PHOTOGRAPHY IN THE DARK

An experience in the learning of photographic techniques and the realization of an artistic project by blind and visually impaired people

by Sergio Visciano

September 2024

Premise

In the summer of 2023 I dedicated my time to studying the perception of reality of blind and visually impaired people. The compensatory power of the other senses often leads to surprising results in the orientation and perception of reality by people with visual impairments. I wondered therefore what the hardest challenges were, and I concentrated on **how to make the invisible visible**. (Blind Photography)

I began to read up on the subject and one of the contributions that I like to cite is Valentina Saccà's 2016 dissertation thesis in cognitive sciences, "Rappresentazioni semantiche nei ciechi congeniti. Un studio sperimentale sulle stereotipie" [*Semantic Portrayals of the Congenitally Blind. An experimental study on the stereotypes*], (vsacca@uinime.it), written under the supervision of Prof Pennisi and Prof Cavalieri (University of Messina), because it gave me several ideas about how blind and visually impaired people perceive reality.

With a programme that included in-class lessons, podcasts and practicing taking photos both inside and outside, I tried to make learning photography techniques relaxing and useful for everyone. The main objective was to put on a photography exhibition.
The programme was proposed to the Unione Italiana Ciechi ed Ipovedenti (*Italian Union for the Blind and Visually Impaired*) of Verona: the article that follows speaks about the learning experience of the participants. The result was surprising in that seven of the course participants revealed a strong intuitive ability and determination in the choice of what to shoot both from a compositional point of view and of technique.

Course Contents
The course consisted of seven podcasts which gave the major principles of technique and which formed the learning part of the course.

Here is a synthesis of the course contents

Lesson 1
Presentation of the course outlining the technical contents and the development of the photography project.

Perception of reality as the animating subjective input for interpretation through the senses and the background of the individual through interviews with participants.

Suggestions regarding possible themes of reflection as the object of each individual's photographic project: portraits, architecture, landscapes.
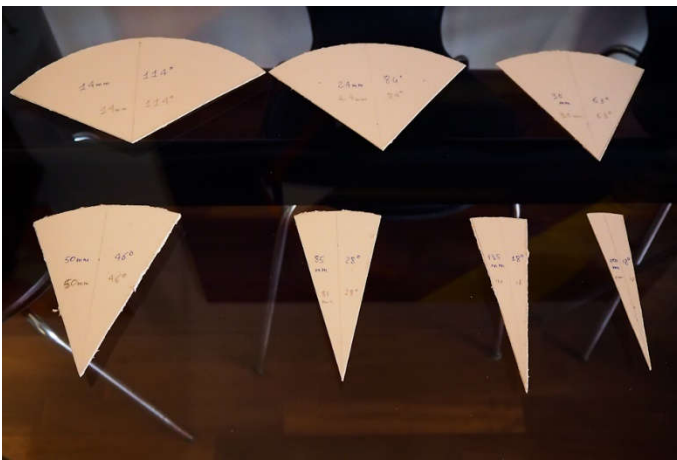
Lesson 2

Perception of reality in closed and open environments.

Field of view: tactile examples.

In order to make the correlation of focal length and field of view understandable, that is, the portrayed space visible, I used tactile models.

Here are selected examples:

The correlation of focal length and field of view through the use of tactile models.

The rule of thirds: the rule of thirds in photography involves the dividing up of an image into thirds, both horizontally and vertically, to create a grid of nine equal parts. Tactile models made this perceptible for the participants in the course.
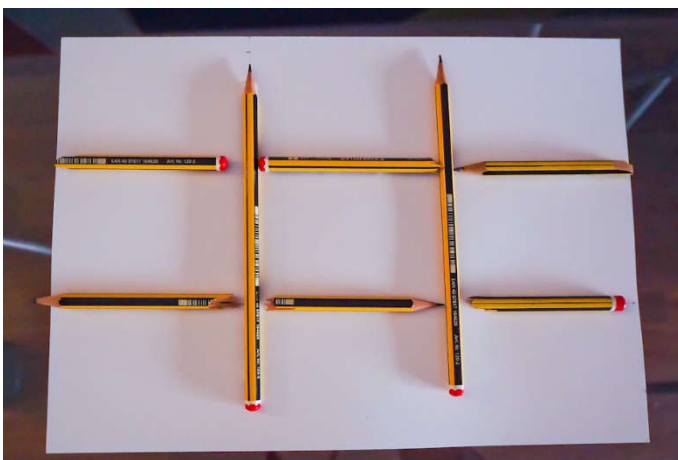
The rule of thirds: dividing up the image into nine rectangles
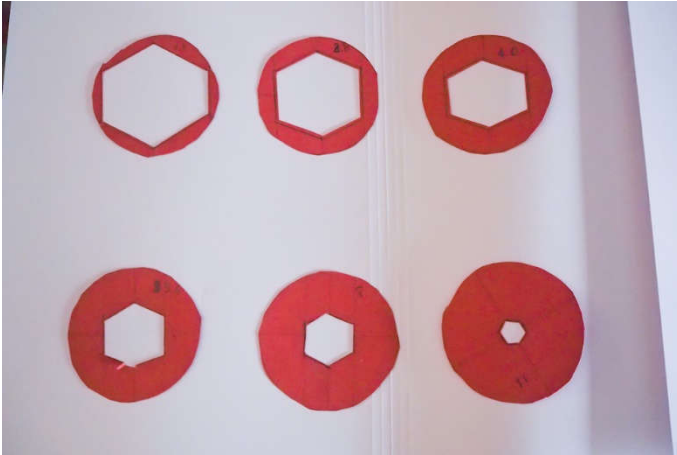
Lesson 3

From the lens to the shot: getting the camera into course participants' hands.

In-depth analysis of lenses and field of view

First attempt at taking shots inside with different field angles and lenses: close-up, whole figures, medium shots.

Diaphragm aperture, times and sensitivity.

For the diaphragm aperture, that is the light that passes through the inside of the diaphragm in the unit of time, I used tactile models representing the different apertures.

Different types of diaphragm apertures

Lesson 4

Types of programmes that cameras have: A: aperture priority; T: time priority; P: automatic; M: manual. The meaning of using different programs and why aperture priority is used in portrait photography. Concepts of depth of field and its relation to the diaphragm aperture. Since a larger opening of the diaphragm corresponds to a shorter depth of field (sharp/clear area in perspective) and vice versa, I tried to get the participants to understand this concept by using objects glued to a flat surface.

Concept of depth of field

Finally, an overview regarding ISO sensitivity, namely the attitude of the sensor to capture light.

Lesson 5

Review of previous concepts. Preparation for a shoot: the participants were taught how to mount the camera on a tripod, clean the lens and attach it to the body of the camera, whether to shoot with the apertuare priority (A) in time priority (T) or automatically (P) and to identify these commands on the camera, through touch.

The same goes for the choice of focal distance to use – a variable lens 24-105 mm was used so that the participants could choose a camera angle to shoot. Concerning this aspect, participants suggested individuating some reference points (e.g. 24 mm; 35mm; 50; 85mm) with thing strips of scotch tape.

White balance: automatic setting.

Beginning of shoot with first attempts to use the camera.

Lesson 6

Types of shots:

practical examples 1) portraits in the classroom: the photographer is positioned at a distance of 3 to 5 metres from the model. Positioning of camera and deciding whether to use it horizontally or vertically. Choosing the focal distance: 50 mm or 85 mm recommended. It was initially decided to shoot with the diaphragm priority. Choosing of diaphragm aperture desired, in order to get the depth of field that the participant wants to obtain. At this point and in respect to the light present, ISO sensitivity is set (ISO on automatic can be used).

Using facial recognition so that the camera automatically focuses on the eye of the subject to be shot.

Practical example 2) photos of architecture. Historical constructions such as a bridge rather than a church.

In this case the photographer must be at a longer distance, more than 50-70 metres.

The wide-angle lens is used when photographing an entire building or bridge, for example at 24 mm; for part of a piece of architecture 50 mm is used, and for a particular of a piece of architecture with a narrower field of view 135 or 200 mm is used.

In order to prepare the participants to shoot photos, a series of images were taken from the same point, on a tripod, at different focal lengths. This reminds the participants of the aperture of the field angle; adhesives where glued to these prints to make the concept tactile.
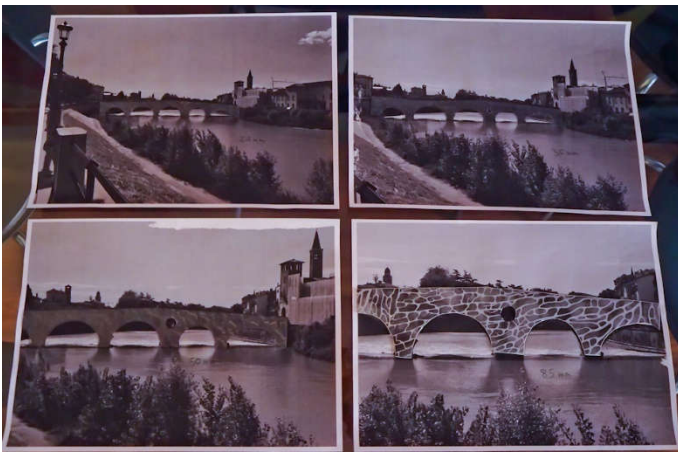
Different focal lengths and their correlation to field of view: tactile examples

The best option is to use the wide-angle lens without too much SPINTO, like 24 mm.

The shot should be taken with the priority of Aperture, using a rather narrow diaphragm, for example f8, 11, 16, in order to have wide field of depth (clear area).

Low ISO sensitivity (e.g. ISO 200 or 400) when shooting by day.

White balancing.

Use of tripod.

Lesson 7

Practice lesson in the studio to shoot models and objects under controlled light with spot focused on the subject and lit background: shots of a model, a statue or a basket of fruit.

Lesson 8

Preparation for the photography project: this means a series of pictures that are inter-related not for a purely aesthetic reason, but by a meaning which connects the different pictures.

Lessons 9-10-11

Outside photography to start each participant's own photographic project with exchanges between the participants.

Photos of architecture, landscapes of the city of Verona and of nature (lakes, waterways).

Lesson 12

Preparation of each participant's artistic project and editing of materials.

Conclusions

The seven course participants developed their projects around city landscapes, natural landscapes, architecture of city and religious buildings, photos of objects and people, archeological museum artifacts.

Observations

The main observation that I made concerned the participants' final photographs: if the pictures were printed on normal support, that of photographic paper, the participants of the course would not be able to understand what they had done.

Therefore, with the dual intention of "translating" the results of the project in a simple way, and with an eye on keeping costs down, I used a technique that allowed for tactile lithophanes to be realized, namely the use of 3D technology printing with a relief of 3.0-3.5 mm in the parts in light and no relief for the darker areas. This led to greater accessibility of the pictures for blind and visually impaired people.

The Arena of Verona with a tactile lithophane (source: Angela Gianesella)

Portrait of Giulia (model) with a tactile lithophane (source: Laura Veronesi)

In order to make the exhibition even more accessible, some of the photos taken in the studio were printed in 3D.

Statue of Cangrande (source: Giorgio Gagliardi) and 3D printing realized by the vocational school Istituto Giorgi di Verona.

The following are links to articles about the exhibition (in Italian).

https://www.exibart.com/fotografia/in-mostra-a-verona-opere-realizzate-da-persone-ipovedenti-che-raccontano-la-citta/

https://www.corriere.it/cronache/24_giugno_24/fotografia-al-buio-in-mostra-a-verona-gli-scatti-di-sette-non-vedenti-abbiamo-catturato-quello-che-non-possiamo-toccare-3bb236c9-085a-472a-8ce7-ad30190f7xlk.shtml

https://fotocult.it/fotografia-al-buio-mostra-fotografia-verona-persone-ipovedenti-e-non-vedenti/

www.sergiovisciano.com