2825QCA
Photographic Practice 1A
Introduction to Medium Format Black and White Photography

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ASSIGNMENT 3:

Aim

The main aim of this assignment is to introduce students to the use of medium format cameras and the use of medium format black and white photography through experimenting, using multiple studio lights. The main benefit of medium format photography is that, because of the larger size of the film or digital sensor, images of much higher resolution can be produced. This allows for bigger enlargements and smooth gradation without the grain or blur that would characterize similarly enlarged images produced from smaller film formats. Moreover, as well as reinforcing the skills learned in Assignment 1 and 2, this studio task aims to give students a basic understanding of black and white negative processing and printing.

The assignment aims to develop a broad practical knowledge of certain aspects of black and white photography and darkroom techniques. By working in groups to photograph each other in a studio context, students aimed to use appropriate studio flash lighting and medium format cameras to produce one quality black and white print image that best captures the character of the subject. As a whole, these aims are significantly important to produce the final 20 x 25 cm black and white print, as combined they help provide an understanding and competency for various aspects regarding black and white negative processing and printing.

Method

Studio Shoot
Equipment

- Rolleiflex (medium format camera)
- Tripod
- Sink cord
- Black and white film (50 ISO)
- Fill light
- Main light
- Hair light
- Diffuser
- Grey background
- Stool

Step 1: *Setting Up Lighting*
Set up the studio lighting including the main light which models the subject, the hair light that provides sparkle to the subjects hair and the fill light that provides an even level of illumination across the entire scene. Place these studio lights in their correct positions and adjust them to their appropriate level of illumination by using incident and reflective light metering to achieve the desired affect.

Step 2: *Loading Film*

Remove the film roll from its box and place inside the back of the Rollei using appropriate method to load the film.

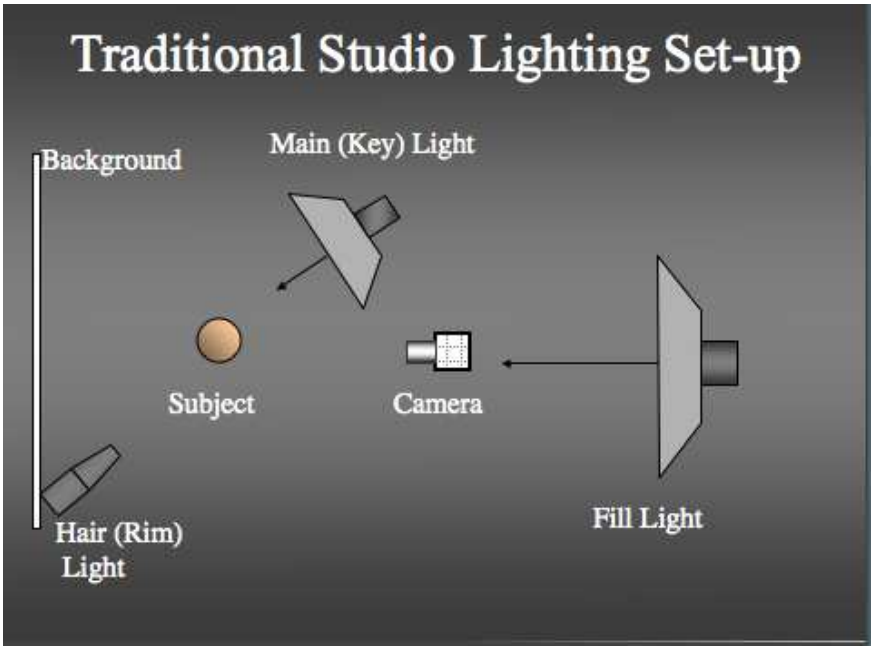
Step 3: *Setting up camera*
Set up the tripod at desired height and position and place the medium format camera on top and secure. Attach the sink cord to the main light and to the Rollei and ensure that it is secure so that the flash will successfully go off during shooting.

Step 4: *Shoot*
Direct the subject to do various poses in order to achieve desired look, facial expression and body gestures required to best capture the character of the subject.

Step 5: *Remove Film*
Once the film has wound, remove the film correctly and firmly seal it so it doesn't unwind. Place the roll of film in a sealed container and store in the fridge.

Step 6: *Pack Up*
Turn off all the studio lights and return items utilized to previous positions.

Diagram:

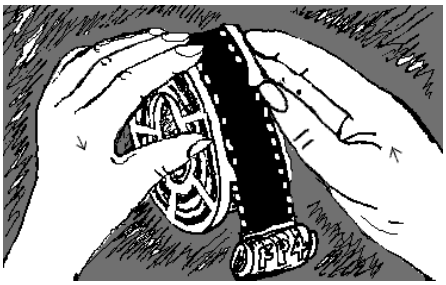


Developing Process
Equipment

- Tank (with all its parts)
- Gloves
- Developer
- Stop Bath
- Fixer

- Hypo Clearing Agent
- Running water
- Thermometer
- Black and white film roll
- Chemical containers
- 2 clips

Step 1: *Loading the Film*
Before trying to load the film in darkness, practice loading your reel in light with an old piece of film. One ready, line up all the equipment (including tank with all its parts and film) on your counter in the dark room, for easy access. Shut the door and turn off the darkroom lights, making sure no light source is entering the room. Undo the paper section the keeps the film rolled up and begin unwinding until you feel the actual filmstrip. Grab the two corners of the film and insert the end into your film development spool until the film's sprockets are firmly engaged by the ball bearings of the spool. Still in complete darkness, crank the 2 sides of the reel back and forth in opposing directions, until the film is completely drawn into the spool. When you come to the end of the roll, feel for the junction of the end of the film and the magazine and slowly release the film from the magazine. Crank the spool a little to ensure that the end of the film is into the spool. When the loading of the film is complete, place the film spool properly into the development tank, ensuring all of the parts are in their proper place. Once the tank is sealed, the lights cna be turned on and the film is ready to be developed.



Step 2: *Preparation of chemicals*
This is the critical step in developing Black and White film as using the wrong amount of chemical or the wrong temperature or time will adversely affect your film. Measure out the correct ounces of each solution that will be used (including developer, stop bath and fixer) in the process and pour them into 3 separate containers so that they are ready for use. Most developers have an optimum temperature and in this case it was adjusted to 19 degrees to give more consistent results. Adjust the temperature of the water and allow the temperature of the chemicals to stabilize at your desired temperature.

Step 3: *Development*
Start your timer and rapidly but carefully pour the 500ml of developer into the tank, tighten the lid and provide initial agitation for 5 seconds and then repeat the 5-second agitation at 30-second interval for the remainder of the development time. After every agitation give the bottom of the tank 2 firm raps a hard surface in order to dislodge

any air bubble that are attached to the films surface. When the development time is finished, take the lid off the tank and dump all the solution into a recovery device.

Step 4: *Stop bath*
Immediately pour in the 500ml of stop batch and agitate continuously and pour directly back into the bottle after use.

Step 5: *Fixer*
Add 500ml of fixer and agitate continuously for the first 30 seconds and then at 30-second intervals for 5 minutes. When fixing process is finished, pour the fixer back into the large bottle.

Step 6: *Water Rinse*
Rinse the film in the tank by placing it under running water for 30 seconds.

Step 7: *Wash or Hypo Clearing Agent*
Poor in the 500ml of Hypo Clearing Agent and agitate continuously for the first 30 seconds and then at 30-second intervals for 2 minutes. Return to the bottle after use.

Step 8: *Water Wash*
Remove the top of the tank and fill the tank with running water and let the water overflow for 5 minutes.

Step 9: *Wetting Agent*
Slowly remove the film from the tank and off the reel. Place the film in the wetting agent for about 30 seconds.

Step 10: *Dry Film*
Remove the access solution still on the film by sliding two fingers down the filmstrip until the film is relatively dry. Using clips, hang the film in a heated film drying cabinet or in a clean dust-free place and leave for approximately 1 hour to ensure that the film is completely dry.

Step 11: *Storing*
Place each strip into a separate negative sleeve, ready for a contact sheet.

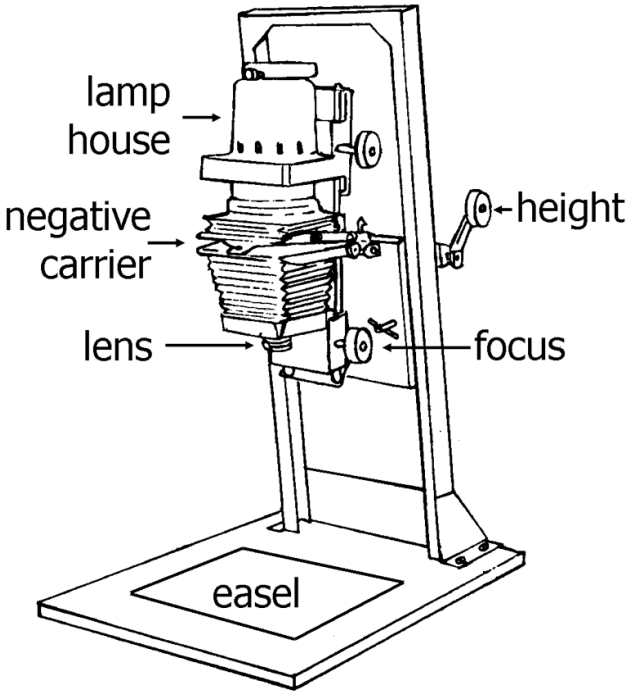
Processing and Printing
Equipment

- Enlarger
- Enlarger timer
- Enlarging lense
- Safelight
- Ilford IV RC Multigrade photographic paper
- Negative film
- Easel
- Proofer
- Focus control
- Printer

Step 1. *Enlarger*

The first piece of equipment required is an enlarger, which is a machine that shines a bright light through a negative and into a lens and then focuses the image at the plane in which the paper is positioned. The enlarger must first be correctly set up in order to continue with the following steps. A 75mm lens is placed at the bottom of the enlarger and the negative holder is place in its position, as shown in the diagram below. At this point the grade can be selected. The grading system runs from 00 to 5 is a method of controlling the contrast of the print. The lowest contrast or softest prints are made at grade 00 and the highest contrast prints or hardest prints are made at grade 5. The filters associated with the grading system are then adjusted to the standard 2 grade, which means the yellow filter is set at 52, the magenta at 20 and the blue is at 0. Lastly, the lens aperture is set at 8 by simply rotating the lens on the enlarger.

Diagram:



Step 2. *Proof Sheets*

Turn off the main light and ensure the safelight is on which produces a light that will not expose or "fog" the paper while you are working. Then place the proofer on the base of the enlarger and place a sheet of the multigrade paper on the proof sheet. Place the negatives on top of the paper with the emulsion side up and line them up so that they fit the size of the paper. Close the proofer, ensuring it is

positioned where the light will cover the entire frame. Set the enlarger timer to 4 seconds and expose the proof sheet by pressing the red button on the timer. Then cover a small section of the proof sheet with a piece of card and expose the rest of the proof sheet for another 4 seconds. Cover slightly more of the proof sheet with the card and set the timer to 8 and expose the remainder. Do the same by setting the timer to 16 and then 32 each time covering a larger section of the proof sheet. Once printed, doing this will allow you to see which exposure is best for your negatives. In this case the negatives were very bright so the timer was set much higher in order to produce appropriate exposure and contrast. Consequently after experimenting with different times, the timer was set to 26, then 30, 34 and 36 seconds using the same set up and techniques as in the first proof sheet. By viewing the prints, it was concluded that the section that was timed at 34 meaning 90 seconds overall, was the most appropriate exposure.

Step 3. *Enlarging*

Once again, the daylights must be turned off and the safelights turned on. Place the chosen or preferred negative in the carrier after ensuring that it is clean and free from dust. Switch on the enlarger lamp and size the image on the easel by moving the head up and down the column. When the image is around the correct size, use the focus control to render the image sharp by focusing in and out on the enlarger. Turn the light enlarger light off and place the paper on the easel. Then set the timer to 90 seconds and expose the image. The print showed that it was slightly too dark and the contrast needed adjustments. Subsequently, the timer was set to 40 seconds and the lens was stopped up to 5.6, meaning more light was being let in. The grade was then adjusted to 1.5 and therefore the filters were changed to 65 for yellow and 15 for magenta. This print turned out much better than the first, however, ‘burning’ was required in order to remove overexposure on the subjects forehead. Using the same settings another print was made but this time after exposing the image for 40 seconds, a large piece of card with a small hole was used to produce the ‘burning’ effect. Holding the card high above the image and positioning the hole on the subject’s forehead, the card was moved in at a consistent speed and motion for another 40 seconds of exposure. The print indicated that more time was required during the ‘burning’ process. Therefore following the same steps again, the ‘burning’ process time was simply changed to 60 seconds and the paper was held up slightly higher to create a larger and softer hole for the ‘burning’. Although there was still very slight overexposure on the subject’s forehead, this last print illustrated fairly correct contrast and exposure.

Step 4. *Pack Up*

Return pieces of the enlarger to the box and return the easel and proof sheet back to the shop.

Results

The results obtained for this assignment were fairly successful by achieving the aims set out and acquiring skills relevant in the photographic process. Shooting the subject

in the studio went relatively well as the images captured the character of the subject. Although the negatives were successfully developed and were clear of marks and patterns, they demonstrated slight underexposure in the images. In photography exposure is the total amount of light allowed to fall on the photographic medium during the process of taking a photograph. The aim was to expose for the best detail in the white zones and the results should be an image with interesting contrast of black and white. However, in this case the images were a little underexposed, meaning that not enough light was in contact with the film and thus the negatives appeared slightly lighter and less dense than a normal negative. Underexposed negatives also means that the prints will appear darker and have more dark spaces, loosing details in the shadows. These particular results, however showed only slight underexposure, therefore there wasn't much lose of information in the prints.

Although the printing process was long and drawn out, the prints that resulted gradually got better by adjusting the grade (filters), lens aperture and time of exposure. The contact sheets demonstrated a very wide range of exposure times in order to be able to find the most appropriate and accurate exposure for the preferred image. The last few enlarged prints were relatively good, however the subject's forehead was slightly underexposed and therefore very bright. By 'burning' that section of the image for a certain amount of time, the brightness was significantly reduced, still leaving the rest of the image at its original exposure. Therefore, the final image demonstrates fairly correct contrast and exposure and successfully captures the subject's character through facial expression and lighting.

Discussion

The results for this particular assignment were very similar to the predictions made prior to the completion of the task. The results further reinforce what research already states and provides a clear understanding for certain aspects of black and white processing and printing process.

This assignment demonstrated that the results for the developing process depended on a number of different factors. These factors include, time, temperature, agitation and developer formula. By experimenting with the prints it allowed for a better understanding of how these various factors significantly affect the overall print. The results showed that more time allows the chemical reaction in the development process to continue and as a result the developer produces more and more black silver until all silver halides have been consumed. Therefore, increasing the development time increases the contrast while reducing the development time will reduce the contrast. It was further demonstrated through the development process that chemical reactions proceed faster at higher temperature, therefore by increasing the temperature, the rate of the development will also increase and visa versa. On the other hand, agitation removes development by-products and provides fresh reagents. However, too much agitation can cause overdevelopment and streaks in the negatives while too little agitation can cause underdevopment. Lastly developing the roll of film reinforced the idea that the more concentrated the solution the more active, consequently by adding more developing agent or alkali in the solution you are increasing the activity while by adding by-products you are slowing down the activity. Lastly, the developing process in particular highlighted that fact that

consistency is vital to producing a quality black and white print which is maintained by carefully adjusting and controlling each variable to maintain the equilibrium.

The assignment further strengthened the idea that contrast is the difference between the darkness and lightest parts of a negative. A normal contrast negative is one that produces an “excellent” quality print on a normal paper without additional burning or dodging. Moreover, development is what alters negative contrast while exposure is what effects negative shadows, which was also learnt through experimenting with the negatives. In regards with exposure, the negatives produced demonstrated that a subject that is heavily lit from behind can cause underexposure, too much brightness without compensation.

Experimenting with various aspects of the enlargement process and obtaining a wide range of results in the prints allowed for a better understanding of the processing and printing process. As a result, it became clear that exposure is significantly related to time, aperture size or amount of light that is let in and the filter or grade.

If one were to re-do this assignment, it would be important to undertake certain changes in order to improve on previous mistakes or failures. Lighting, aperture and shutter speed utilized during the studio shoot is very important to achieving desired affect and appropriate exposure. Furthermore, consistency throughout the development process combined with the correct exposure and contrast for a particular print is vital to obtaining good qua lity prints. Overall, although there were some slight inconsistencies and inaccuracies made during the studio shooting and the developing and printing process, the final black and white print was relatively successful in achieving contrast and correct exposure.