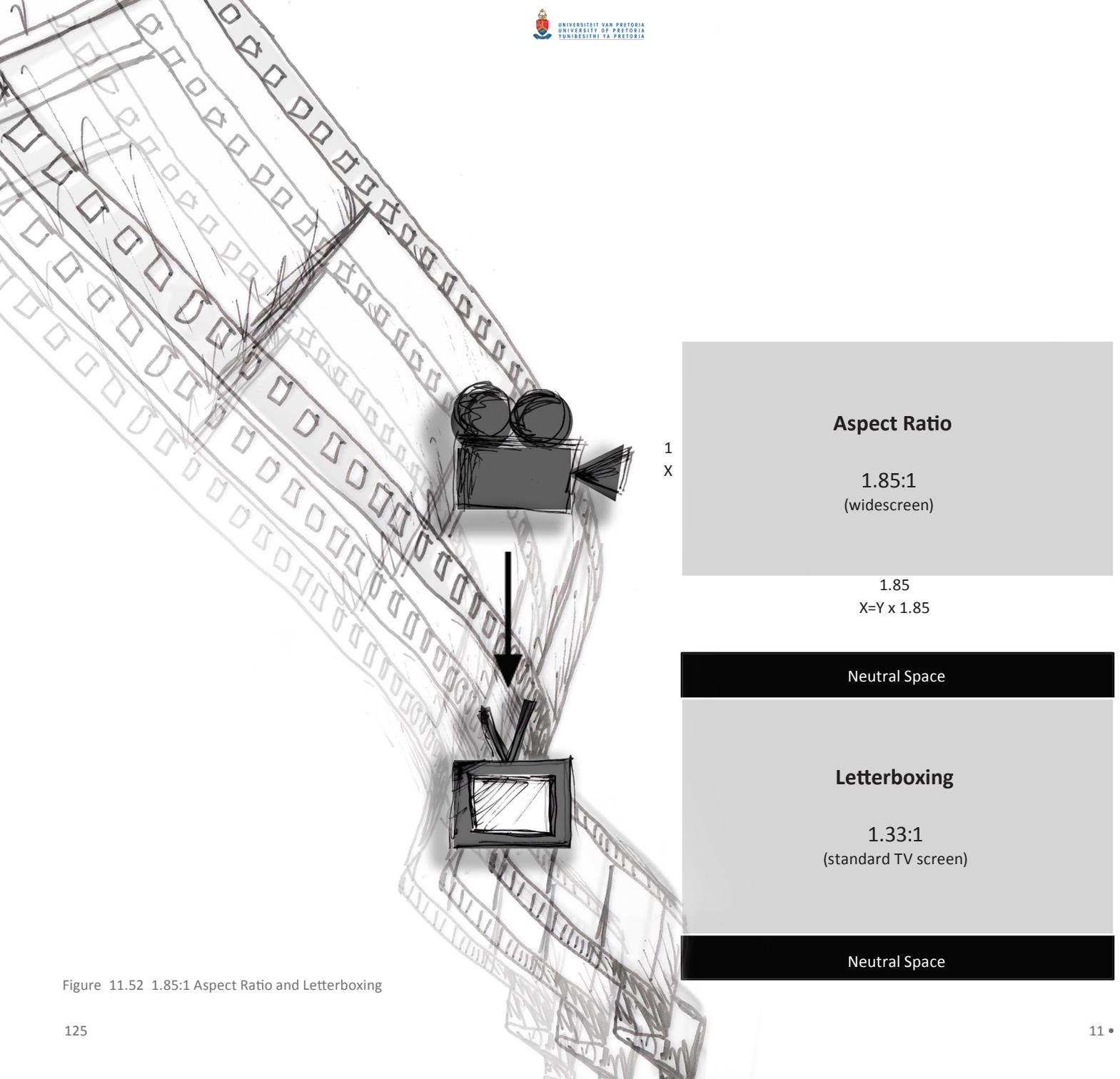


Figure 11.52 1.85:1 Aspect Ratio and Letterboxing

This chapter relates to chapter 9 on production design development.

Each shot in a film has a composition that needs to be considered by the designer, because this is what communicates the emotional message to the audience.

The composition of a shot is related to the ‘canvas’ - the film screen. Before designing the PD needs to know this ‘canvas’ and its characteristics. Even more important than this, the PD needs to understand the tools available to create a composition. Of these the most basic is the set-up of the camera.

The designer needs to translate the script into visuals by means of the storyboard. Storyboards are drawn as if the paper is the screen, thus before the aspects mentioned above is understood by the designer, the design process for a film, cannot commence.

## 11.1 FILM FORMAT - THE CANVAS

Film formats comes in different aspect ratios and sizes (mm), which each has pros and cons regarding resolution and price (Campbell 2002:35). It is the area of the DP and director, but has an influence on the work of the PD.

35mm focal length focal length together with an aspect ratio 1.85:1 are one of the most commonly used standards. This is what will be used for *The Lorax* due to factors discussed below.

### 11.1.1 SIZE

35mm is the industry standard. It is small enough to make processing not too expensive and large enough to provide acceptable resolution when

projected on large screens (Campbell 2002:37; Mamer 2002:416). “Production cameras in 35mm generally come from two companies: Arriflex and Panavision (Mamer 2002:99).

### 11.1.2 ASPECT RATIO

Aspect ratio refers to “the relationship of the frame’s width to its height” (Bordwell and Thompson 1997:477).

The aspect ratio 1.85:1, known as flat ‘unsqueezed’ widescreen, is the industry standard for widescreen format (Block 2001:53; Katz 1991:356-357; Rizzo 2005:306; Tumminello 2005:26) Eighty percent of films in America is shot in this aspect ratio (Allen 2000:5).

The first number (1.85) indicates the frame’s width, relative to the second number (1), its height (Tumminello 2005:22). The aspect ratio numbers indicate the width and the height proportion or the shape of the screen and not the actual size of the frame (Block 2001:52-53)

There has been many aspect ratios since the beginning of cinema. At the beginning the aspect ratio was 1.33: 1, which is a square shape. Widescreen formats were developed to help differentiate film from television and to help combat the competition. Today of course, television is a major outlet for the screening of films (Barnwell 2004:108-109; Rizzo 2005:321).

The 1.85:1 aspect ratio of standard feature films has to be adjusted when shown on 1.33:1 standard television screen. One option is to use letterboxing – where the image is displayed in its original aspect ratio and the top and the bottom of the TV screen are not used. The other option is to view the film full screen on the TV and then the “...television viewer actually sees the area

above and below the 1.85 frame that was not projected in theatres” (Block 2001:55) When a film is shot with the bottom and the top included for later television screening, it is referred to as ‘TV protect’ (Campbell 2002:45; Tumminello 2005:28).

Large screen sizes are beneficial for audience involvement and participation (Allen 2000:1-2). The 1.85:1 shows more height than its 2.40:1 counterpart (Rizzo 2005:83), which is beneficial for displaying architecture, as opposed to landscapes.

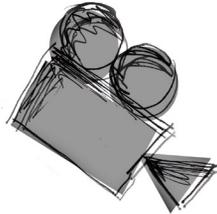
It was also part of the concept for dystopia to create excess height in the setting to contrast with the character of ‘You’, in order to make the character seem more scared, small, insignificant and like a boy. Here the 1.85:1 ratio was used for the desired effect, whereas 2.40:1 would not have been as successful.

Calculation for a rendered storyboard can be done in the following steps:

1. First decide the height that the image is to be rendered (Y).
2. Multiply this height by 1.85 to obtain the width ( $X=Y \times 1.85$ ).



Figure 11.53 The monitor on set of *The Bang Bang Club* (2010) to check the image included for cinema’s and TV.



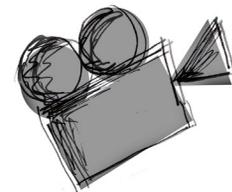
High Angle Shot



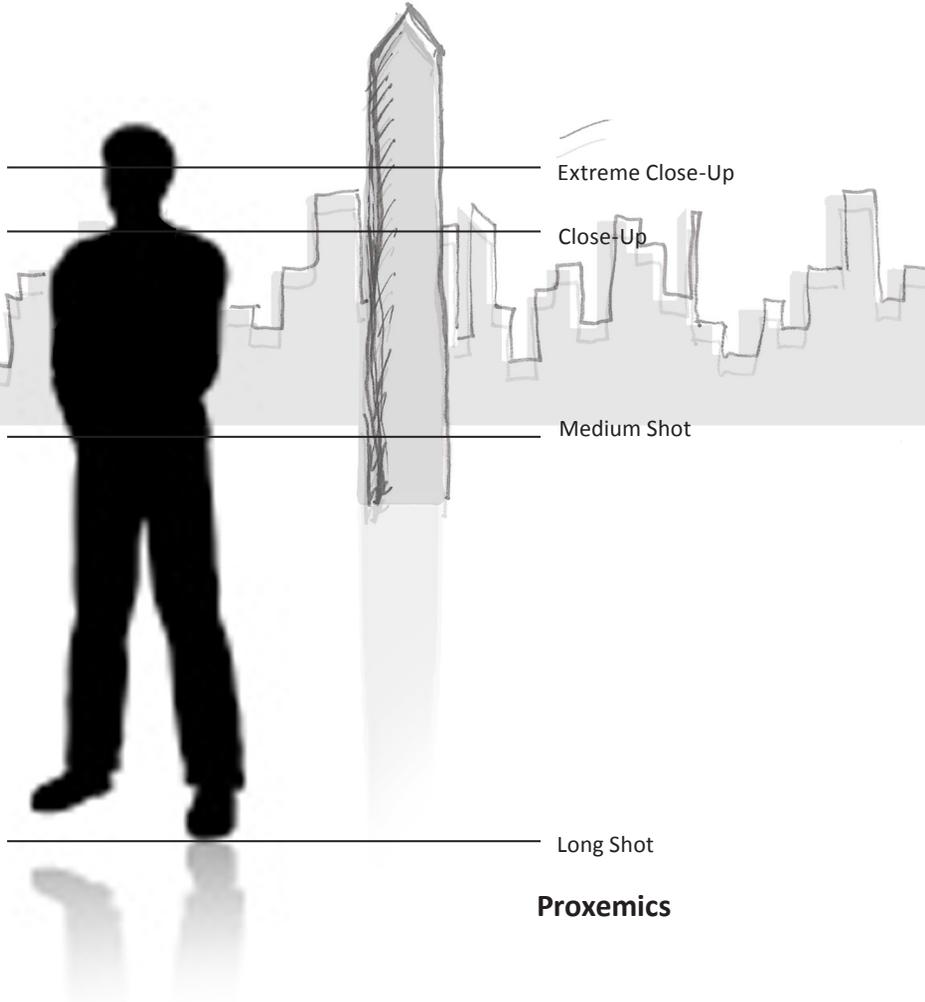
Bird's Eye View Shot



Frontal Shot



Low Angle Shot



Extreme Close-Up

Close-Up

Medium Shot

Long Shot

### Camera Angles

### Proxemics

Figure 11.54 Camera Angles and Proxemics  
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## 11.2 CAMERA SET UP - THE COMPOSITION TOOLS

### 11.2.1 PROXEMICS

Proxemics is the distance between the subject and the camera (Mamer 2002:4; 422; Tumminello 2005:34).

There are three main positions, namely the long shot, medium shot and close-up, with various points between or outside of these such as extreme long shots or medium close-ups (Mamer 2002:4).

#### ***Extreme Long Shot (ELS) or Master Shot***

“A shot that establishes the setting” (Mamer 2002:420). It is where “...the subject is exceptionally far away from the camera” (Mamer 2002:5).

This shot establishes the context for following shots by setting up the location (Mamer 2002:31; Tumminello 2005:36), and was used in the production design of *The Lorax* to establish the scene of Pretoria, Church street and the Grickle Grass Maze.

An ELS can also be used to diminish a subject, as the subject will tend to appear overwhelmed by the surroundings (Mamer 2002:5). The shot was also used to make the character of ‘You’ appear small against the dystopic landscape.

#### ***Long shot (LS) / Wide Shot (WS)***

A “...shot that includes the full human body or more” (Mamer 2002:5). This shot answers the questions of where, what and who (Tumminello 2005:37).

#### ***Medium Shot (MS)***

A “...shot of a person from the waist up...” (Mamer 2002:5).

#### ***Close-Up (CU)***

A head and neck shot (Mamer 2002:6).

#### ***Extreme Close-Up (ECU)***

Anything shot that is closer than a CU (Mamer 2002:6).

### 11.2.2 CAMERA ANGLES

The height or level and orientation of the camera in relation to the subject (Mamer 2002:7).

#### ***Low Angle Shot***

The camera is below the subject and is angled upward. It has the tendency to make the subject appear threatening or powerful (Mamer 2002:7).

#### ***High Angle Shot***

The camera is above the subject, but not directly overhead. The subject appears insignificant and intimidated (Mamer 2002:8; Tumminello 2005:41).

#### ***Eye Level Shot***

When the camera is positioned at the eye-level of the subject being filmed (Mamer 2002:9; Tumminello 2005:46).

#### ***Bird’s Eye View Shot / Overhead Shot***

It is an extreme high angle shot from directly above; the subject appears insignificant (Mamer 2002:9; Tumminello 2005:42).

#### ***Point of View Shot (POV)***

Portrays the viewpoint or perception of a specific character, it therefore has a subjective feel (Mamer 2002:10).

#### ***Over the Shoulder Shot (OTS)***

The camera is positioned above the shoulder of a character, partly revealing the back of their head and shoulders (Tumminello 2005:46).

#### ***Single Shot***

A shot with only one character in the frame, usually as focal point in a medium or close-up shot (Tumminello 2005:39).

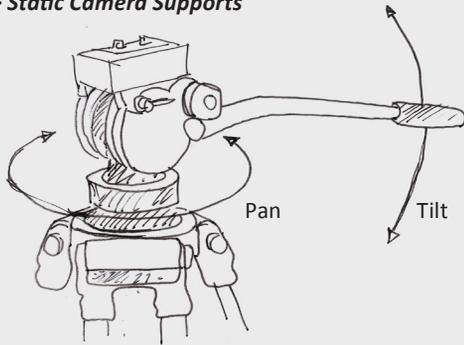
#### ***Two Shot***

When two characters occupy the frame. There are variations such as face to face, side to side etc. (Tumminello 2005:40).

#### ***Insert Shot***

This is a CU of action or an object inserted between the main action (Tumminello 2005:40).

> **Static Camera Supports**



> **Wheeled Camera Supports**

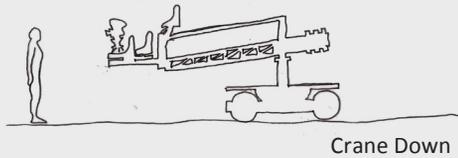
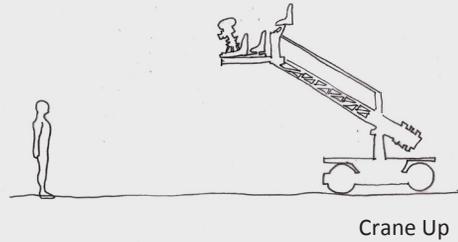
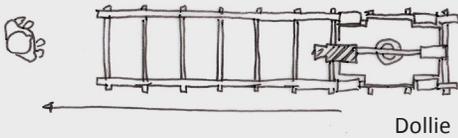


Figure 11.55 Camera Movement

## 11.2.3 CAMERA MOVEMENT

### > Static Camera Supports

#### **Pan**

A shot where the camera is pivoted horizontally on a tripod (Mamer 2002:11).

#### **Tilt**

A shot where the camera is pivoted vertically on a tripod (Mamer 2002:11).

### > Wheeled Camera Supports

#### **Dollies**

“A wheeled vehicle with a camera mounting device on it” (Mamer 2002:12; Campbell 2002: 101-102) usually used on a specially designed track, to eliminate bumpiness when moving on uneven surfaces (Mamer 2002:12).

Dollies are preferred to tripods even for static shots as “[i]t is easier to adjust the position of the camera between set up if it is on wheels” (Campbell 2002: 101). There are two types of dollies – crab dollies that can go sideways, as well as going forward and backward, and spider dollies with adjustable legs. Most camera crews choose crab dollies due to its greater stability (Campbell 2002: 101-102). This is what will be used for the production of *The Lorax*.

When the camera follows alongside, in front of or behind a moving subject, the shot is called a **tracking shot** (Mamer 2002:11). It is important to note that “[a] dolly or zoom towards a subject usually requires a tilt” (Mamer 2002:179).

#### **Cranes**

“A camera platform that can rise up in the air, carrying the cameraman and the director, as well as the camera itself” (Campbell 2002: 216). It has “...a single elevating arm on a rolling vehicle” This can be a large vehicle to get the camera high in the air or a smaller one incorporated into a dolly (Mamer 2002:12). A jib only carries the camera (Campbell 2002: 216). For the production of *The Lorax* a crane will be used.

### > Special Rigs

#### **Steadicam / Floating Cameras**

“[A] gyroscopically balanced body rig” (Bordwell and Thompson 1997:19) where the “...camera attached to a camera operator via a mechanical harness which reduces or eliminates the unsteadiness of the operator’s motion” (IMDb 2009).

“The Steadicam was designed in recognition of the benefits of freedom of movement offered by the handheld camera, while also recognizing the desire to eliminate its attendant shakiness. It is a device that mounts on the camera operator’s chest. It incorporates balanced weight and reciprocating movement to give fluid movement to what are essentially handheld shots” (Mamer 2002:19).

The first floating camera, the Steadicam, was designed by Cinema Products. It was so popular that the word ‘Steadicam’ is mostly used regardless of brand name (Campbell 2002: 104).

#### **Aerial**

Aerial shots are made from planes or helicopters and for vibration reduction need specialized mounts (Mamer 2002:19). A Cineflex helicopter, such as the one used for the *Shoreline* (2009) series, is recommended.

## 11.2.4 LENS PERSPECTIVE AND CHARACTERISTICS

Lens perspective refers to the way space is represented by lenses. It is the field of the DP and therefore will be discussed only briefly. This influences depth and dimensionality. Lenses are chosen by DP’s for how they represent space, and not for subject proximity. (Mamer 2002:22)

#### **Normal Lenses**

Perspective is presented in a normal way (Mamer 2002:23) as opposed to wide angle or telephoto lenses that respectively make objects appear further apart or closer together than they actually are (Mamer 2002:22, 24). Because this is not desired in the representation of images of the production of *The Lorax*, a normal lens will be used.

#### **Zoom Lenses**

Zoom is categorized under lenses and not movement, because it is not a camera movement, but a lens movement. The object and the camera keep the same distance from each other (Mamer 2002:22).

### 11.3 THE COLOUR PALETTE

Colour can be used as a psychological, narrative and ordering element in film (Bordwell and Thompson 1997:175). Colour has a very important role in cinema. When films were first made in colour by Technicolor, rules were even laid down for its use by the legendary Natalie Kalmus (Higgins 2007).

Each colour has symbolism, meaning and thus has emotion attached to it. These perceptions vary in different individuals and nationalities, which is not ideal if the film needs to communicate a specific message and emotion. The PD can ‘override’ these associations by forming new association specific to the film. “Once you establish a colour and its meaning, the audience will accept the idea and react accordingly” (Block 2001:4).

“The best way to control colour is to control the colour palette...” (Block 2001:120) which is “[t]he range and scope of colours to be used in the production design” (LoBrotto 2002:176). The colour palette is one of the first and most important decisions the production designer will make (Weavind 2009, LoBrotto 2002:77). “Limiting your colour choices will allow the colours you use to have visual meaning to the audience (Block 2001:120).

Key colours can be attributed to time or plot development, place and characters as an organizing principle, to establish emotion, mood and atmosphere (Barnwell 2004:54; LoBrotto 2002:77; Outside-Hollywood 2009)

Colour in film can be achieved in four ways in film:

1. The actual **setting** colour (Block 2001:120).
2. **Film stock and camera filters** – used to adjust the colour the camera sees. This is the field of the DP (Barnwell 2004:54; Block 2001:122).
3. **Lighting filters (gels)** - adjusts the light source colour temperature to film stock. it can also be used to produce a coloured light. This is the field of the DP (Block 2001:120).
4. **Post production colour correction** is a process where final alterations to the colour of a film is made to the instructions of the DP in a film laboratory or digital suite (LoBrotto 2002:176). “The digital world can manipulate hue, brightness, saturation and contrast in an entire shot or a single object within a shot. In the digital world any type of colour change can be made in any frame...in postproduction, but **it shouldn’t be used as an excuse to ignore colour control during production**” (Block 2001: 123).

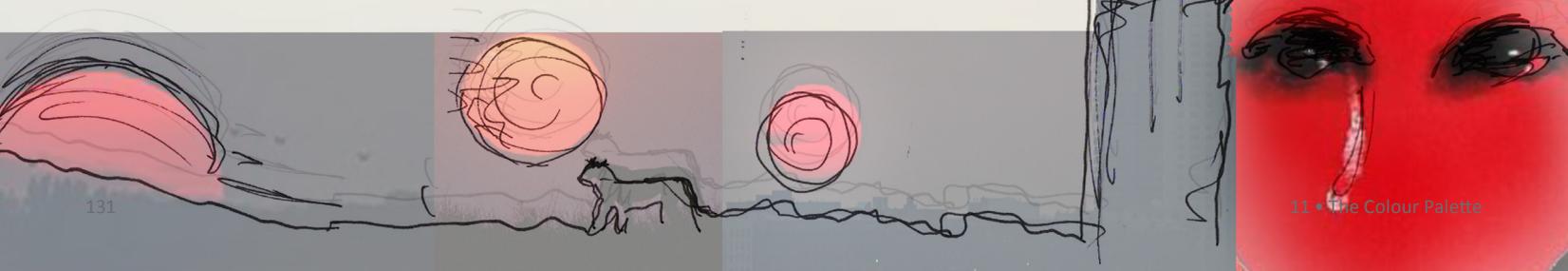
For the production design of *The Lorax* only setting and lighting colour were worked with, because the areas of lighting and camera are the field of the DP and post production that of the editor. Lighting was included in the role of the PD for this dissertation because it is also essential for atmosphere in a film. Of course lighting is also an important part of interior architecture as a discipline.

A discussion of the colour choices will follow. Please see the mood boards and colour palettes (9.4) for details on the colour usage.

#### **Dystopic Colour Palette**

Cool colours represent coldness – both environmentally and emotionally. Grey can reflect lifelessness (LoBrotto 2002:82) and blue can mean murder (Block 2001:3). Blues, greys, browns and blacks were chosen for dystopia, with an absence of the cool colour green, because it is stereotypically associated with the environment and money (Eisenstein 1968:110; LoBrotto 2002:82; Tumminello 2005:132, 134).

In the original text of *The Lorax*, green was used for the Once-ler’s gloves and the grass (environment) which diminished the strength of the contrast between good (environment) and evil (Once-ler). Because of these dualities and its association with the real world environment, green was left out of the whole colour pallet for the production design of *The Lorax*. Instead black was assigned to the Once-ler for its associations with evil, death and luxury (LoBrotto 2002:82; Tumminello 2005:132).



### Utopic Colour Palette

Reds and pinks were chosen for the utopic colour pallet because the red sun against the pastel sky is often the colours of African and Pretorian sunsets. In cities such as Pretoria, it is probably the case due to air pollution.

The Truffula Trees are fire dancers in the production and the use of red here is as the colour of danger, a warning (Kalmus in Higgins 2007: 44) of what is to come - a future reflection image.

Another reason for the use of pink and pastel colours is that it is associated with tranquillity, lightness and softness (Tumminello 2005:132), but also with frivolity (Eisenstein 1968:114) Thus pink has dual meaning in the production.

The idea was to create oozes of colours for the utopian background, as in Impressionism. Claude Monet's *Impression, Soleil Levant* (1872/1873), uses the combination of pinks and blues with a red sun (see utopia mood board for image).

### Heterotopic Colour Palette

Heterotopia's colour needed to be a combination of the utopic and dystopic colour pallet's, as this is the transition period between the

two phases. Pinks and reds then symbolizes utopia, while blues, greys, browns and black represents of the ever nearing dystopia.

## 11.4 THE STORYBOARD

### The storyboard as production tool

A storyboard is a visual version of the script produced by drawing the script, shot by shot, in chronological sequence. The first storyboards were conceived in the early 1930's by Disney Studios (Tumminello 2005:17).

It is a pre-visualization tool that represents on paper (or screen in the case of an animatic) what will eventually appear on the film screen. The storyboard represents the camera and is therefore drawn to indicate the angle and position of the camera. Besides this, shot size, action lighting and setting needs to be indicated. Therefore the previously discussed technical knowledge is essential to design a storyboard (Barnwall 2004:13,62; Tumminello 2005:1). Storyboards are done by storyboard artists.

### Elements of the Storyboard

Elements of a storyboard, that need to accompany it, are the **shot number, the proxemics, the camera angle, the camera movement and**

**the action taking place** (Tumminello 2005:72).

### The Rule of Thirds

Storyboards are often designed by means of the 'Rule of Thirds'. The storyboard artist divides the frame into thirds vertically and horizontally with guidelines to create balanced composition (Mamer 2002:422).

Figure 11.56 *Opposite page:* red African sunsets and red polluted sky sunsets

Figure 11.57 *This page:* the 'Rule of Thirds'

