

FORMATION DEFORMATION

FROM REALISM TO EXPRESSIONISM
FROM EXPRESSIONISM TO CUBISM
FROM CUBISM TO GEOMETRIC ABSTRACTION

**GCSE Fine Art
Component No1
Theme: "Formation"**

This art project is based on a series of photos taken in the art studios of my father. Strange objects, home-made fire security systems, a maze of incredible spaces formed a unique and fascinating environment. Through my art works I tried to recreate the ambiance of this world applying Realist, Expressionist and Cubist styles.



PART I

ARTISTIC RESEARCH



SYNOPSIS

To present my artistic response to the concept of “formation”, I’ve decided to take as a subject matter a Parisian art studio, which happens to also be the place where I grew up.

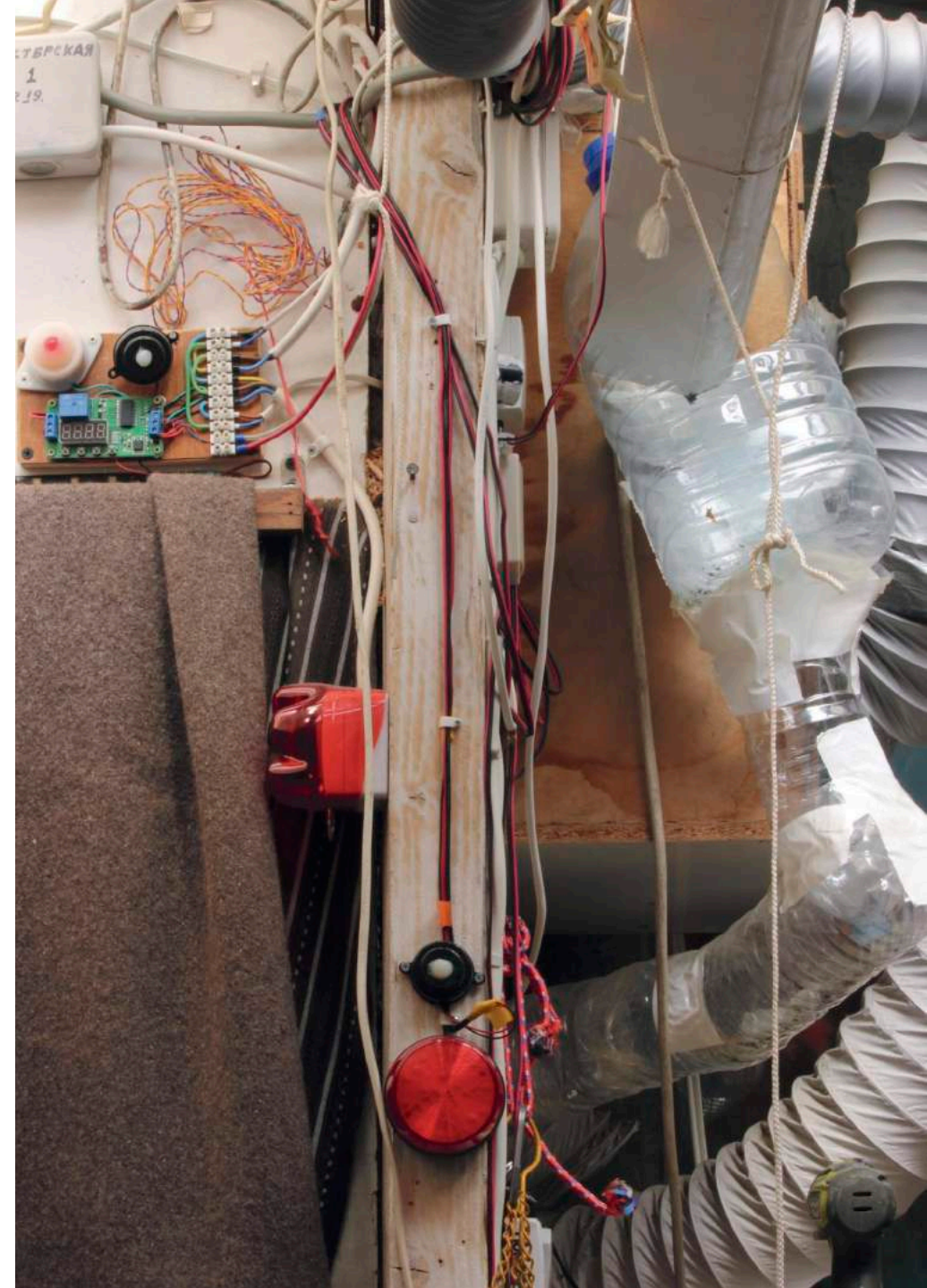
To realise these works I did a series of photographs consisting of random objects, electric wires, installations, homemade fire security system, leaking roofs repaired with duct tapes, never ending ventilation tubes, jars of pigments, brushes and books, all formed in an ideal environment to find images which could correspond to the concept of “formation”.

In fact, all these heterogeneous still lifes were formed organically by different generations of workers, art assistants and numerous other people over the last twenty-five years. I would even call it a modern “cabinet de curiosités” where military helmets, paintings, peculiar objects found on the street and my toys, were all mixed up in a chaotic but aesthetically original amalgam.

So, the first apparition of the concept of “formation” to me would be passing it through the “genre” of still life in a three-dimensional space where time and functional interventions were the main engine of the transformations and creations of these scenes.

I interpreted the concept of formation this way mainly using the theme of repetition, pattern and opposition which I could find in these extraordinary surroundings. It also gave me the possibility to look around me and see the environment of my childhood home in a new way, suddenly realising how artistic and amazing these views are.

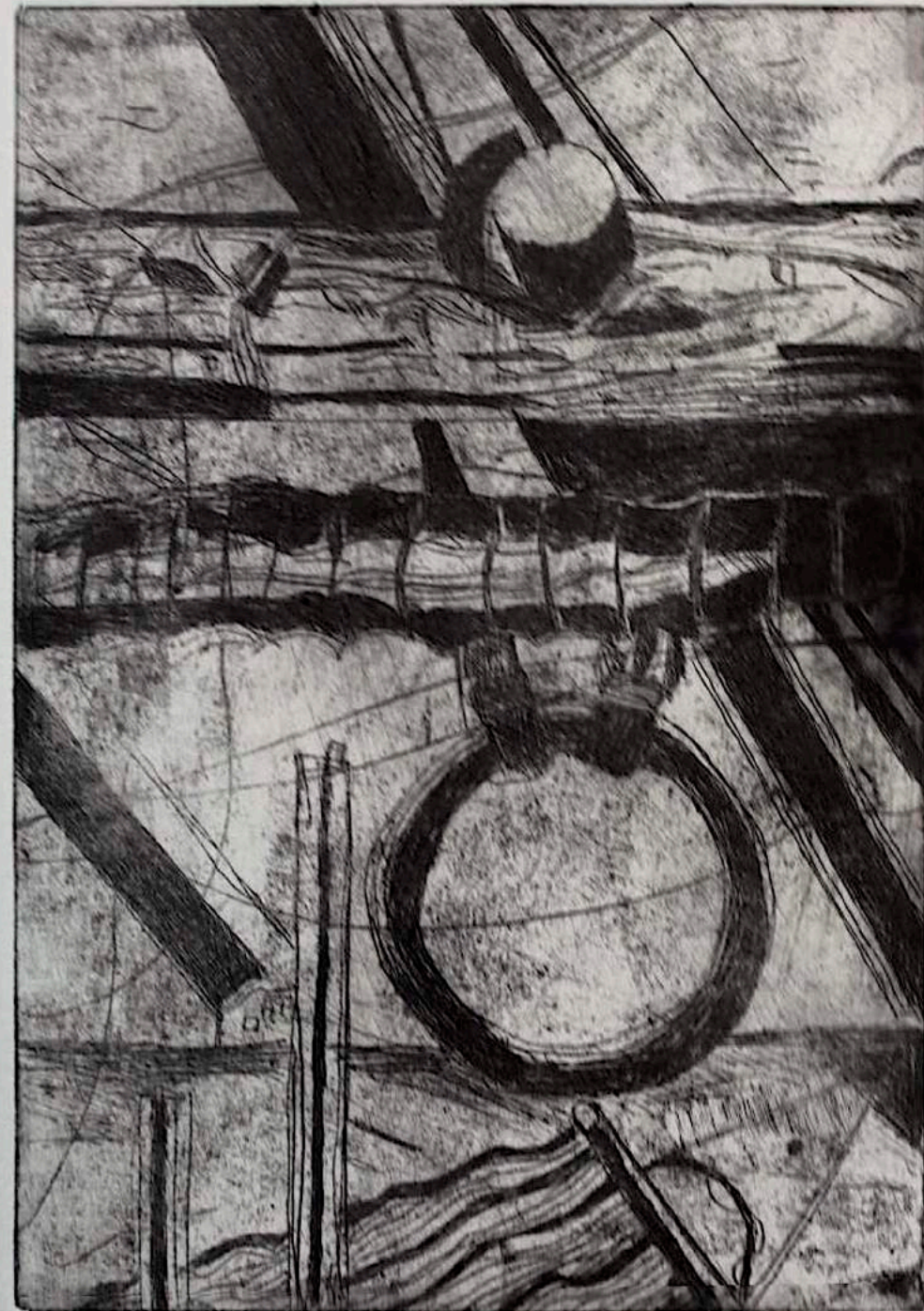
Homemade
Fire Security System
HM-FSS-3



REALISM

Final Response
in Realistic style

“The Orangery”
Paul OstroVerhy
etching on paper, 2023
Plate: 20/15 cm
Sheet: 21/16 cm



ARTIST'S STATEMENT

REALISM

From a young age, I have been fascinated by the world around me and the way to represent it. So it is not astonishing that the art studio of my father became the subject matter of one of the first finished realistic painting I realised back in 2020.

In this artwork we can already notice those spaces and objects which I will show in this portfolio. As at the time I was too young to create a balanced composition, I printed out A4 sized photos on which I painted with Posca acrylic markers, a quick and efficient technique which sometimes I'm still using today.

However, for this project I was also using “classical” art tools like pencils, pierre noir or charcoals following the traditional “Florence Academy of Art” method of the realist tonal drawing.

I was inspired by artists such as **David Hockney's** linear drawings, **Pierre Bonnard's** post-impressionistic paintings and **Max Beckmann's** expressionistic treatment of the figures and forms using thick, black lines.

My Final Response in the section ‘Realism’ was an etching in the style of **John Howard**.

This realistic approach is also my personal interpretation of the **Assessment Objective Number 3**, called “record ideas”.

“Nature Dormante”
Paul OstroVerhy
Posca markers, pencil
oil pastel, acrylic paint
on photo paper
60 / 84 cm, 2020



LINE DRAWING

Before starting any artwork I'm always passing with my hand over the white paper and trying to feel energetically the surface. Then I place the future object mentally in the middle of my future composition. I also look at the image in front of me with half closed eyes to have a blurry picture to better see the main forms, dark and light spots.

Only then start I draw using all kind of drawing tools. My favorites are the Koh-i-Noor metallic pencil holders where I can change the mines to 2mm, 3mm and 6mm colored or black and white charcoals, pierre noirs or led mines. I usually do not use gums, but if it happens I have a whole collection of different sort of gums or gum holders.

Sketches, tonal studies and monochrome paintings

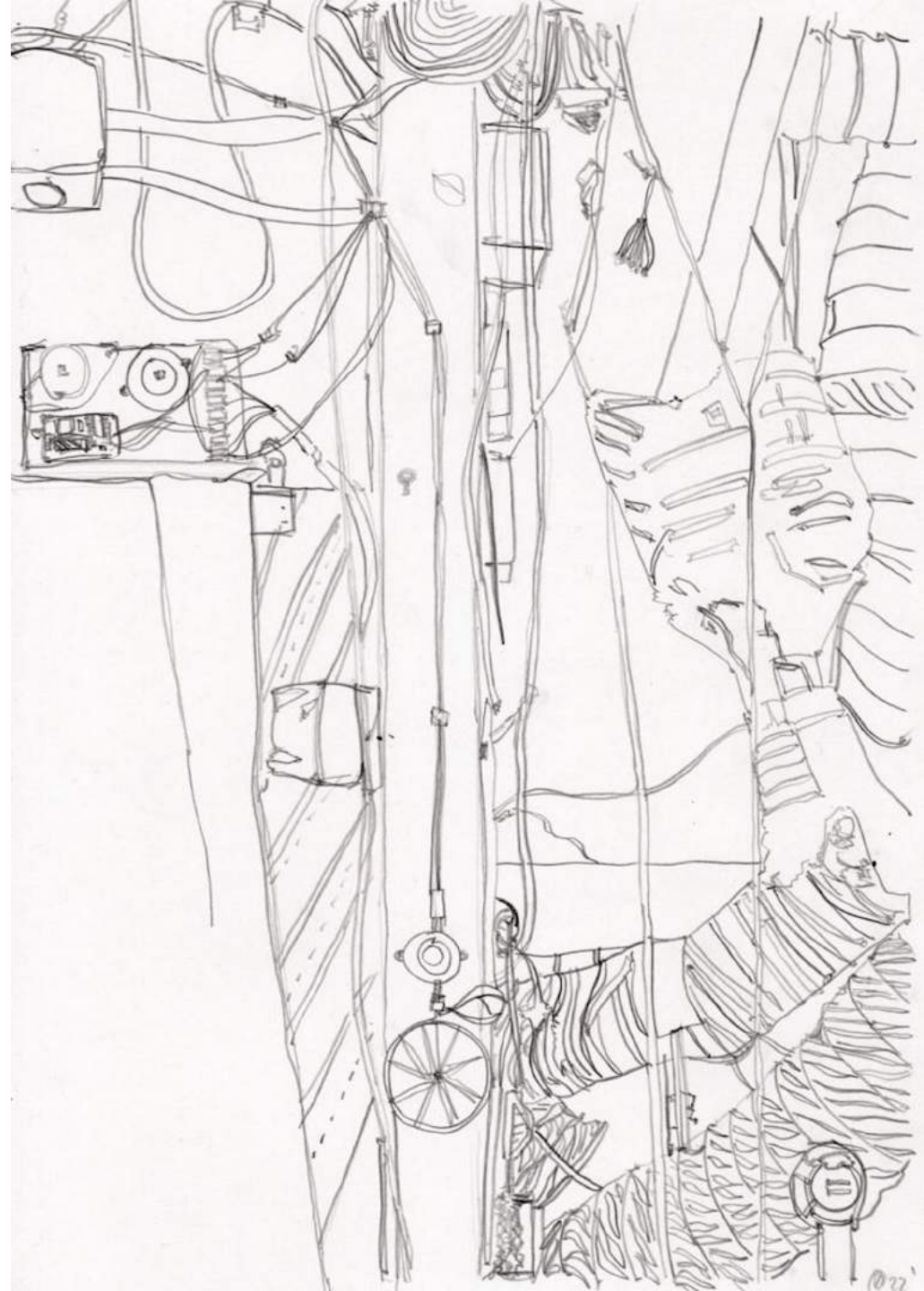
Sometimes I also use bread or a piece of cotton to gum a surface which leaves a slightly dirty but interesting texture. In general having a big variety of drawing and painting tools helps to be at ease to try different techniques.

"HM-FSS-3"

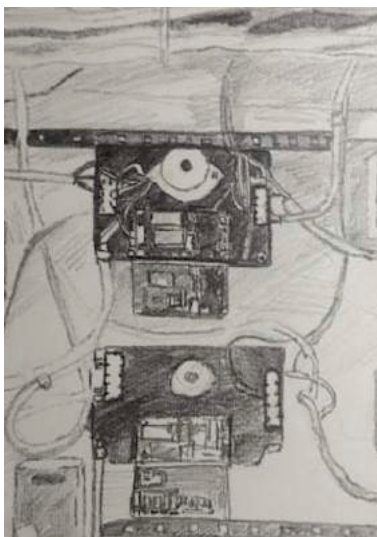
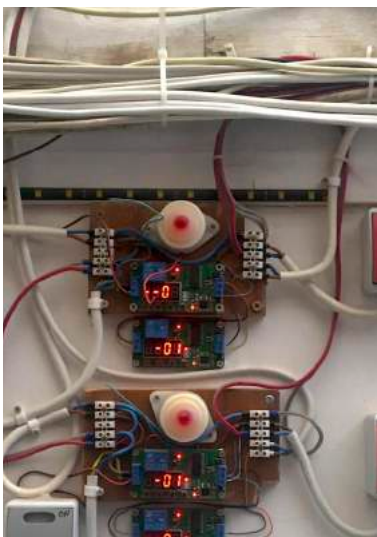
by Paul OstroVerhy
pencil, paper, 2023

20 / 28 cm

(1), (2)



REALISM



MASTER DRAWINGS

Investigating David Hockney's and old Masters' Line Drawings

David Hockney is best known for his brightly coloured paints of swimming pools and Californian landscapes. Recognised as one of the most prominent English painter that helped revitalise the art world in the second half of the 20th century, the pop artist was known for his deliberate deconstruction of perspective and other traditional methods of realistic art to create an emblematic and distinct art style.



Pablo Picasso (1)
Jacques-Louis David (2)
David Hockney (3)
Henri Matisse (4)

Instead of looking at David Hockney's more famous artworks, I focused on his linear contour pencil drawings, which served as inspiration for my own linear pencil studies. The above portrait of a young man, is representative of a realistic style that uses almost exclusively line whilst omitting any tonality apart when it comes to represent the hair.

I also loved the linear drawings of **Jacques-Louis David**, **Henri Matisse** and **Pablo Picasso**. Especially Picasso's illustrations for the Metamorphoses of Ovid.



REALISM

PROFILE STUDIES

Sketches of my fellow classmates and Stowe school architecture

Inspired by all these famous painters, I did a few linear drawings myself. On the right are my classmates from Stowe school and below are a few studies of Stowe architecture. They were done on A6 Bristol paper with Mitsubishi ink pen. For the profiles I used photos and a light box as for the buildings I did them direct from life, in "plein air". I always have these papers and pens with me and whenever I can, between classes or on the train - I draw. In a way we can say it is my sketchbook. On the next page a few more examples of these "esquises itinérantes" representing mostly Stowe school's garden.



"Camarades"
Paul OstroVerhy
ink, paper, 2022
10,5 / 14,8 cm
(1), (2)



REALISM

SKETCH BOOK



REALISM

“Stowe School”
line drawing studies
ink on A6 size paper
illustrations published
by Kommanda Crew
in “Diary of a Stoic”
by Paul OstroVerhy
alias Paul Montaigne
London, 2022

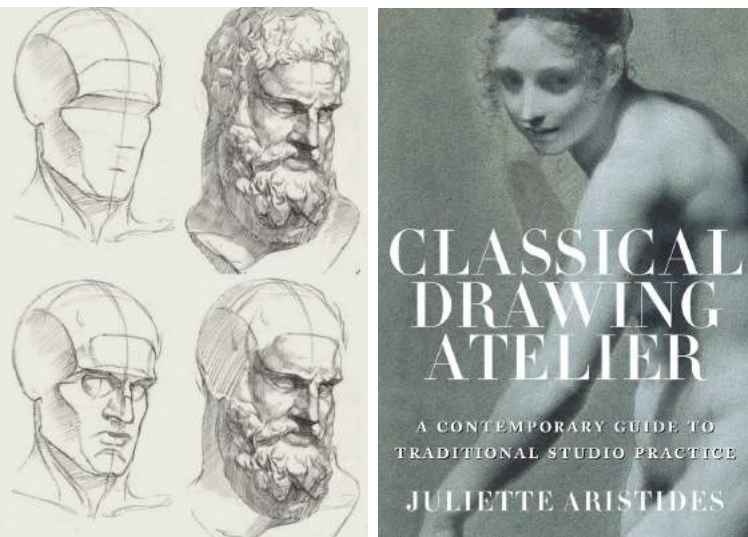
CLASSICAL REALISM

Following the method of the Florence Academy of Art

Before showing my further research in realism, I wanted to talk about the pedagogical method I was following in the area of tonal drawings. I read the book of **Juliette Aristides**, an ex-student of the Florence Academy of Art. This Academy follows “religiously” all the principles of the “old school”: the famous drawing methods of the French “Académie des Beaux-Arts” of the 19th century.

It consists of drawing from the general to the details, dividing the subject into geometric forms, then very vaguely placing the shadow-light contrasts and finally going into the details of the tonal shading. Of course it’s a bit more complicated than that, and generations of artists have written hundreds of books about this.

REALISM



Paul OstroVerhy
drawing HM-FSS-3
2023, (3)



TONAL DRAWING

Tonal study for my future Cubist composition

Pavel Filonov
“Formula of the Imperialism”
Detail, Oil on canvas, 1925
Russian State Museum
St. Petersburg (1)



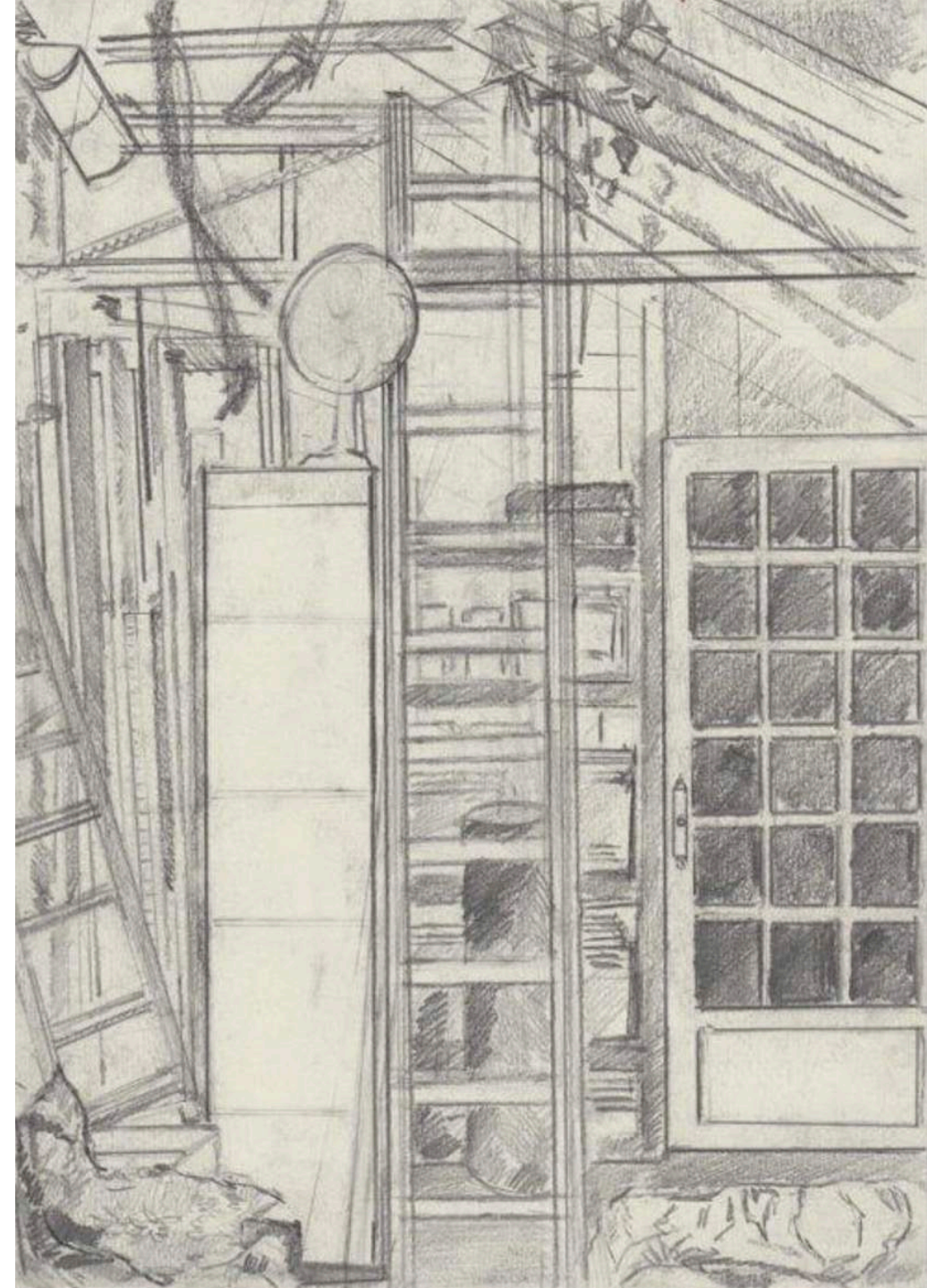
Although I didn't have the goal in this project to do a very elaborated classical tonal drawing, I still tried to follow the main idea in this study: from the general to the particular.

It's important to note here that the contrary of the “Classical Drawing Method” was developed by an artist named **Pavel Filonov** with his famous “analytical realism” where he goes from the details to the general picture.

I am mentioning this theory, as for my Component Number 2, I used the Filonov method in my pointillist realistic studies as well as for my Final Response, the Geometric Abstract composition, where I started meticulously with the smallest details and then step by step, centimeter square per centimeter square I covered the whole surface of the painting.

Getting into the details or rather working on the general forms would be a recurring dilemma in my further works presented in this project.

“Orangery”
by Paul OstroVerhy
photo (2), pencil on paper (3)
20 / 28 cm, 2023



MONOCHROME STUDIES

REALISM

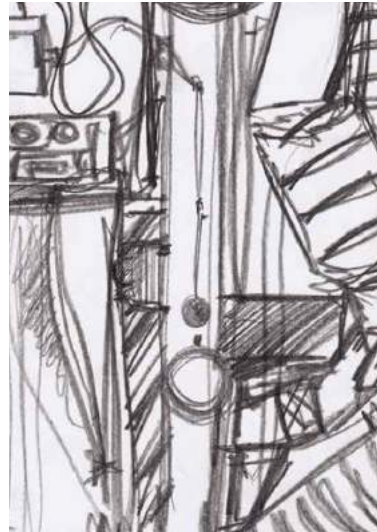
Experimenting with mixed media

My realistic approach started in an observational manner, drawing carefully on A4 paper a linear drawing of the photo I chose, devoid of any tonality, because in having greater simplicity it was easier for me to spot formative structures that could be applied to my work.

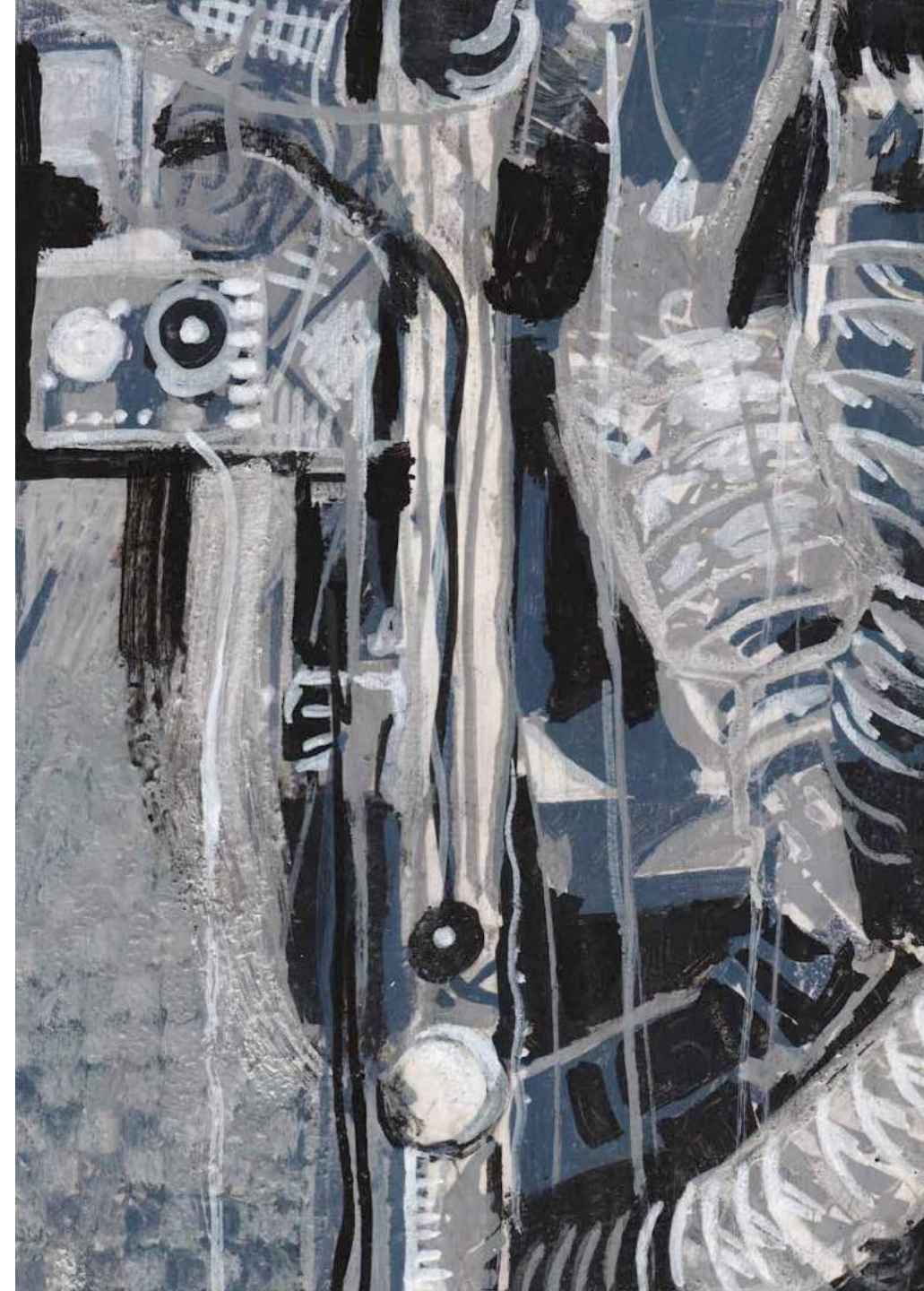
I did a quick, A6 ink drawing of the photo, as well as several A5 ones with 3mm and 6mm pencils. My aim was not necessarily to copy the reality in a photo realistic way but more to try different artistic mediums to feel the subject matter through my artistic sensibility.

My final work was an A4 painting with various layers of black, grey and white Posca markers, using a technique that employed transparent acrylic every time I changed the colour of the Posca marker to not make the colours messed up.

I also used a method called the patchwork technique where I drew little squares in oil pastels to create a decorative element to the painting that also helped promulgate the concept of the “diversification of the treatment of the surface”.



“HM-FSS-3”
Posca markers
oil pastel, acrylic paint
15/21 cm (1), (2), (3)
20/28 cm, (4)



ETCHING WORKSHOP

REALISM

Investigating the etchings of John Howard

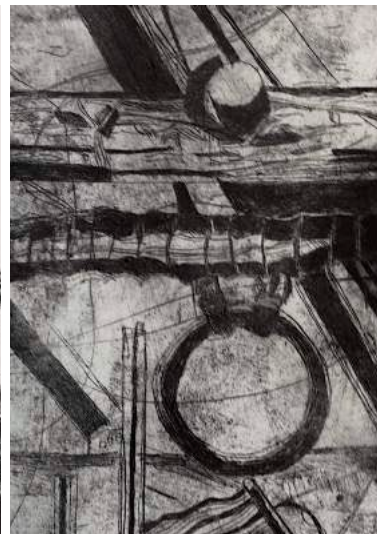
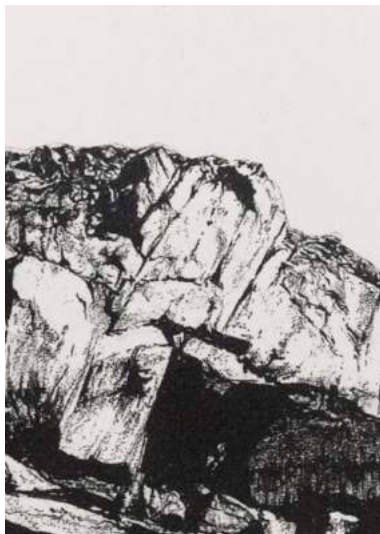
My Final Response for this section is an etching in the style of **John Howard**. Ink was painted over a cooper plate and then with a dry cloth taken away in small and steady swirling swipes. It was then printed on the watercolour paper.

The overall effect was not as satisfactory due to the redundant ink on the paper in places that should have stayed white, such as within the large circle and in the top two corners.

In the Rock Study I (2), John Howard uses Somerset satin paper, whilst his other artwork (1) was done on Lana, 1950 edition paper. "Capturing the qualities of light and experimenting with form and structure, inspired by the natural world." writes John Howard about his art.

The use of bold contrast for background, helps achieving a sense of calm monumentality. Light plays an important factor in Howard's work, something that is achieved through the use of contrasted tonality to create a more dramatic outlook. The artist uses thin lines to not accentuate the outline of the forms, using instead contrasting shades for shadow. The slightly cubist forms and shapes of the rocks are put together in such a way as to create an impression of constructed unity.

Influenced by the natural landscapes of Cornwall, the artist uses several techniques in his artwork, such as photopolymer etching, dry point, etching and aquatint.

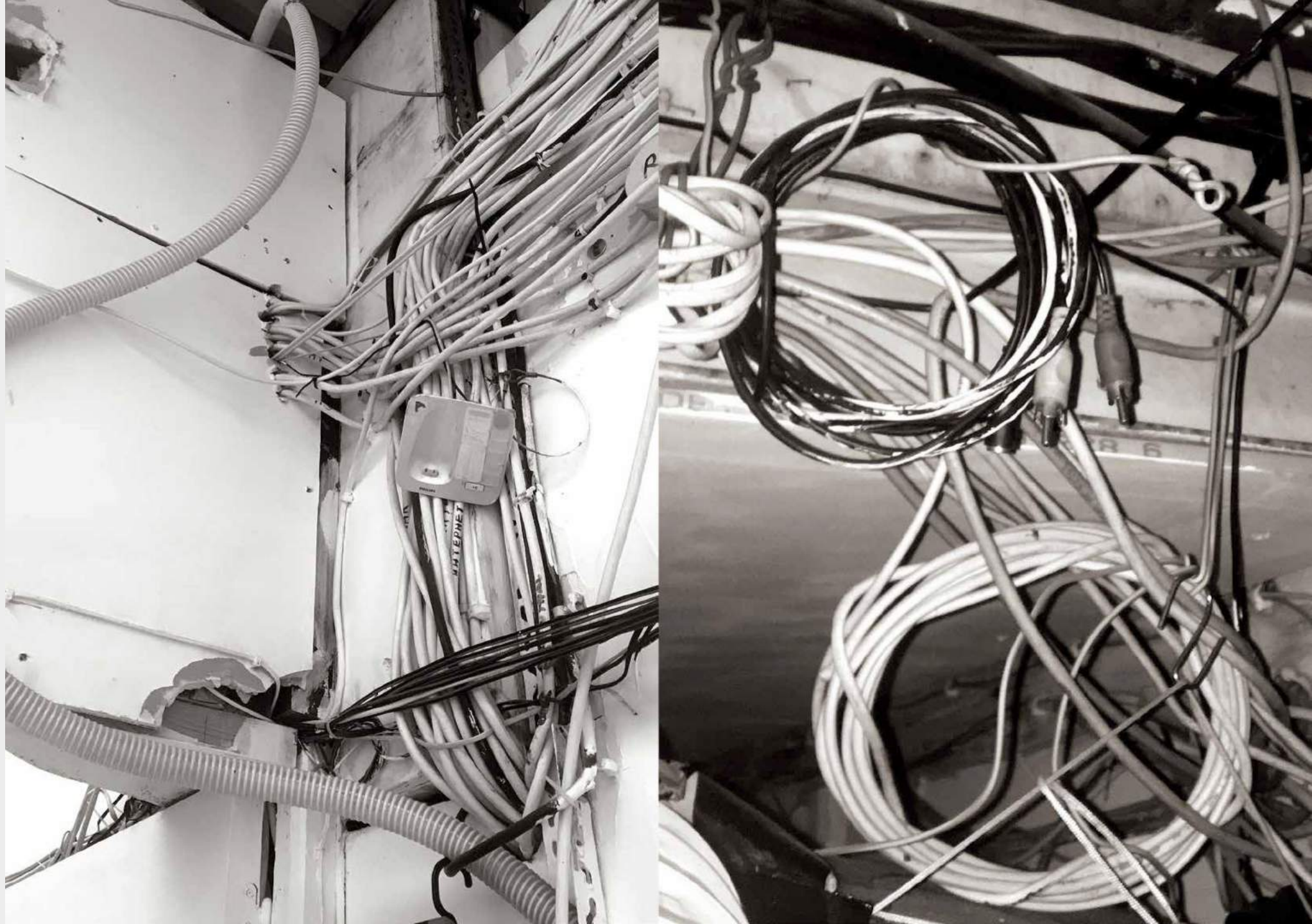


"Sans titre", (1)
"Rock Study", (2)
John Howard
etching on paper
9/15 cm, 2020

"Orangery", (3)
Paul Ostroverhy
etching on paper
Plate: 20/15 cm
Sheet: 21/16 cm
2023



“Orangery”
Paul OstroVerhy
Paris, 2022



MUSEUM VISIT

Naga-makara at the Ashmolean Museum

REALISM

Having studied Sanskrit at school I was particularly interested in visiting that Museum. I made a few sketches with pencil on A4 paper. The intention was not necessarily to have a minute and very detailed representation of reality. In fact, the sketching exercise was more here to help me distinguish the Naga-makara's form, proportion and where the shadows lay. I found drawing it in profile the best, as it allowed me to concentrate on outline and detail and not worry about creating a realistic, three-dimensional, tonal drawing.

The Naga-makara stood upright, and the pitch-black background for a setting accentuated the sea creature's forms. The lighting was set up to focus exclusively on its face, thereby creating an almost theatrical setting by giving an effect of "chiaroscuro", furthering the sea-creature's imposing & defying look.

Whoever crafted this Naga-makara certainly completed the desire to create a terrific, beastly yet noble creature, a figure that certainly casted off an aura of awe and grandeur.

During my visit to the Ashmolean Museum, I could not really find anything that linked to formation and industrial motifs, so I focused more on looking for something related to the mythological, fantastic and epic. The Naga-makara fitted all three of these criteria. Nestled in a shady, comfortable nook on the first floor amidst the ancient art of subcontinental Asia, a stoneware-made ceramic of a dragon-looking creature caught my eye instantly. Upon closer inspection, it proved to be a Naga-makara, equivalent to a mythological sea-creature found in Hinduism, made in Thailand and dating from the 14-15th century.

The Naga-makara was made out of stoneware, a pottery technique, and is a brilliant example of ceramic-made decorative art. The whole body was covered in white slip, a smooth and resplendent texture. The Naga-makara was made with underglaze painting in dark brown, the lines used specifically to paint details such as the scales, eyebrows and beard. It made me think of a three-dimensional paper on which the sculptor decided to suddenly paint a dragon. The underglaze painting put emphasis on details and allowed the viewer to discern every scale on the creature's back, every hair on its beard and the intricate mane on its back.

"Naga-makara", Paul OstroVerhy, (1), (2)



ANALYTICAL REALISM

REALISM

Applying the theory of Filonov to my Children's book illustration

As a parallel artwork to the theme "Formation" it is important to present my ongoing (for the last 7 years!) holistic project called "Ostroco". It contains already around 600 sketches and initially intended to be my Component No1.

So even if at first sight it does not appear to have much in relation to the theme "Formation" in reality it contains all the stylistic and artistic experiments and techniques which led me to be able to realise the artworks in "Formation".

Also it was made following the artistic theory of **Pavel Filonov** called "Universal Flowering" or "Analytical Realism", which is the exact contrary of the Classical Drawing method, this time going from the particular to the general.

Spending my whole last summer working on this fascinating enterprise I finally self-published it in the form of a hard cover book in September 2023. It is still at a "work in progress" stage as I could further work on it by taking these three directions:

- a comic book or
- a series of graphic (linear) illustrations or
- a set of watercolour illustrations in the style of "analytical realism" as on the right page.

On the next page I present the way I elaborated the composition for this illustration.

The same technique (sketch, computer, light-box) was used to finalise my Final Response for Component No1, the Geometric Abstraction.



"Forgotten Tales and
Lost Legends of Ostroco"
Cover Illustration, 20/28 cm
watercolour, gouache on paper
Paul OstroVerhy, London 2023
published by Komanda Crew

FINALISING COMPOSITION

REALISM

One of the main difficulties of my approach to “analytical realism”, (besides creating decorative surfaces (as in medieval miniatures)), was to create a persuasive, literary and realistic illustration which would be used for the book cover.

First, I made a lot of A5 size mix-media sketches as a visual brainstorming.

Then, I chose an A4 size Bristol smooth paper with a very greasy pencil to create a first idea of the composition. **(Illustration No1)**

As the paper was very smooth, the pencil was almost skating on it, which gave me the freedom to create a very quick and expressionist final effect.

pencil sketch rearrangement on computer final drawing on light-box

After that, I did a collage based on the character studies which was done on the computer using CAD. **(Illustration No2).**

This image, once printed out, was used as a base for the lightbox where I copied on a water-colour paper with light 3H pencil my final work **(Illustration No3).**

During this process I made a slight readjustment and at the very end incorporated the sun in the illustration which had a human figure. It gave the illustration a more magic and iconographic effect.

Before the final piece I also did an ink study of the final composition **(Illustration No4 on the right).**



I. Handmade sketch defining the final composition

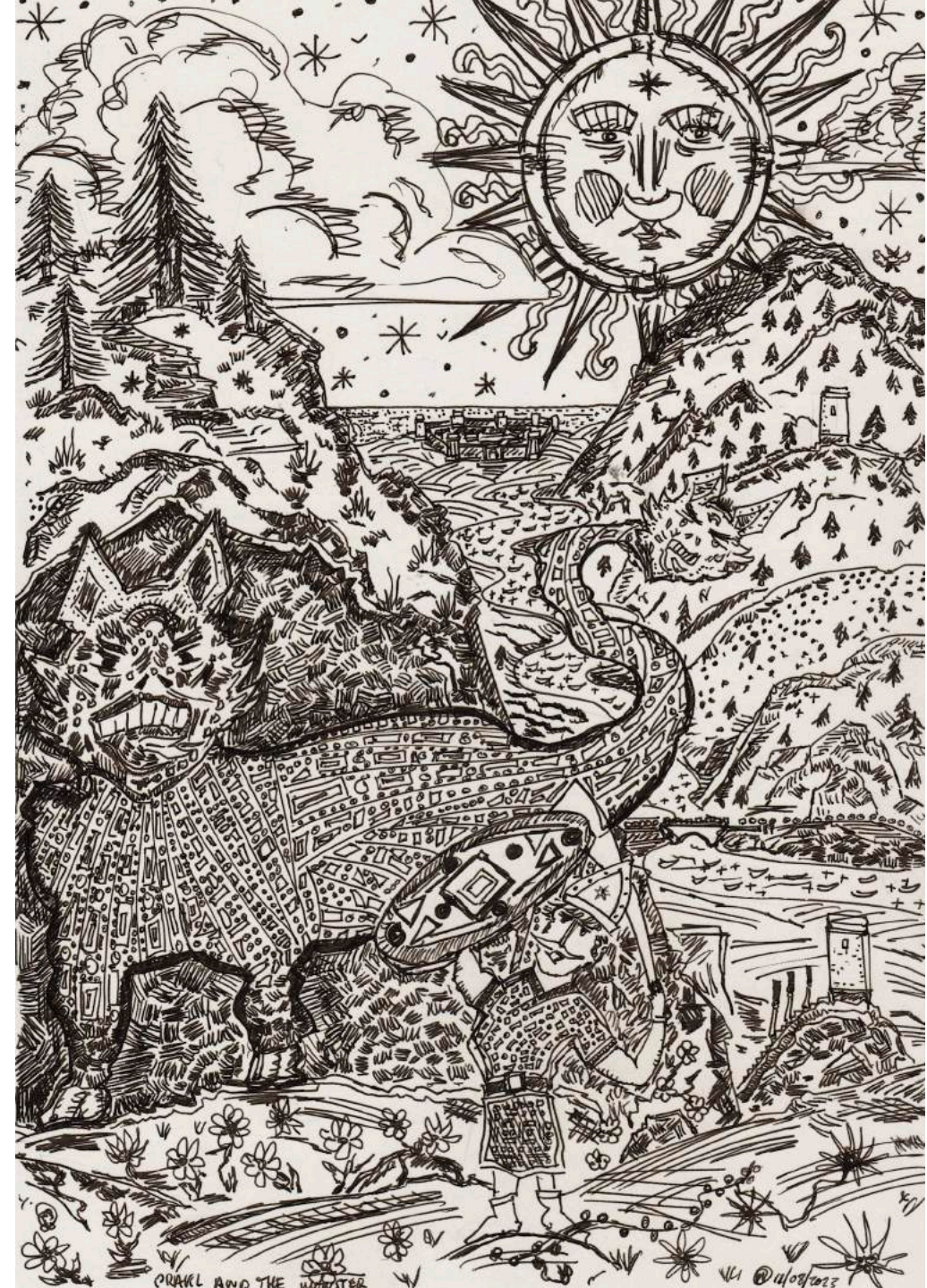


II. Collage of the final composition using CAD



III. Final pencil drawing using a light box

“Forgotten Tales“
Paul OstroVerhy
20/28 cm, 2023
3mm pencil, (1)
collage in CAD, (2)
2mm pencil, (3)
ink on paper, (4)



CHARACTER STUDIES

Character studies were rather simple in the sense that I already had a rather defined visual picture in my head which only needed to be put on a few ink sketches on A6 paper. The main character studies were those of the merchants, which in the story are called boyars and look similar to the actual boyars from history: big, bearded, rosy-cheeked men with caftans of flaming colours, large boots and tall, black hats.

Warriors Creatures Druids Monsters

Prakl was the model of an Ostrokan warrior, porting a magnificent, bristling, black mustache, with silver armor, saber, long green cape and other details creating an overall picture of a valiant, noble and dignified warrior, defying all odds to vanquish the powers of evil. What was harder were the sketches for non-humans, such as Urszag and the monster, but nonetheless it was necessary and helpful too in the end.

REALISM



“Character studies for Forgotten Tales”
Paul OstroVerhy, London 2023
published by Komanda Crew
ink on paper, 10,5 / 14,8 cm



PAVEL FILONOV

Inventor of Analytical Realism

At the opposite to Classical Realism, **Pavel Filonov** created an artistic movement called “Analytical Realism” or “Universal Flowering” (Mirovoi rastsvet). “...The name given by Pavel Filonov to his system of analytical art. The system arose from cubo-futurist experiments and works that he undertook from 1913 to 1915. It is characterized by very dense, minutely faceted, and relatively flat surfaces created by working from the particular to the general, using the smallest of brushes and the sharpest of pencils...” (quoting Wikipedia).



“Formula of spring”
Pavel Filonov
detail, oil on canvas, 1920
Russian State Museum
St. Petersburg





“The Artstudio”
Paul OstroVerhy
Paris. 2022

ABSTRACT EXPRESSIONISM

Final Response in the style
of Abstract Expressionism

“HM-FSS-3”
Paul OstroVerhy
Mixed media on paper
15 / 21 cm, 2022



ARTIST'S STATEMENT

ABSTRACT EXPRESSIONISM

My different technical experimentations were pushed further in achieving a freer approach of the treatment of the main theme, which is “formation”, and the “genre” still life I chose, representing wires, plastic bottles and tubes inside of the art studio complex. This approach could be translated through the style of abstract expressionism, and in my particular case was based on a very precise methodology I have used to create the final image. I could call this technique “multi-layered abstractions”.

The final process is purely intuitive, because instead of trying to construct forms, anti-forms, shapes and empty spaces in a logic way, I followed the abstract expressionist way where you just follow your emotion and immediate judgment “good-bad”, thus amplifying the sense of the artist’s intellectual liberation.

The main painters whom inspired me were **Franz Kline** and **Willem de Kooning**.

This abstract expressionist approach is my personal interpretation of **Assessment Objective No1**, called “refine or explore ideas”.

“HM-FSS-3”
Paul OstroVerhy
Collage on paper
4x15/21cm, 2022



MULTI-LAYERED COLLAGE

creation
deconstruction
reconstruction

EXPRESSIONISM

Paul OstroVerhy
Collage on paper

The methodology which I employed to create these works was a process primarily based on what we can call: "creation, deconstruction and reconstruction".

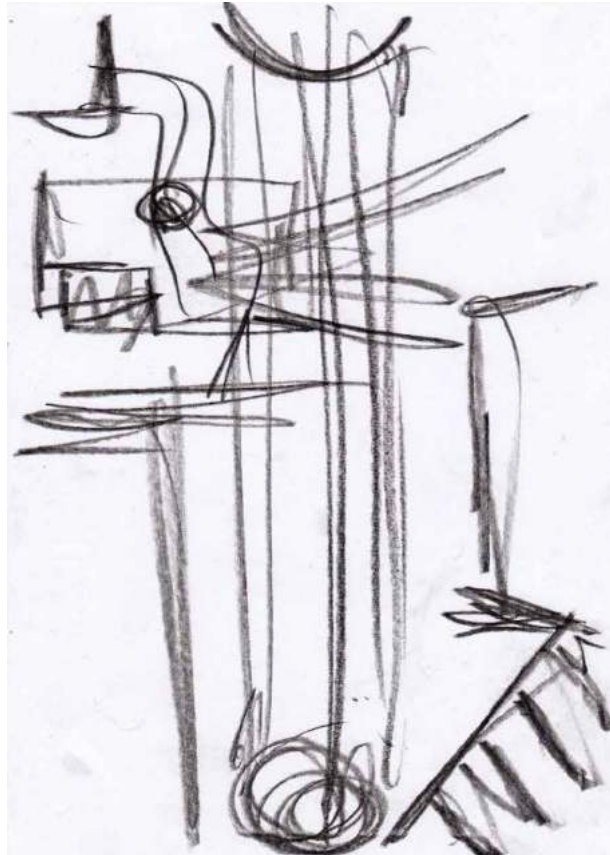
-I first created a drawing of the still life, followed by a second drawing that was cut to pieces and re-composed and glued onto the first drawing.

-I then created a black and grey expressionist painting of the still life, which I also cut and glued on the previous collage (of the cut and glued drawings).

-I then created a coloured expressionistic painting in colour that barely followed the still life which I also cut, much to my regret at first, to also glue on the previous black and white composition.

It was a liberating effect to be able to create an image, be able to cut it, destroy it and re-use these cut pieces on a new composition that is the final image.

-At the end, I retouched the painting with paint and coloured Posca markers. Of course, between each collage layer, I was using transparent acrylic which in my case also served as a glue to put on each other the different layers of papers.



STRUCTURED ADVANCEMENT

step by step
building up different
layers of textures

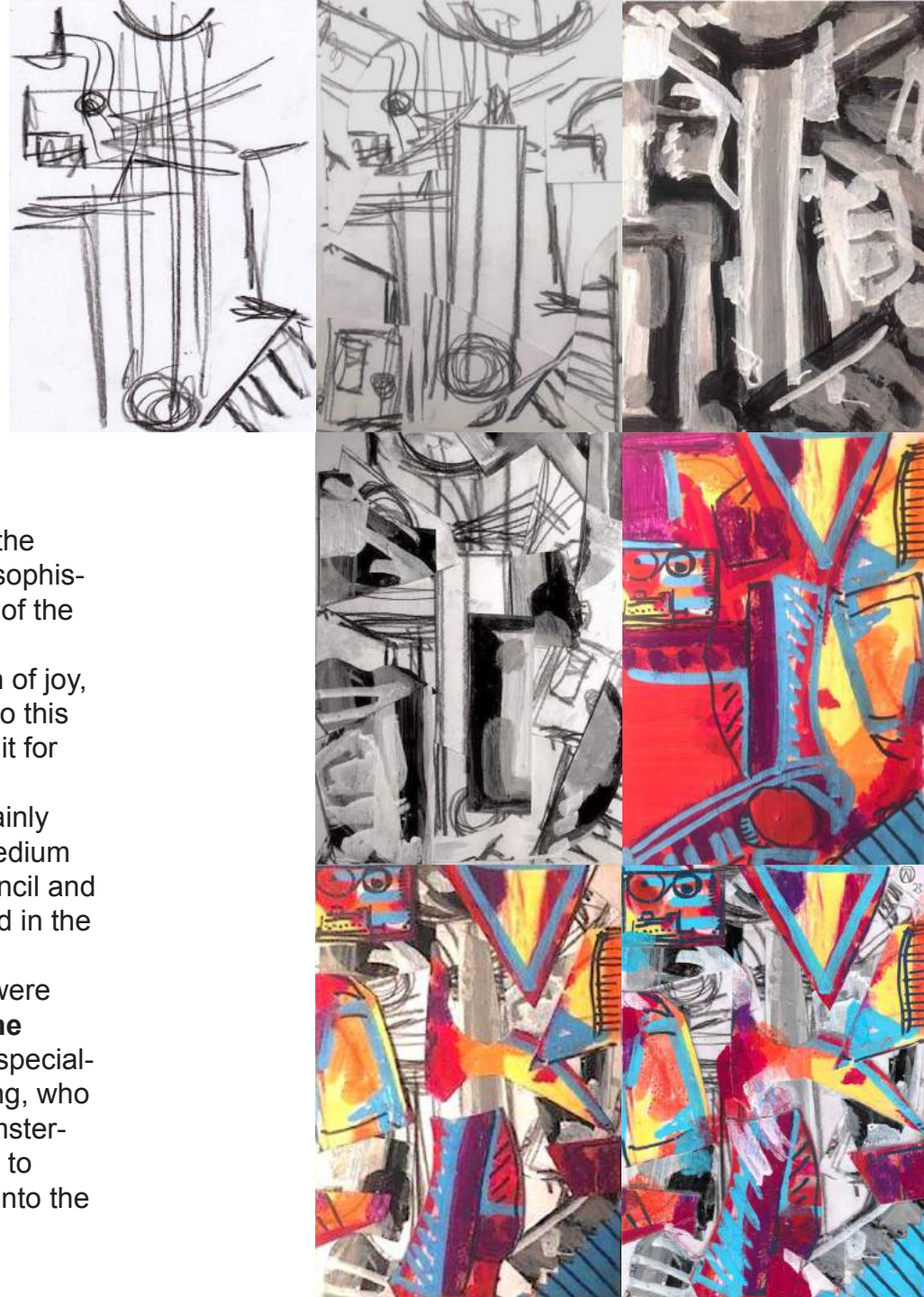
“HM-FSS-3”
Paul OstroVerhy

In this painting I managed to create the impression of deepness and a highly sophisticated diversification of the treatment of the textures.

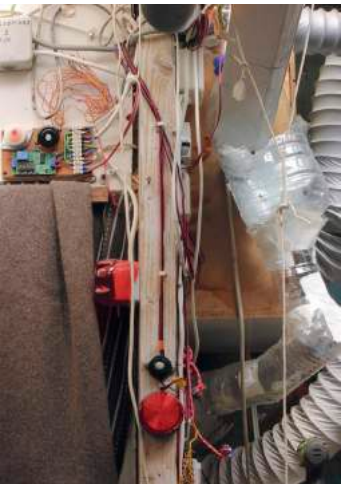
To my shocking surprise the emotion of joy, happiness and feast was so inherent to this final image that I even decided to use it for my annual Christmas greeting card.

The artistic tools I was using was mainly Posca markers, 290 and 33 Acrylic Medium from Marin Beaux-Arts, oil pastels, pencil and basically everything I could find around in the art studio,

The artists who mainly inspired me were **Franz Kline**, **Pierre Soulages**, **Joanne Mitchell** and **Willem de Kooning**. I especially like one of the phrases of de Kooning, who said one day, after emigrating from Amsterdam to New York, “And then I decided to become a painter... and throw myself into the abyss...”



EXPRESSIONISM



FRANZ KLINE

To realise my final Expressionist piece I also tried to introduce new methods, like gestural painting, inspired by **Franz Kline's** works. In his black and white series Kline helped develop Abstract Expressionism which are renown worldwide. Kline's artworks include a number of abstract motifs that do not bear any resemblance to figurative art. Instead, the artist embraces artistic confidence to create strong, emotive and vivid paintings. Kline is most famous for his black and white abstract compositions which reflects Kline's occupation as an action painter primarily engaged with developing gestural artworks that have been likened to Japanese calligraphy.

introducing calligraphic gestures



"Calligraphic studies"
Paul OstroVerhy
Acrylic marker on paper
15 / 21 cm , 2024

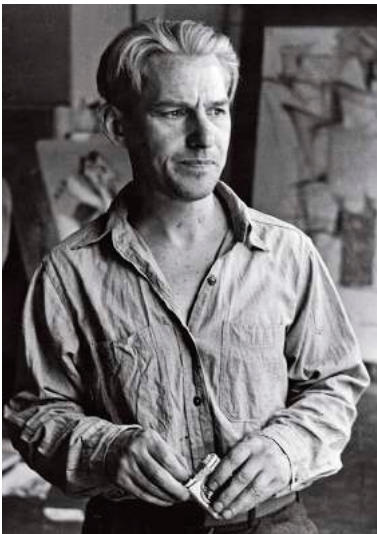
Franz Kline's series of black and white abstract compositions, which almost emulate an architectural and structural mood, was another inspiration for my artistic response. Moving on to Assessment Objective Number 1, which involves a refinement of ideas and experimentation, I was inspired by Kline primarily due to his free, gestural movements which I tried to recreate in my A5 ink studies, works which I did in the same style later on also used for my Component No2. Instead of trying to create a realistic drawing, I let myself go of artistic constraint and sought to emulate Kline's gestural movements to free myself.

EXPRESSIONISM



WILLEM DE KOONING

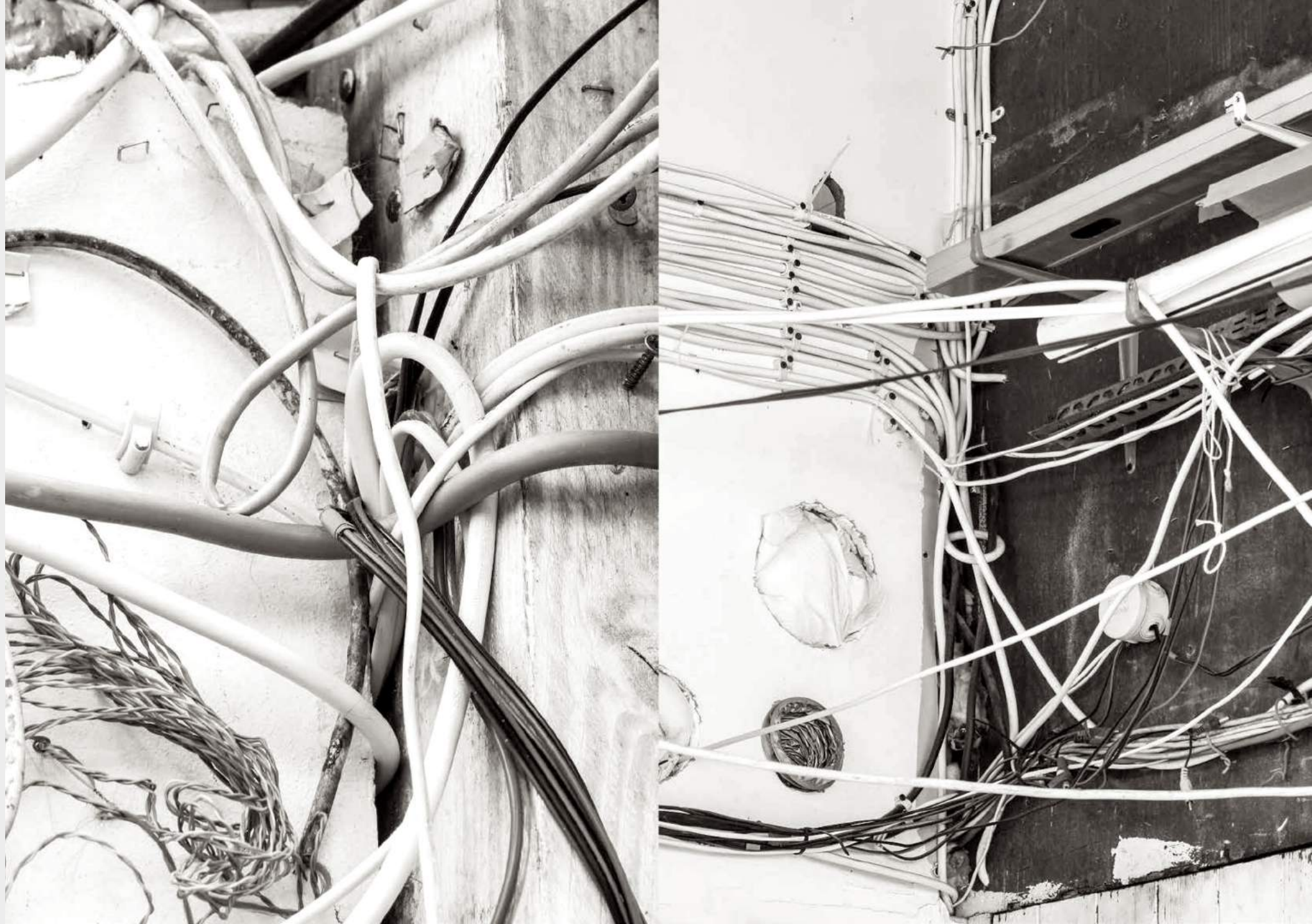
“Then I decided become a painter
and throw myself into the abyss.”



Willem de Kooning
is certainly along
my top three
most admired artists
with Pavel Filonov
and Vladimir Nemukhin

“Woman V”, 1952-53
Willem de Kooning
detail, oil on canvas

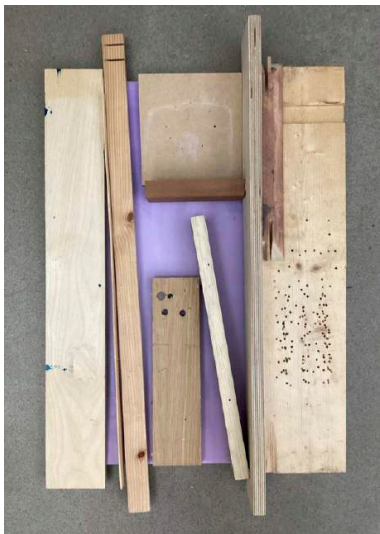




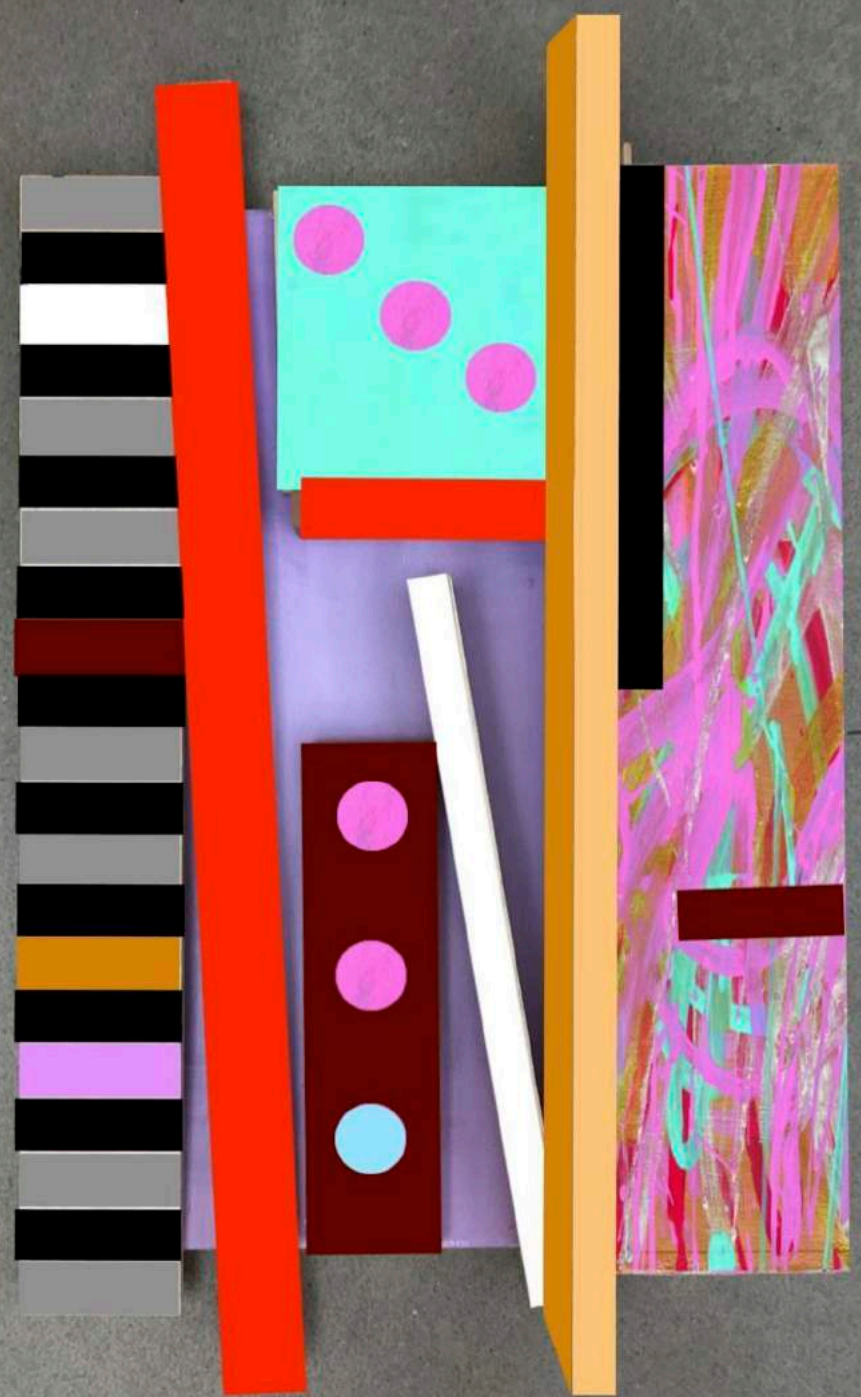
“Orangery”
Paul OstroVerhy
Paris, 2022

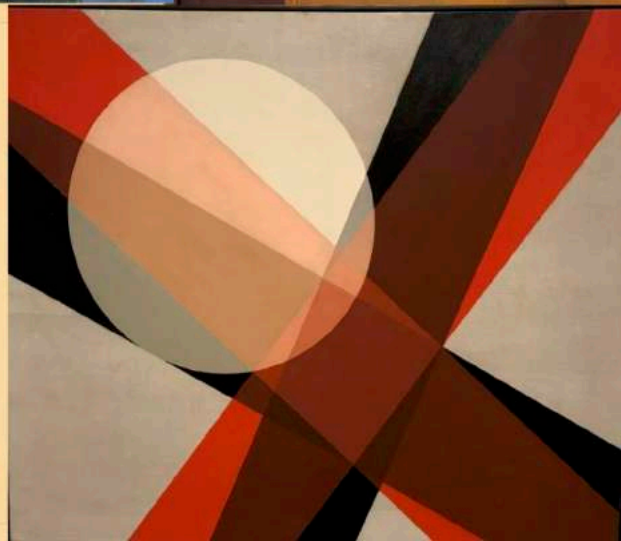
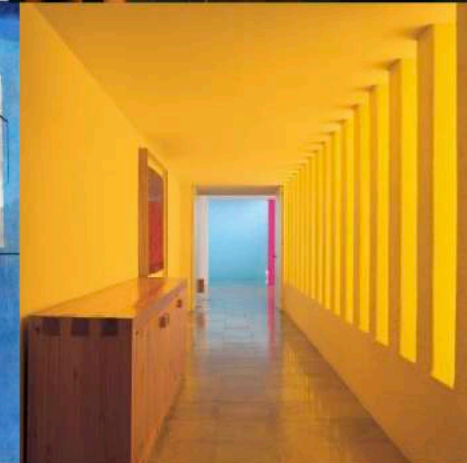
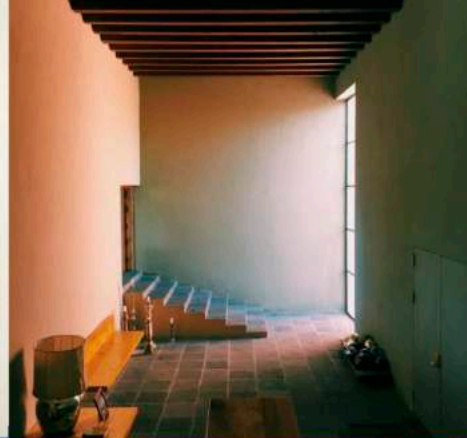
CUBISM

Final Response
in the style of Cubism



"Orangery"
Paul OstroVerhy
painted wood
32/44cm, (1)
CAD, (2)





ARTIST'S STATEMENT

CUBISM

Having finished a series of realistic representations of reality, in itself reflections of formative patterns, I decided to push these ideas to a radicalisation that I would fittingly call a simplification of reality to reveal the essential forms that lies beneath our everyday surroundings.

As demonstrated by the artist **Paul Cézanne**, who said that all reality could be reduced to a square, a triangle and a circle, I thought fit to do the same with the photos that I took that were related in some way to the theme of “formations”.

I was inspired by the artists like **El Lissitzky** and **Serge Poliakoff**, whose abstract geometric approach to art was particularly helpful in my visual understanding of reality.

This cubist approach would correspond better to a personal interpretation of **Assessment Objective Number 2** which is “develop ideas”.

HM-FSS-3
Paul OstroVerhy
digital collage, 2022



MASTER PAINTINGS

Exploring the abstractions of Serge Poliakoff and Piet Mondrian

Serge Poliakoff
Composition 1959 (2), (3)
oil on canvas



CUBISM

Piet Mondrian
Tree series (1)



Serge Poliakoff created over thirty years works of pure abstraction. In his abstract compositions, the artist tried to “assemble” blocks of colour together to create a balanced impression of harmony. The artist was influenced by Russian religious iconography to which he was exposed to during his childhood. As a result, Poliakoff’s abstractions reflect his quest to express the mystical. Creating multiple layers of colours that sometimes had a slight effect of transparency he was mainly preoccupied by the relationship of forms between each other.

As for **Piet Mondrian**, he created a series of trees starting with a realistic approach then by simplifying the branches, finished in a pure minimalistic abstraction. It was very relatable to what I tried to do.

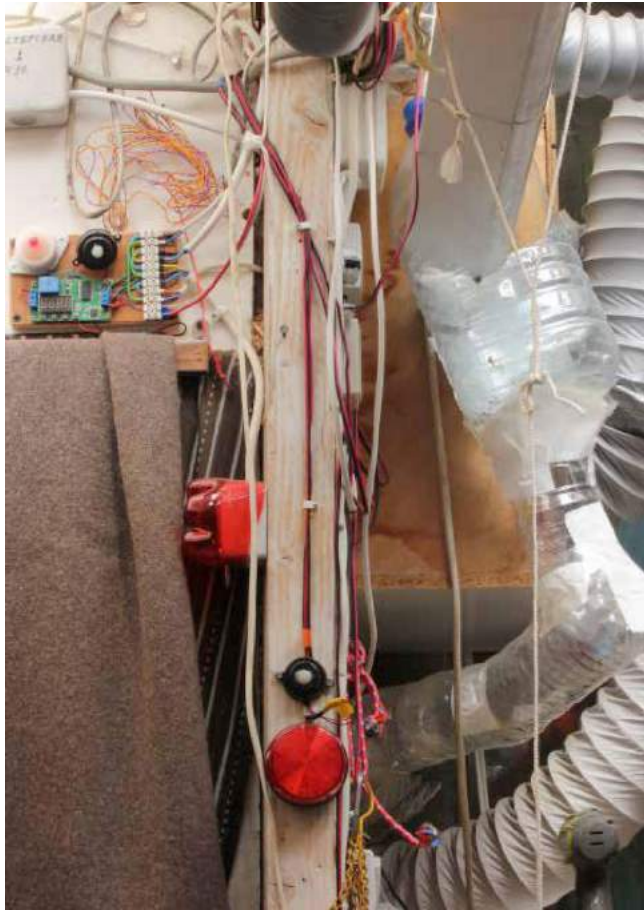
SELECTING MY PHOTOS

CUBISM

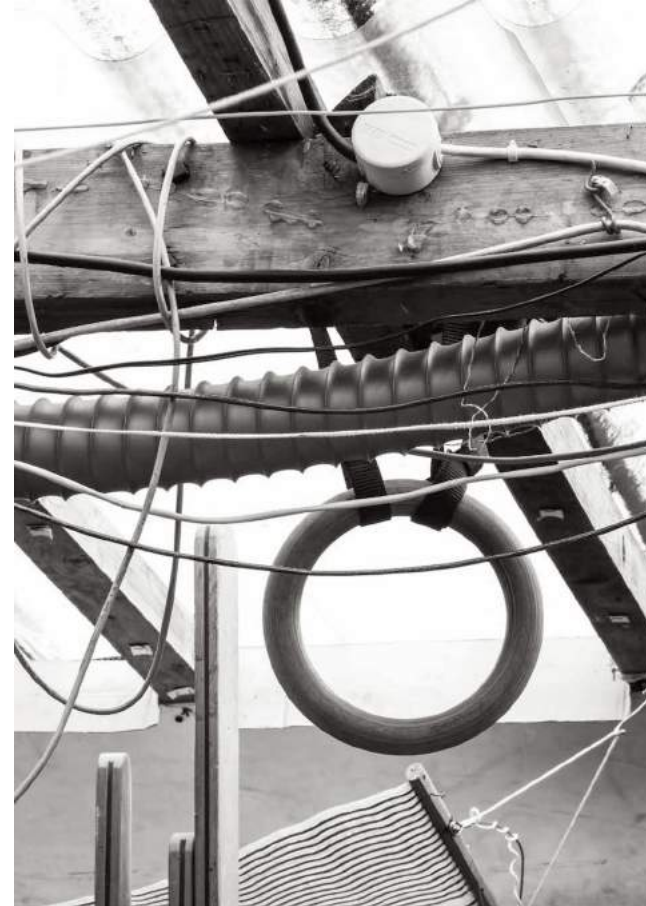
for future
compositions

Out of the hundred photos taken I chose 20 to present in this portfolio out of which four were selected to become the subject matter of my compositions.

The first one was used to be the image of my **Expressionist Final Response**.



It also was used as the object for my **Scientific investigation** (HM-FSS-3, HomeMade Fire Security System No3).



The third was used to be the image of my **Realistic Final Response**,

The second photo was used first to the Realist tonal study then became the first Cubist composition which was used for my 3D Bas-Relief piece and **Cubist Final Response**.



The fourth one was used to be the **Geometric Abstractionist Final Response**, which at the same time was the art work I used to be my **Component Number 1 Final Response**.

“Paris Art Studio”, (1), (2), (3), (4)
Paul OstroVerhy, 2022

MONOCHROME STUDIES

Experimenting with forms

(3), (4)

(5), (6)

Starting my Cubist experimentations I decided to put **Paul Cézanne's** theory (where reality can consist of geometrical shapes) into practice by a methodological approach that started

-by **drawing over the still life photo the essential lines** that defined the shape and form of the image. (4) Having done so,

-I coloured each part with greasy, Conte, thick pencils in three primary colours: charcoal black, white and sepia **reducing all colour to these three.** (1) (5)

-I further pushed the process by **simplification of forms** to more simple geometrical shapes. As such, I was able to radicalise my realistic approach by simplifying the objects into rather primitive equilateral forms. (3) (6)

-At a point, I **cut separately the geometric shapes** which I drew on the photo, to recompose my image just based on these geometric forms and creating a paper collage. (2)

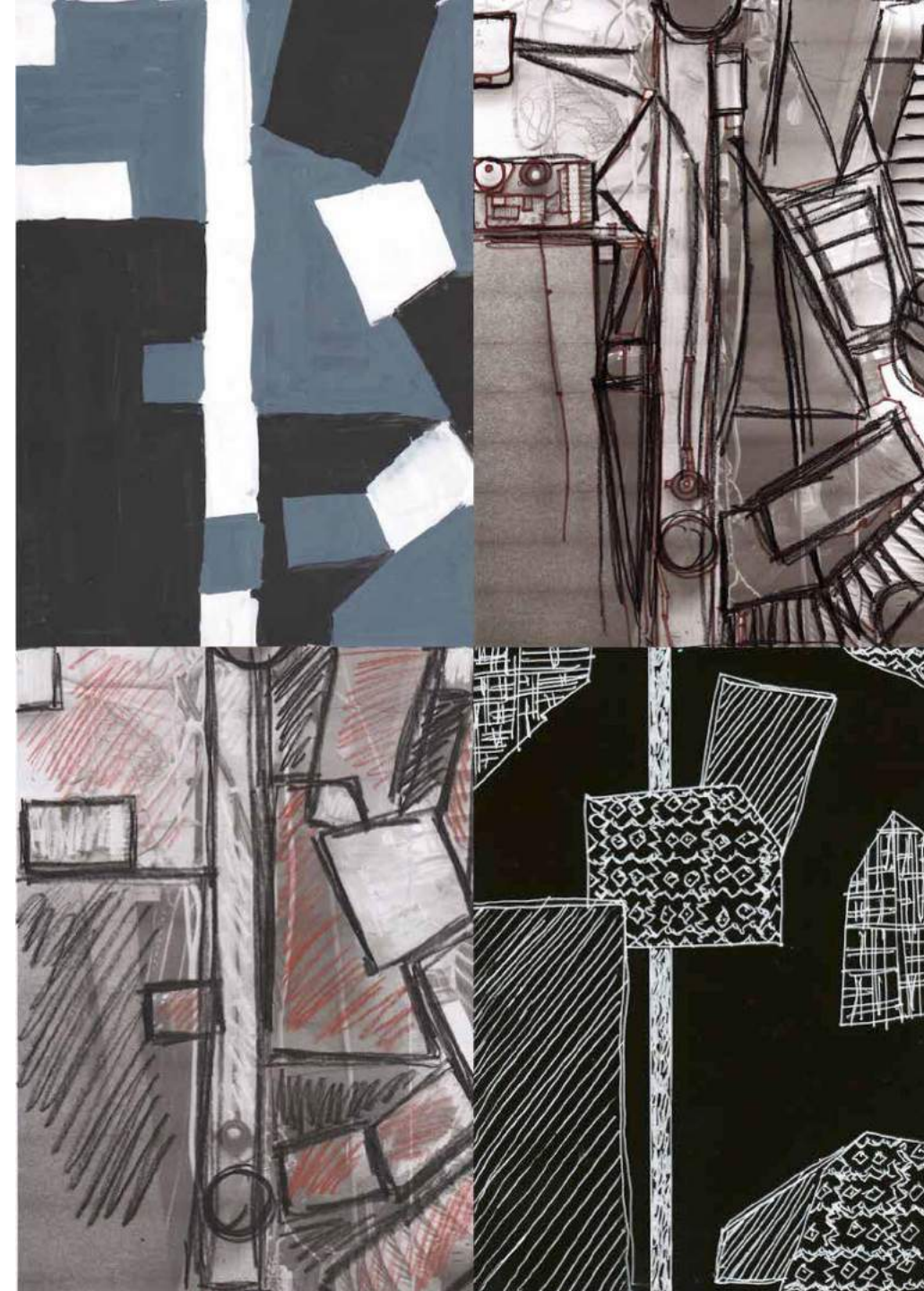
As such the final compositions already had nothing to do with the original photo representation.

"Cubist studies"

Paul OstroVerhy

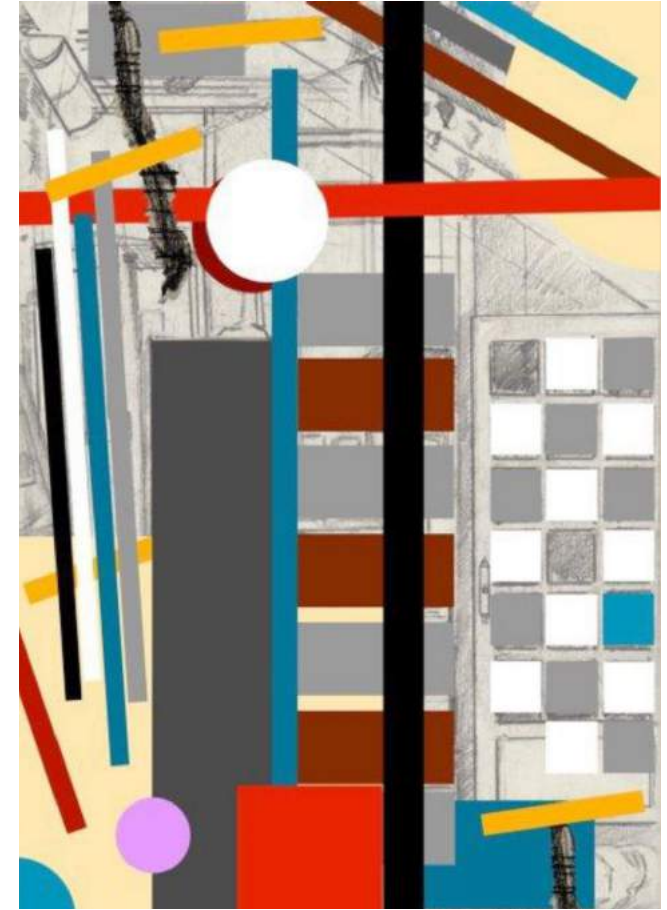
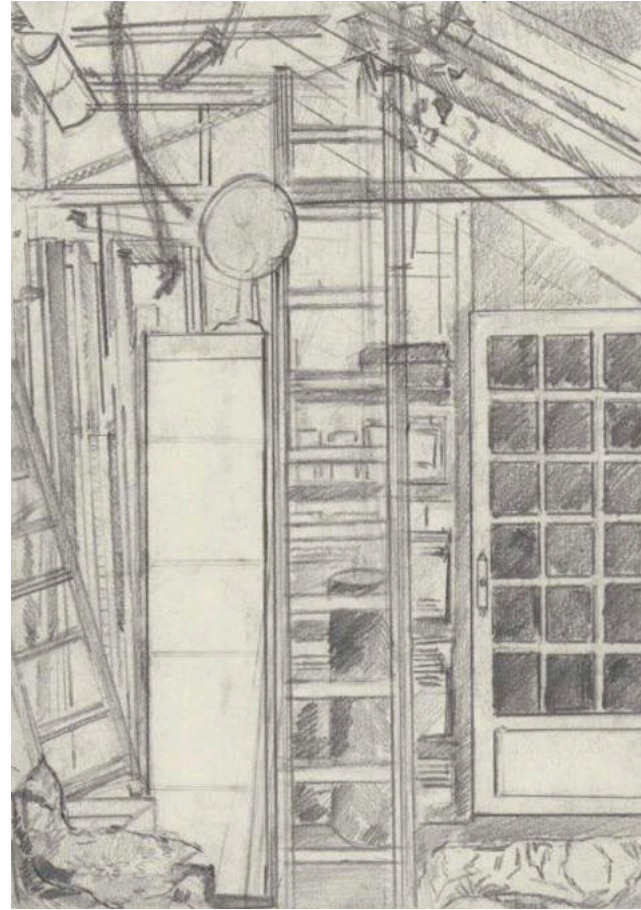
Acrylic marker, ink and pencils
on paper, 15 / 21 cm , 2022

(1), (2)



CUBISM

REALISM - - CUBISM



My methodology to start creating Cubist composition was following the main concept of **Piet Mondrian** (see his tree series) with a slight difference: I started to use a computer (mainly the software Preview) to draw shapes and colour on it. Here in these three images we can see clearly the process.

“The Gallery”
Paul OstroVerhy, 2022
Photo, Pencil, CAD
on paper, 20 / 28 cm

-photo
-drawing
-CAD image

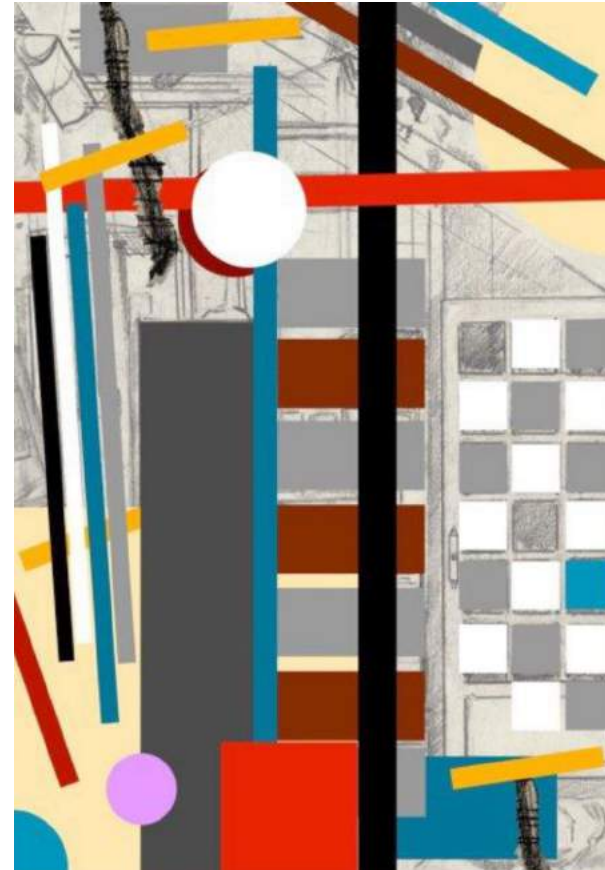
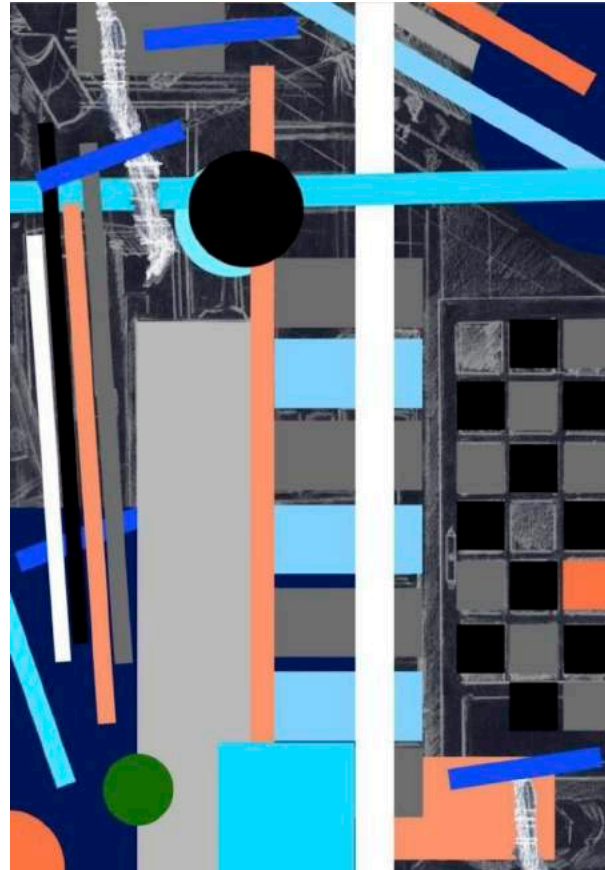
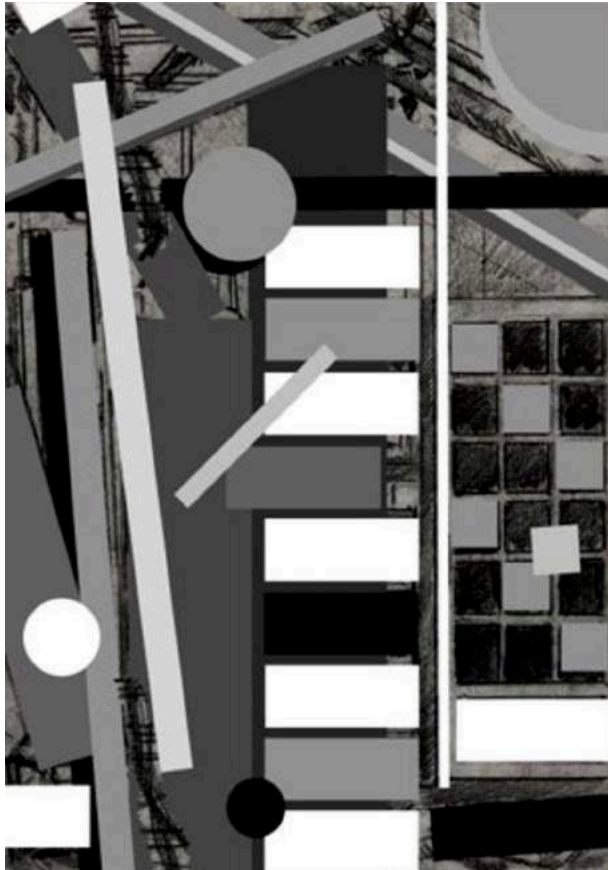
CUBISM

USING CAD COMPOSITIONS

CUBISM

filling forms of reality
with coloured shapes

First I was placing Geometrical forms on the different surfaces more or less following their forms, then I created a monochrome composition without any colour: just black, white and a few grays then finally I added the colors. Covering all the surfaces with shapes however was happening parallel to filling the shapes with colours. It is only at the end we could not see anything from the original photo. Based on this composition and inspired by **Kurt Schwitters**, I created my first 3D constructivist Bas-Relief, as it can be seen in the following pages.



KURT SCHWITTERS

“An artist creates by choosing, distributing and reshaping the materials.”

“Mertz pictures”
Kurt Schwitters
Mixed media on paper
1919



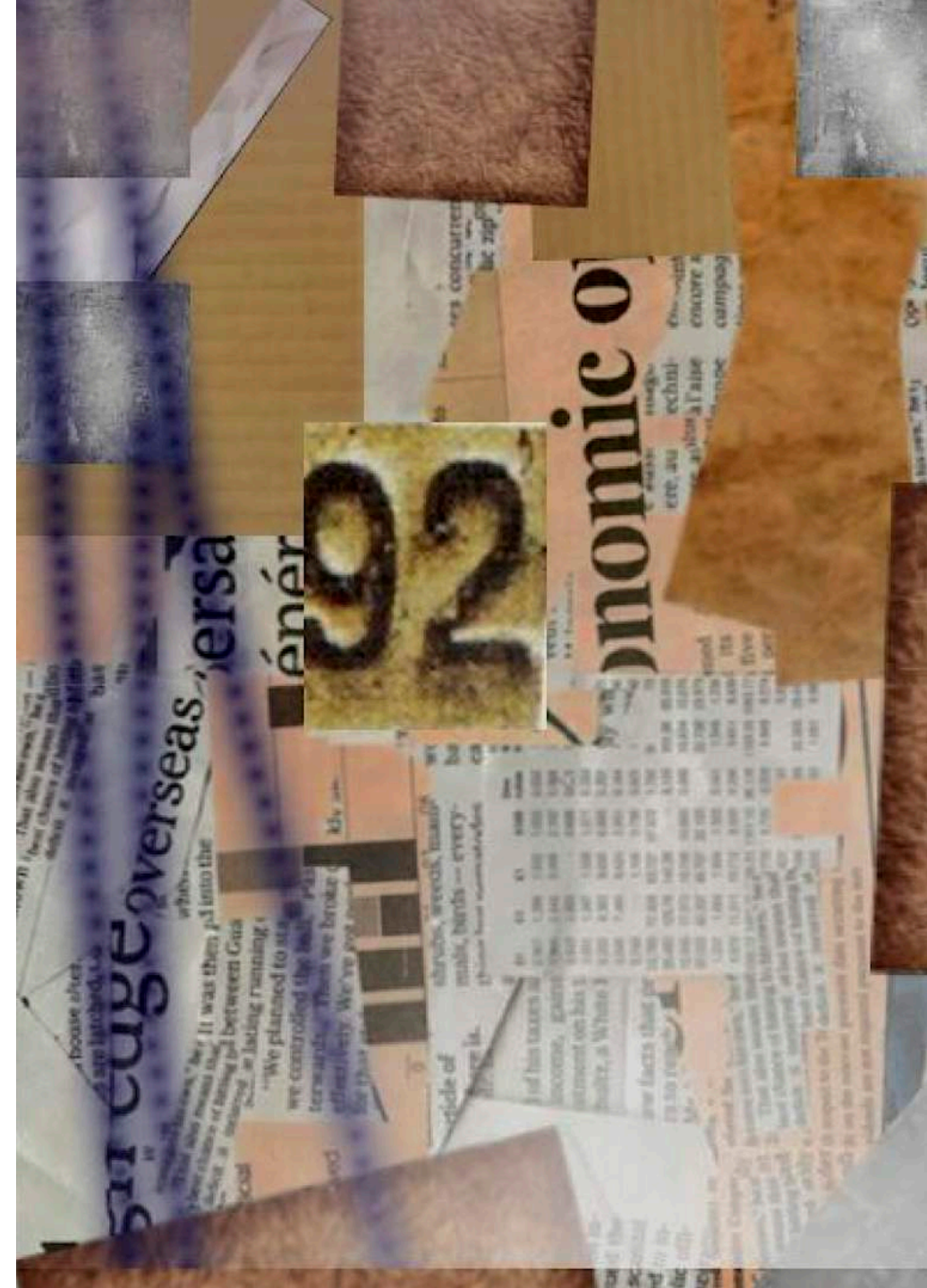
For my final piece in Cubism I chose to study more closely Kurt Schwitters “Merz Pictures” series.

The word “Merz” comes from Commerz Bank, which is featured on a piece of newspaper clipping the artist uses in one of his works. As a whole this reflects Schwitters’s exploration of contemporary commercial culture, symbolic of normal, everyday life, and its relationship with art.

Schwitters creates assemblages of everyday objects, such as newspaper, train tickets, buttons and pieces of cloth to create an abstract collage composition.

A theme prevalent in Schwitters’s series of ‘Merz Pictures’ is the idea that art can be created from anything. Regardless of destruction and annihilation, art can still be created from the rubbles of war. This reflected in the use of materials commonly associated with everyday functionality, such as buttons. The creation of a geometrical composition filled with harmony and balance, the interplay between rough, textured surfaces and smooth surfaces, this all promotes the artist’s message: art’s potential as a reconstructive force within a fractured world.

“Hommage
à Kurt Schwitters”
Mixed media on cardboard
by Paul OstroVerhy
30 / 42 cm, 2023



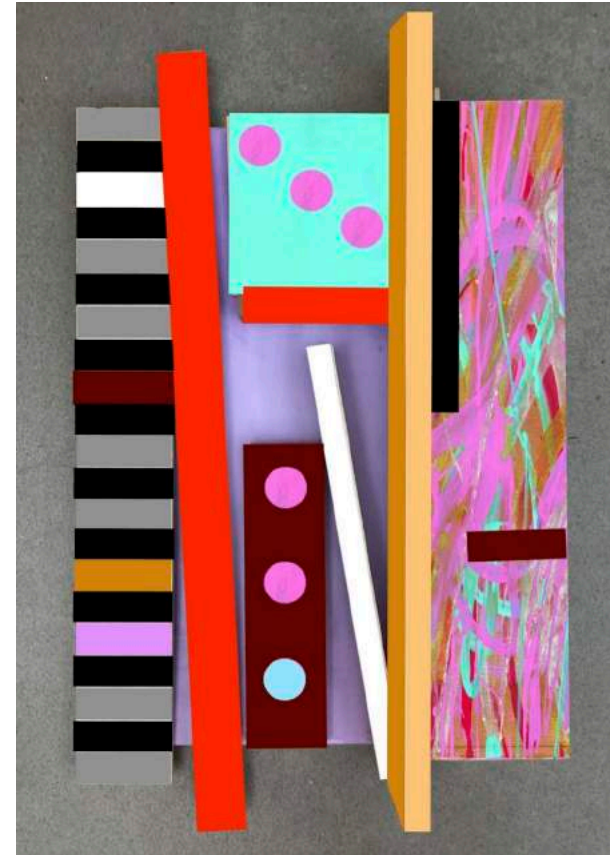
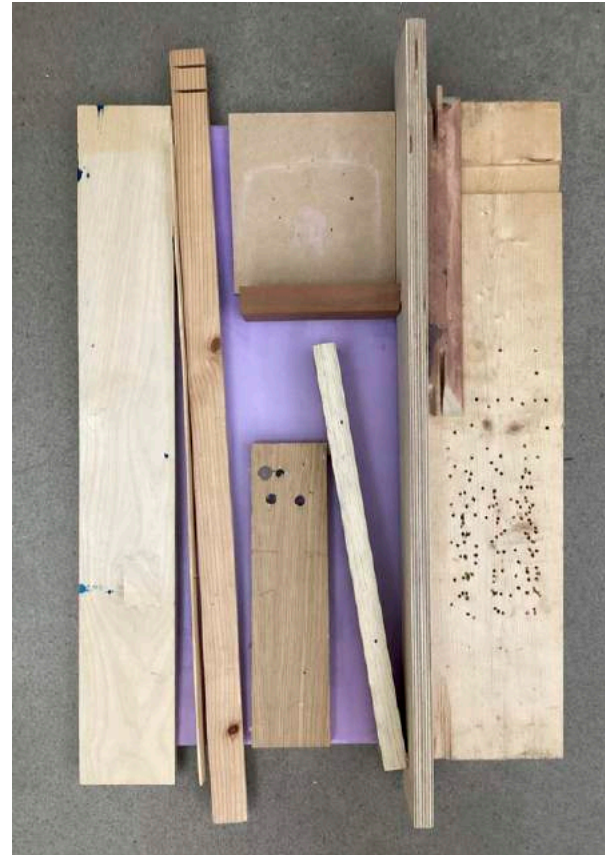
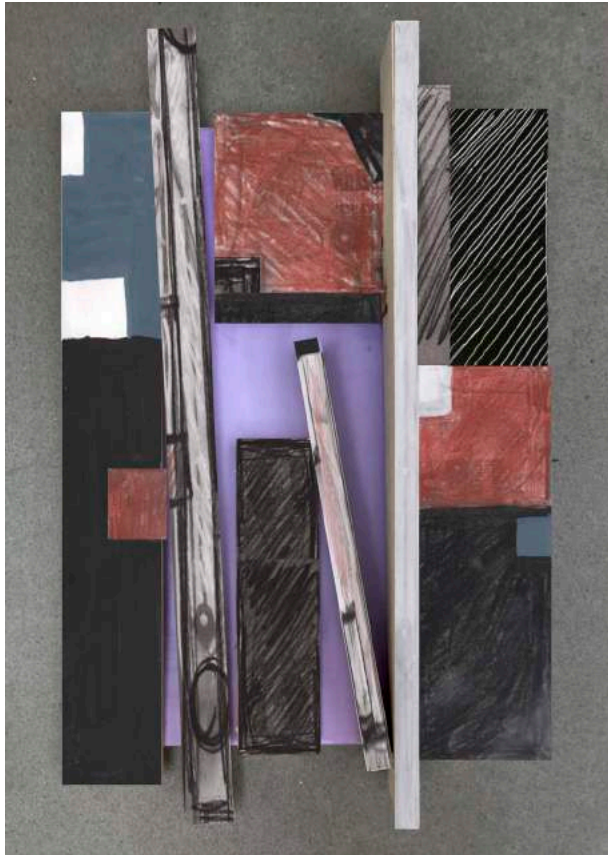
CREATING BAS-RELIEF

monochrome sketch
CAD image
bas-relief
painted bas-relief

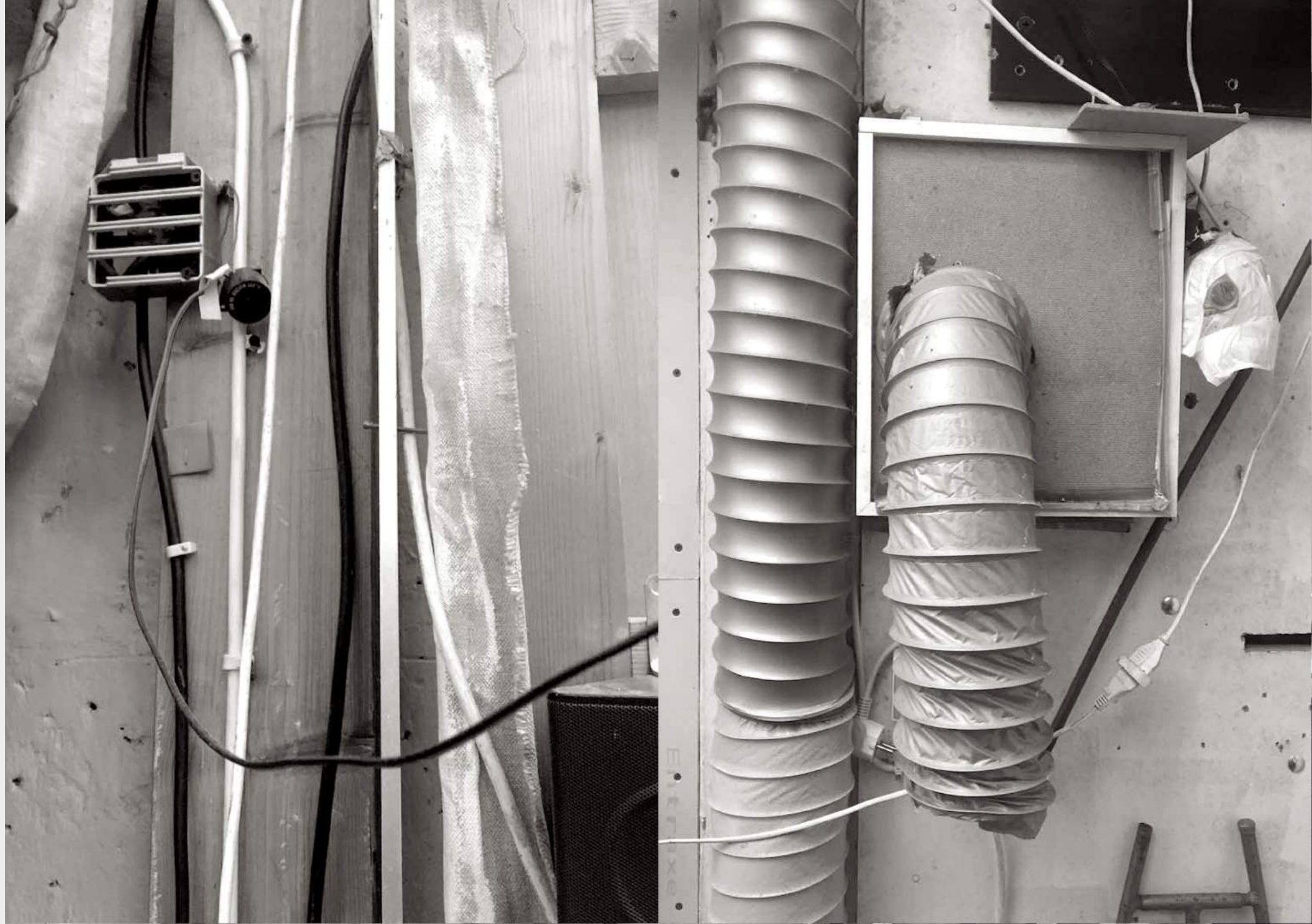
- Taking photos.
- Creating realist drawings.

- Realising monochrome cubist sketches
- Doing CAD images using computers
- Assembling a 3 Dimensional wooden piece
- Painting using the CAD colour maquette

CUBISM



“In the Artstudio”
Paul OstroVerhy
Paris, 2022



SCULPTURE

Final Response
to my 3D research



“Sculpture studies”
Paul OstroVerhy, 2023
pencil on coloured paper
21 / 29 cm

“Jawa”
Clay, 5/15 cm
Paul OstroVerhy
2023



DRAWING SCULPTURES

Exploring Henry Moore's Drawing Sculptures

Born in 1898, **Henry Moore** is best known for his abstract sculptural installations and 'Humanist Sculpture'. Moore's artworks are made up of a lot of mediums: sculpture, drawing, graphics, textiles, printmaking and tapestries.

Semi-abstract nudes is a recurring theme in the artist's works, inspired by non-Western art, specifically Egyptian, Mexican and African. A lot of the artist's nudes are reclining figures. The 'mother and child' theme is omnipresent. A lot of sketches are used to try and transform a feminine nude into an abstract sculptural composition. Light plays an important factor to create value and the shape's natural inspiration creates balance and unity.

Moore's meaning behind these artworks was shaped by his belief in the social potential of humans. He emphasised on the artist's civic responsibility to spread a peace message to society.



"After Henry Moor"
Paul OstroVerhy, 2023
pastel pencils on coloured paper
15 / 21 cm

The focus is on Moore's sculpture drawings and not the sculptures themselves. Through these sculpture drawings, sketches and prints, the artists' thought process is revealed about how undergoes designing a sculpture. The use of contour lines, such as the study for mother and child, accentuates the three dimensionality so that the viewer can better visualise how the final product (i.e., The sculpture) will look like.

"I really make the little idea from clay, and I hold it in my hand. I can turn it, look at it from underneath, see it from one view, hold it against the sky, imagine it any size I like, and really be in control, almost like God creating something." Henry Moore.

SCULPTURE



"Sculpture studies"
Henry Moor

SCULPTURE PROJECTS

Drawing ideas for clay sculpture

After creating my Bas-Reliefs, I've decided to experiment more with 3D and created a clay sculpture after Henry Moor.

One of the key ideas behind these sketches was deconstruction. It was no longer necessary to draw realistic representation. In order to create abstraction, and not pre-conceived, fixed ideas, a few exercises had to be done.

The exercises were mainly how to transform shapes into forms, working on large A3 paper with thick pencils, drawing standing up. The first two drawings were made with shaded spheres and were part of the exercise and do not represent the clay sculpture.

This gave the hand greater freedom to create large, sweeping strokes and work with shapes as a whole instead of focusing on details. It was a process of trial-and-error, of experimentation, trying to find out which sketches worked, which sketches created depth and volume and work from all angles.



“Jawa” (3)
Clay, 5/15 cm
Paul OstroVerhy
2023

The drawings used shading and the curved lines to help create the illusion of three dimensionality .

A sculpture is three dimensional, and in order to create a drawing-inspired sculpture, the drawings have to have three dimensionality. It avoids doing a sculpture one-sided, because the sculpture should be aesthetically pleasing from all angles.

Fantasies aside the ideas for a clay sculpture had to conform to the laws of gravity. As such, later sketches represent something that hopefully would be feasible to recreate with clay.



“Sculpture studies”
Paul OstroVerhy, 2023
pencil on coloured paper
21 / 29 cm

MASTER WORKS

Born in 1969, Farida le Suavé is a French artist who continuously strives to emulate the organic, influenced by his experience in postwar France. The artist mostly works with clay. His sculptures do not contain harsh texture. Instead, they are smooth and curvaceous, like natural flesh.

Le Suavé's message in her artworks are humanistic, that as humans we are in essence soft, tender as well as vulnerable. Sculptures, such as embraced, and cap carbon have a pacifist and anti-war message.

Exploring the Ceramic artworks of Farida le Suavé

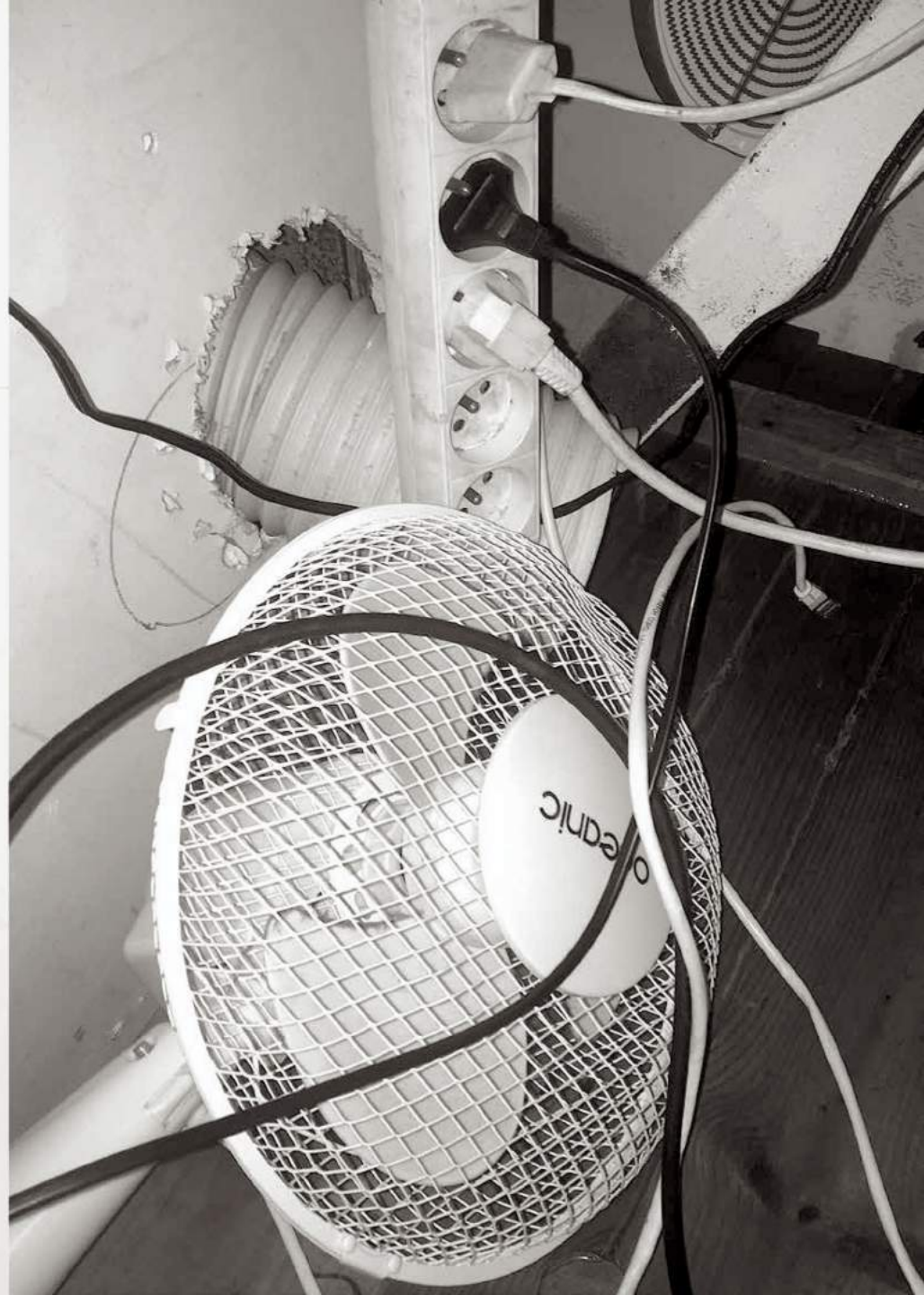
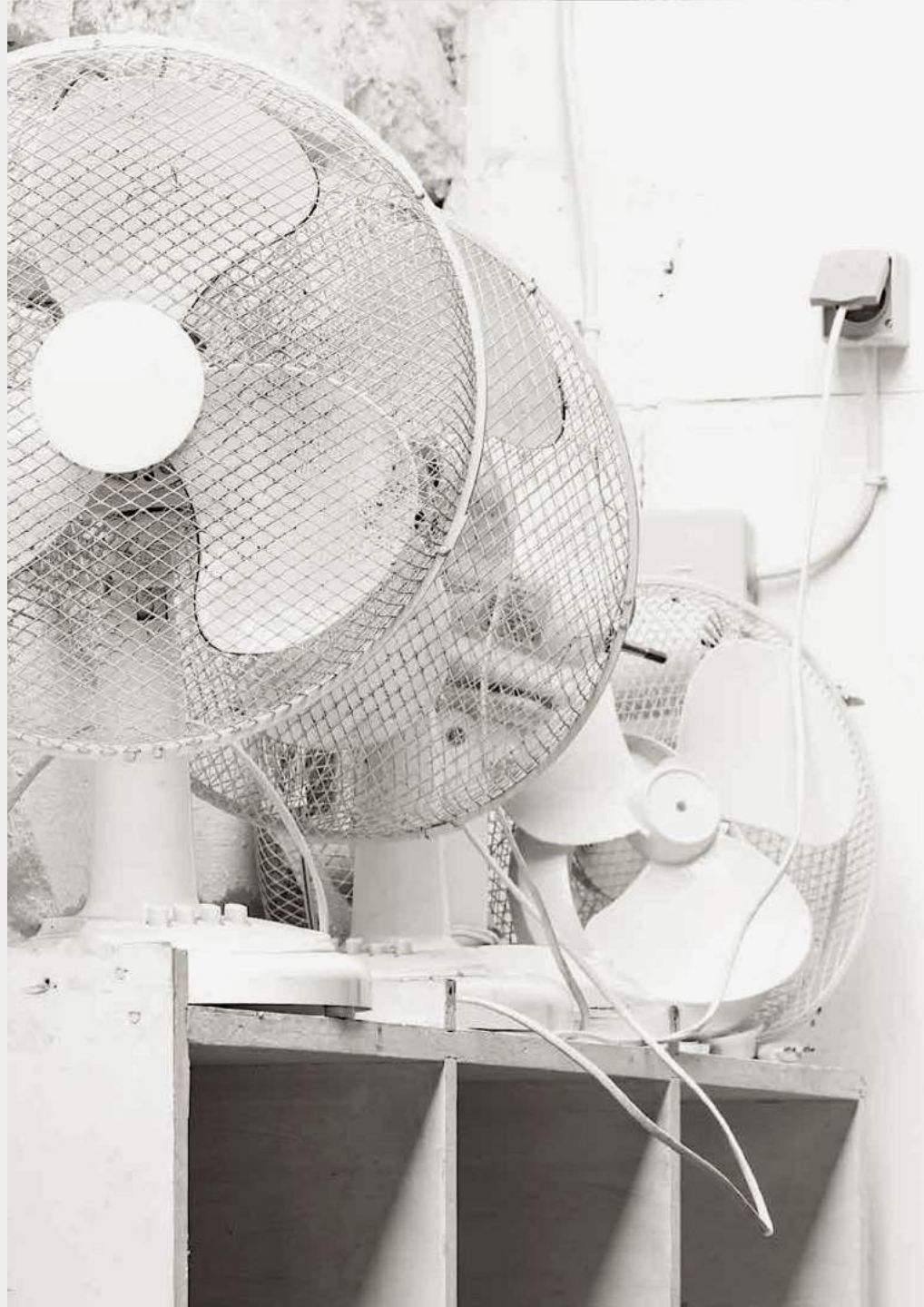
The use of tonality, created by lighting, adds on to the work, aided by the use of 'wrinkled' texture on his clay sculptures. The ceramics represent organic flesh and there is no great emphasis on colour, rather focusing on 'bland' colours that are light, which creates a sense of unity and oneness in the artwork.

The value is subtle, and the shaded and non-shaded blend together. The use of space has been experimented, such as with the drawing to the right which uses negative space (i.e. a hole) to contribute to the sculpture.



SCULPTURE

“In the Orangery”
Paul OstroVerhy
Paris, 2022



PART II

ARTISTIC RESPONSE



GEOMETRIC ABSTRACTION

My Final Response
for Component No1

“Books“
Paul OstroVerhy
Acrylic on paper
28/38 cm, 2023



ARTIST'S STATEMENT

Rationalising the visual world through painting

“Aestheticization of Reality”

My final response to the Art GCSE Component No1 **Assessment Objective N04** (present ideas) consisted of applying the different techniques I used previously to create a final work that reflected an idea that I have named the “aestheticization of reality”. This idea is consisting of two parts.

First, I used photography to take a piece of reality, such as a row of canvases, which in itself is being a framed composition is a already certain choice of harmony versus disorder.

Secondly, by taking this piece of reality as a two dimensional set of forms with dark and light contrasts I then tried to rearrange it using different soft-wares like Photoshop and Preview. As such, the new different relationships between the forms and tonality suddenly became pleasant to the human eye. This process of taking random reality shots and transforming them into an aesthetically pleasant relationships of shapes, tonal values and later on colours is what I call the “aestheticization of reality”.

GEOMETRIC
ABSTRACTION

If **Claude Loraine** hadn't painted his sunsets, we wouldn't appreciate a sunset today



MASTER WORKS

Initially I planned to create a wooden Constructivist Bas-Relief

GEOMETRIC ABSTRACTION

I started my investigation with the artist Tilde Grynnerup. Her use of wood is inspired by her father being a carpenter. A mixed media approach, which enables her to create colourful abstractions, reflects her desire to find peace and contentment within art.

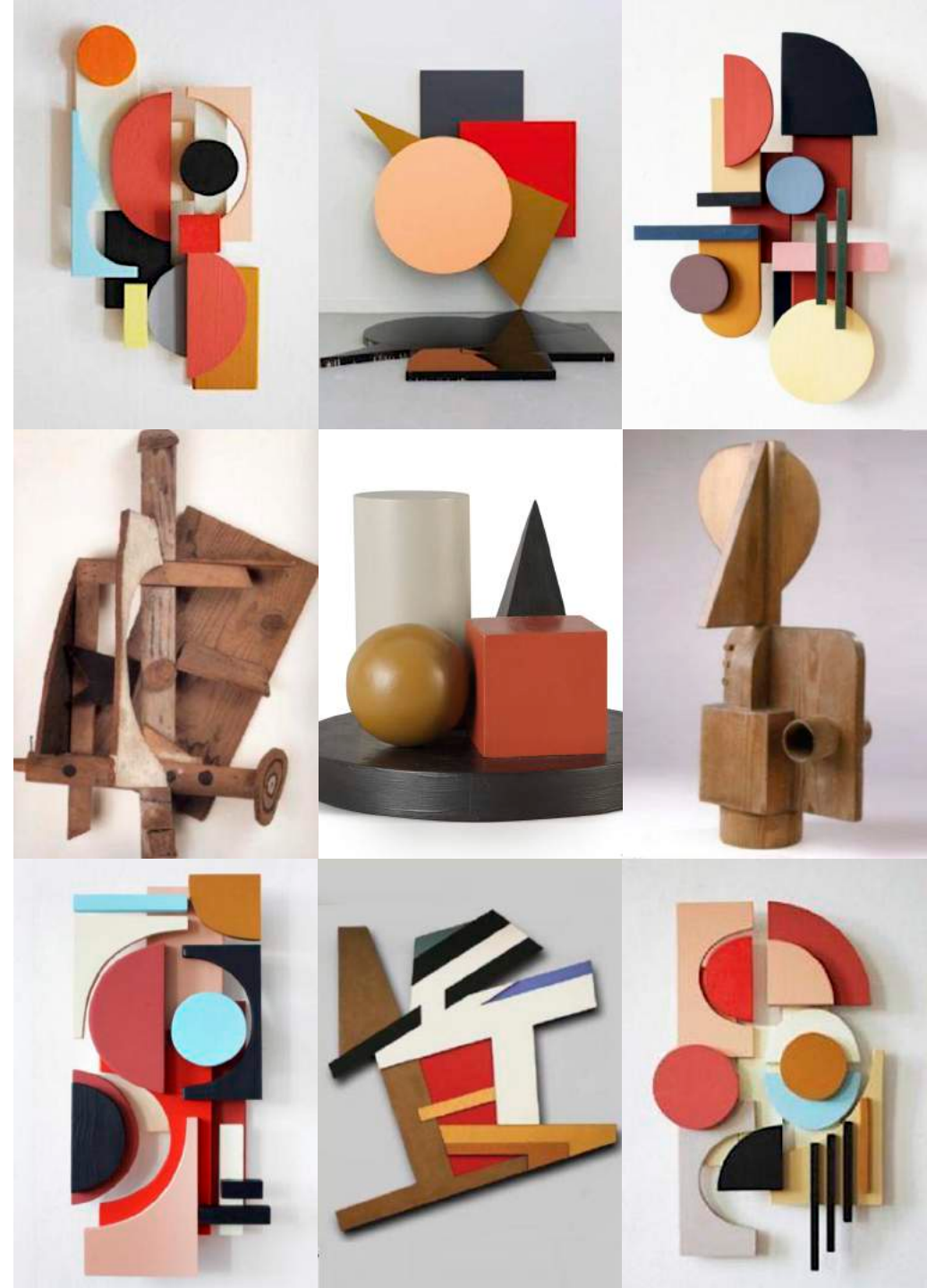
The use of geometric shapes and circles is reflective of a constructivist and cubist-inspired approach in which the artist puts emphasis on balance and sharpness to create a sense of unity within the artist's composition. The artist has also experimented with organic forms, creating variety within her artwork, inciting interest.

I particularly enjoyed the colourful vibrancy and sense of liberation found within her work. Therefore, as an artistic response I used Preview to create digital compositions inspired by Grynnerup in which I took my sketch drawing, based on a photo, and attempted to simplify the drawing into quadrilateral and circular shapes. Tilde inspired me to make my own colourful, abstract compositions.

My original aim to create a wooden bas-relief changed as I lacked the time and savoir-faire, so instead I used CAD to create a two-dimensional digital composition for my final piece.

I selected a black and white photo that I took, from which I had created a paper collage, and used that as my basis for experimenting and coming up with the above digital composition.

Frank Stella (8)
Pablo Picasso (4, 6)
Tilde Grynnerup (1,3,7,9)
Esther Tielemans (2)
Vladimir Nemukhin (5)



TECHNICAL PROCESS I

GEOMETRIC ABSTRACTION

Introducing paper collage instead of sketch

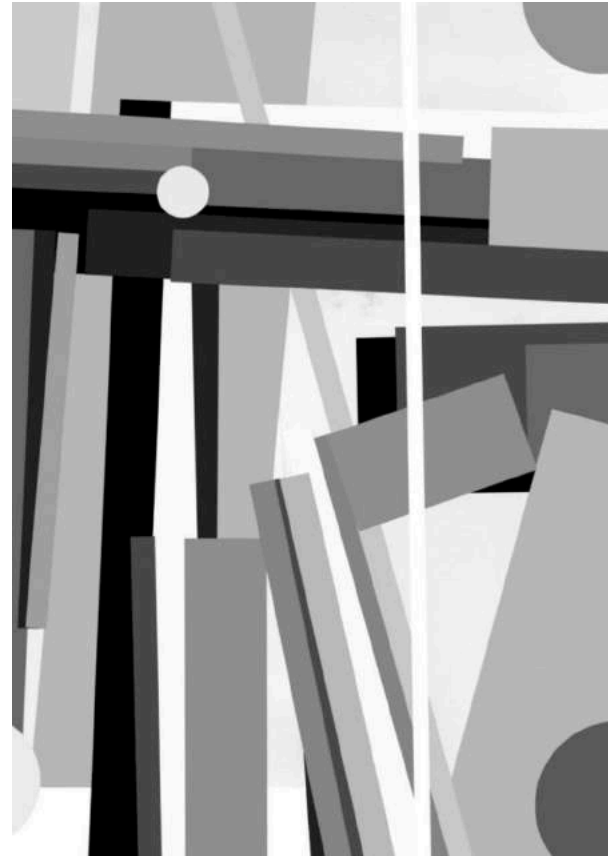
The technical process which I have used to arrive to this final composition was the following:

-I had a photo session and having made a series of photos I went on to select one photo.

-Once I chose the photo, I created a simplified vision of that photo by creating a collage, cutting out of black, grey and white pieces of paper shapes which looked like elements of that photo. I then glued these cut pieces of paper on an A4 paper serving as my base. As such, I was able to create a simplified vision of that photo by first creating a quite primitive geometric abstraction.

-Having made a paper collage, I scanned that image and uploaded it to my computer. Using a software called Preview, I moved and played around with the different black, grey and white shapes from the paper collage. I also added new shapes like little round points and big circles.

-Once I made a composition that I liked on Preview, I filled the image with different colours, using Photoshop.



TECHNICAL PROCESS II

GEOMETRIC ABSTRACTION

each form covered
with several layers
of transparent acrylic

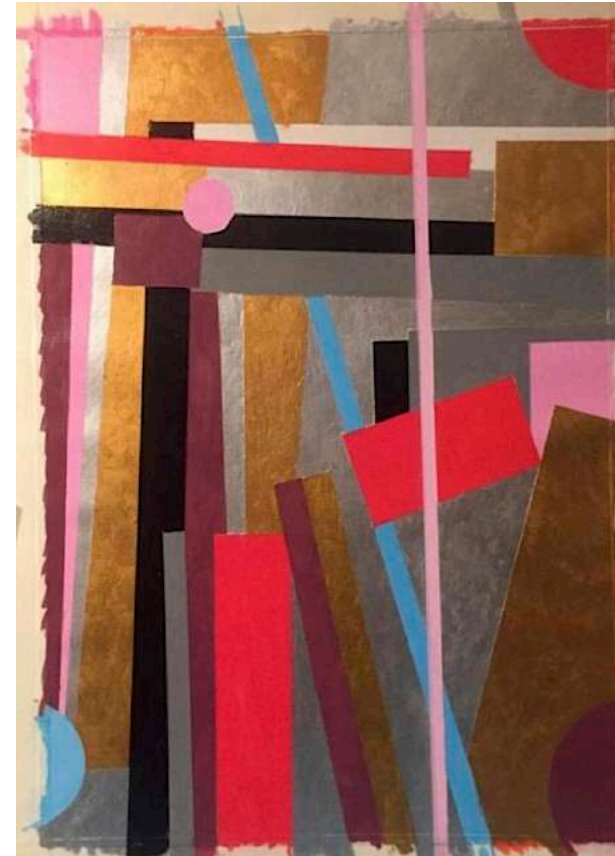
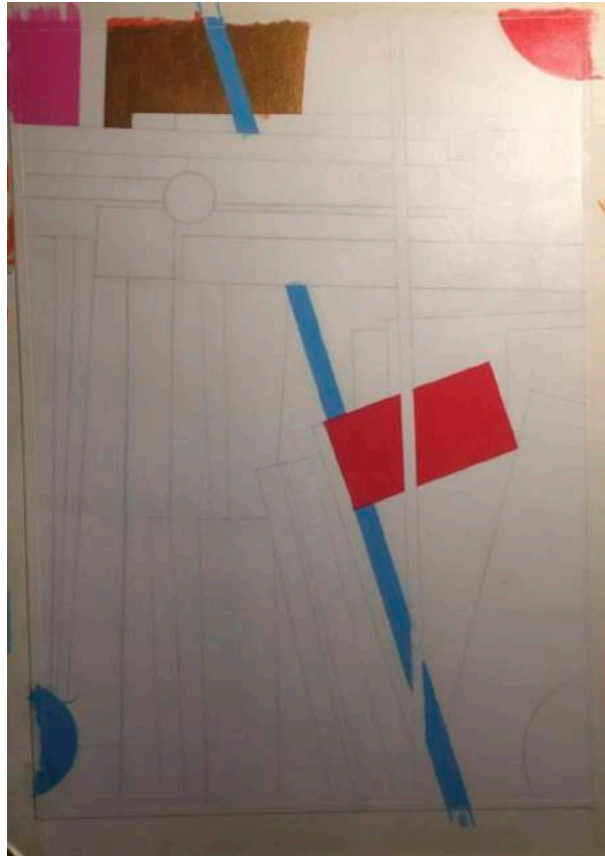
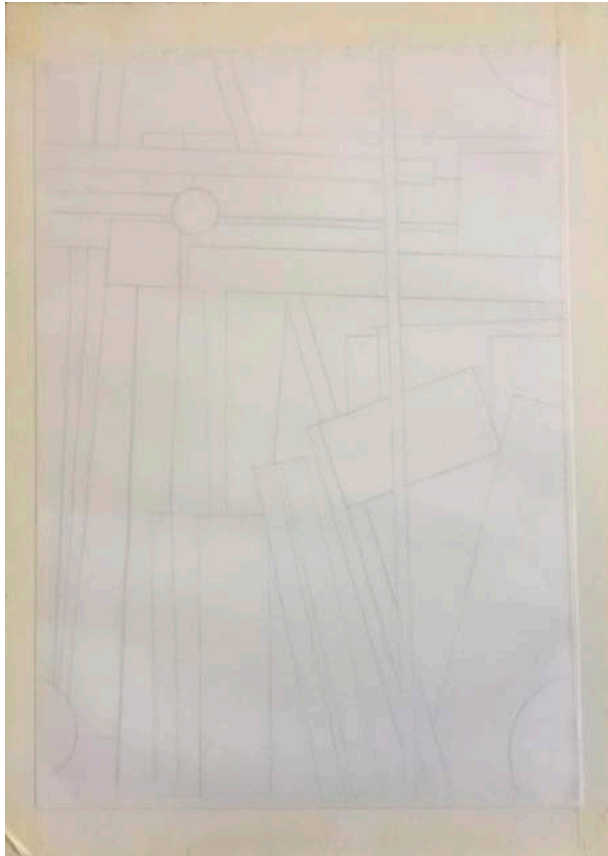
J.S.Bach's counterpoint...

The methodology used on Preview in creating first the black and white composition and later the coloured one is the same as the music of **J.S.Bach** where a concept called "counterpoint" exists. In Bach's music, the concept of counterpoint is the idea that the melody that is used once is repeating itself in another few seconds but in a longer or slightly different way. I applied J.S.Bach's counterpoints to my work.

...applied to forms and colours.

For example, if I create a small round shape then somewhere in the composition using counterpoint there will be a big circular shape. The same goes if there was a small rectangular shape, there would also be a big rectangular shape.

This was the method that I used to put my different shapes, forms and colours, trying to create some sort of logical order.



TECHNICAL PROCESS III

GEOMETRIC
ABSTRACTION

light box
special rulers
posca markers

The same “counterpoint” technique applies to the colour: if I use somewhere the colour of red then necessarily it should appear on the painting elsewhere but on a bigger or different form.

Wabi Sabi

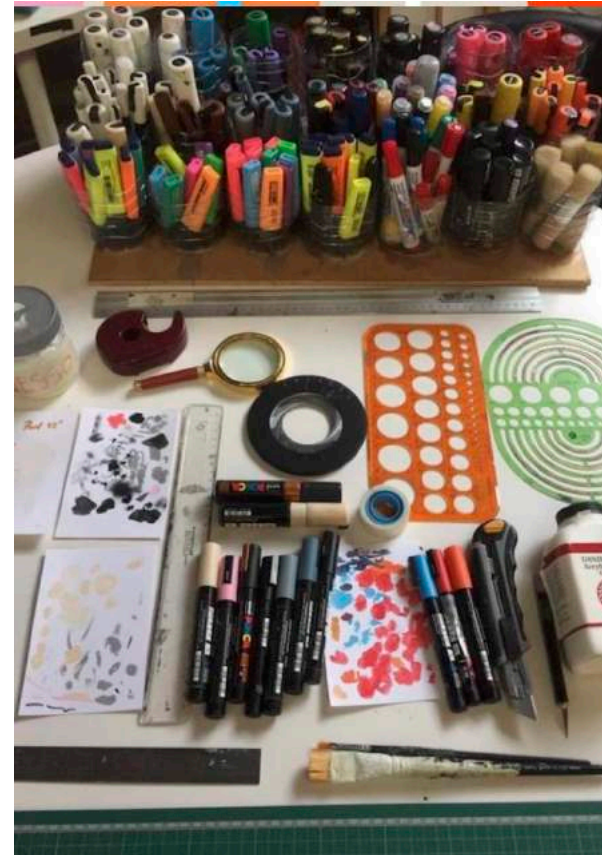
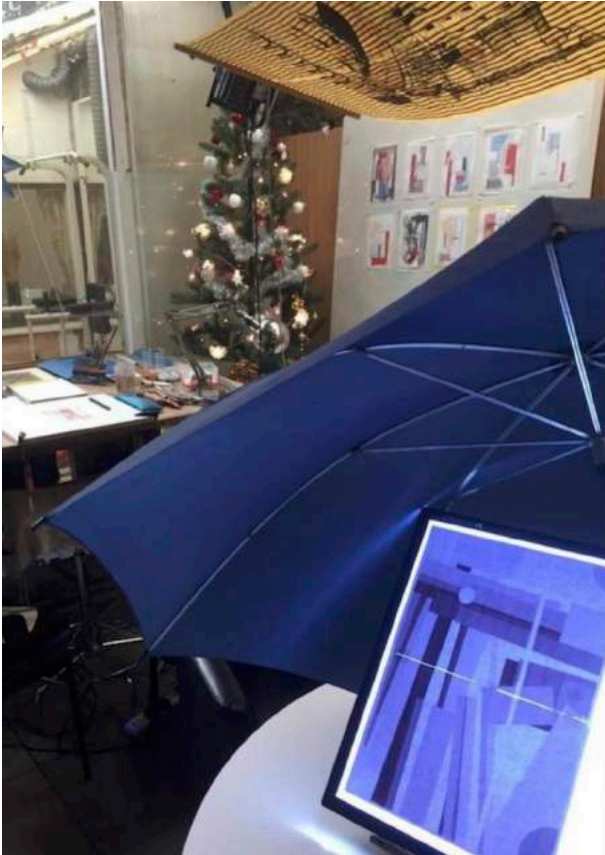
I also used the Japanese philosophy called Wabi Sabi which says that order and human rationality sometimes can be broken by a “laissez-allez, laissez-faire” attitude in which things that are just lying on the floor or things that are looked at as disorderly also carry the right to exist. The same goes in my composition, in

which different shapes that I put together do not necessarily follow a very rational, purely mathematical order.

Misbalance

In one word everything is a little bit misbalanced. The vertical line which should be vertical is a little misbalanced to the left. The rose rectangle which is in the lower part of the painting in reality is not exactly rectangular but a trapezium instead.

The square is not exactly a square, it is a false square. This is the way by which I finally came to a final composition on the computer screen.



TECHNICAL PROCESS IV

GEOMETRIC ABSTRACTION

colour perspective
24 layers on golden shapes
aesthetic tension



Order and Disorder

My final composition is on the one hand seems ordered, filled with geometric shapes, but on the other hand is also misbalanced. The geometrical shapes are not perfect, everything is a little bit not right angled and falling apart. In this general organised disaster, out of this chaos a very refined final aesthetic emotion arises.

Tonal and colour perspective

An other aesthetic concept used to create that painting, I would like to mention the tonal perspective and the colour perspective. It is natural for the human mind

to consider objects which are darker, closer and objects are further away lighter. This is how in my composition the dark, black circle on the left will appear closer than the light, grey circle or rectangle in the middle.

Tonal perspective disturbed

However, in my composition I disturbed this logical order in such a way that the human perception is slightly confused and objects which the human eyes will consider as closer, like the dark lines, in my composition are behind the gold or silver lines. For the human mind this will create a “perceptual tension”. as it considers naturally the fade tonalities farther, thus the golden and silver lines farther too.

It will create what I call the “dancing effect” where the shapes are constantly moving in our perception forward - backward making out of my composition an interesting and aesthetically pleasant painting.

Colour perspective disturbed

The same applies for the colours: the human perception tends to consider warm colours like red and gold closer and cold colours like silver or grey further away from the viewer (see **Johannes Itten's** theory of colour at Bauhaus). However, in my composition I destabilised this order which created extra tension. This is for instance how the golden, long-shaped rectangle in the background initially had to be silver or grey but by being gold automatically brings itself forward to the viewer. However, because other shapes of black, grey and Bordeaux are already before, it creates another feeling of “aesthetic tension”.

TECHNICAL PROCESS V

GEOMETRIC
ABSTRACTION

Art Deco
Kasimir Malevitch
Frank Stella



The work in progress: step by step explained

My final piece consists of an A3 size paper, made using - a light board, pencils, transparent acrylic, posca markers, "repositionable" duct tape, a fan, magnifying glasses and special round rulers.

I used very simple instruments. Nevertheless, it created a quite complicated and aesthetically pleasing final emotion.

-First, I printed out my coloured composition in black and white into A4 size pieces, glued it together then put it on a light board.

-Then I put a 220 gram per square meter paper called Canson using its smooth side which was strong enough to resist water but smooth enough to accept pencil.

-After copying the image on the light board, I fixed the paper on a board with duct tape around it so that it does not "wave" from the acrylic.

-Once it was fixed, I covered the pencil drawing with white acrylic paint called Gesso. This is necessary so that the pencil does not get mixed up with the acrylic paint.

Multilayered painting technique used

Next, I coloured every shape with Posca markers the following way:

-First, I delimited the shapes with transparent "repositionable" duct tape so that the lines are straight.

-After that, I covered the shape with transparent acrylic so that the colour does not go under the duct tape and overflow into the neighboring shapes.

-I then fixed the delimited frame with a thin Posca marker, dried it with a fan, put a transparent layer again and only then did I colour the shape with a thick, Posca marker.

-I then put another transparent layer, cover the shape with two more layers with acrylic Posca markers as well as two transparent layers,

-and only at the end do I go over the shape again with a thinner Posca marker using the grid method like in pencil drawing to make it more homogenous.

As such, each shape on this painting has at least twelve layers of paint.

Computer screen colours

By using the colours that I used on the screen and following the exact shapes that were on the screen, very soon I no-

ticed that some of the Posca markers are not as great as the colour on the screen. For example, the red Posca marker was darker, looking more like Carmen red and not Vermillion red, so slowly I decided to change my colours. This is why I started to use bordeaux instead of red.

Gold colour - Mobile lighting effect

I also decided to introduce the colours gold and silver, as well as black, dark grey and light grey. I replaced the red with a rose colour. At the very end I added a light, yellowish colour. The fact that I was using the colours gold and silver made this painting susceptible to change under different light conditions. As a result, we are talking about mobile perception which changes depending on the light which is used to illuminate the painting.

Kasimir Malevitch and Frank Stella

My final composition started to share some similarities with Kazimir Malevich's Suprematist compositions as well as the **Art Deco** style of the 30s, a more decorative application of Constructivism, It can be said that the source of inspiration for my work was also **Frank Stella's** Bas-Reliefs.

TECHNICAL PROCESS VI

GEOMETRIC ABSTRACTION

Changing colours on the painting

Although I already liked the choice of my final composition in Preview as seen on my computer screen, I realised that I lacked the necessary Posca markers to recreate the Preview's colour on the painting, which is the reason why I started to change the colours on the paper.

Golden colour has 24 layers

Please note that each colour was twelve layers so every time I decided to change a colour, I had to add another twelve layers. This is how the golden-coloured shapes consist of 24 layers paint as I initially used orange colour underneath the gold colour which I covered with golden colour.

Too much colours and forms

I also noticed that whilst some shapes looked great on the screen, they were "too much" on the paper like one of the diagonal lines in blue that I decided to take away. As such, I reduced not only the number of colours, but I also suppressed some extra forms.

Introducing artistic chaos

Wabi Sabi effect

However, because each form consisted of twelve layers, I could not suppress them entirely meaning that they were still visible inside of some of the shapes by which they were covered, thereby creating a textured impression with elements of a Bas-Relief. This is what I call the "Wabi Sabi effect".

Imperfections

By creating imperfections and random texture impressions in the shape (in which the suppressed shapes and forms still appear in a monochrome version through the final surface) these imperfections and textured effects are used consciously and are used as elements of chaos and disorder. It is also used as an additional destruction of the perfect, mathematical and rational effect which a geometric abstraction can be if it is not broken by an artistic, aesthetic intervention. I noticed these small imperfections in **Piet Mondrian's** geometric abstractions too.



The final stage of my work consisted of making little changes which were not necessarily orientated to finish the painting but mostly orientated to refine MY emotions as well as the emotions of the potential viewer which appears looking at this painting. The intuitive and final aesthetic touches to finish the composition was made by very carefully retouching each shape. This included taking away the little spots of dirt, making the circles more circular, and adding additional minuscule shapes here and there to break the monotone, geometric order. **The skating effect.** Once the final piece was framed, I suddenly perceived a very strange effect in this work: the eye of the viewer was skating on the image without stopping and I could look at this image for hours. Here we can ask ourselves the question, when is an artwork really finished? Picasso said an artwork can never be finished but only abandoned. My opinion is that an artwork is finished when the eye of the artist starts to skate on the surface without meeting any obstacles. The aesthetic emotion which the viewer should feel looking at the painting is similar to ice-skating. There is a smooth and subtle magic that is happening in the soul of the viewer, a very delicate tonal balance between the gold-coloured shapes and the rose-coloured shapes, as well as an extremely aggressive intervention of the black lines which are tamed by the bordeaux forms. **Same tonality but different colours creates visual palpitation.** By having some of the colours share the same tonality, such as the rose and the silver, the gold and silver or the white-yellow and the rose, the rational mind, that normally recognises the forms often in contrast of darker and lighter, recognises the different shapes here often like between the rose and the silver exclusively based on its colour. This creates a slight palpitation in the mind, a confusion and incertitude which adds to the emotion's aesthetic subtlety. As such, we can talk of a very pleasant and smooth feeling when we look at this painting. **A consciously constructed set of rules.** We should also understand though that this emotion comes from a consciously constructed set of technical actions based on ideas like counterpoints of forms and colours, tonality confusion based on the use of the same tonality but two different colours, the balance and distortion of perfect, geometric shapes into imperfect ones and a conscious creation of ordered chaos. **Immediate emotion in the viewer.** In conclusion, I have to say that even if we can talk about a painting for hours and write dozens of pages about it, it is the immediate, first, visual and emotional reaction of the viewer looking at this piece for the first time which counts, above all else. If there is no human feeling and strong (positive or negative) emotion in the viewer looking at an artwork, then in my opinion it is not an artwork. Personally, I consider that in this image I achieved that emotion in the viewer. I tempted to create something that should purify our souls from our everydayness, to make human nature attain a higher state of good and find solace in these times of turbulent evil and despair.



PART III

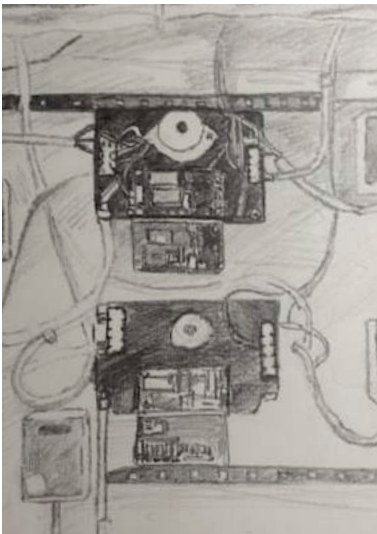
SCIENTIFIC INVESTIGATION



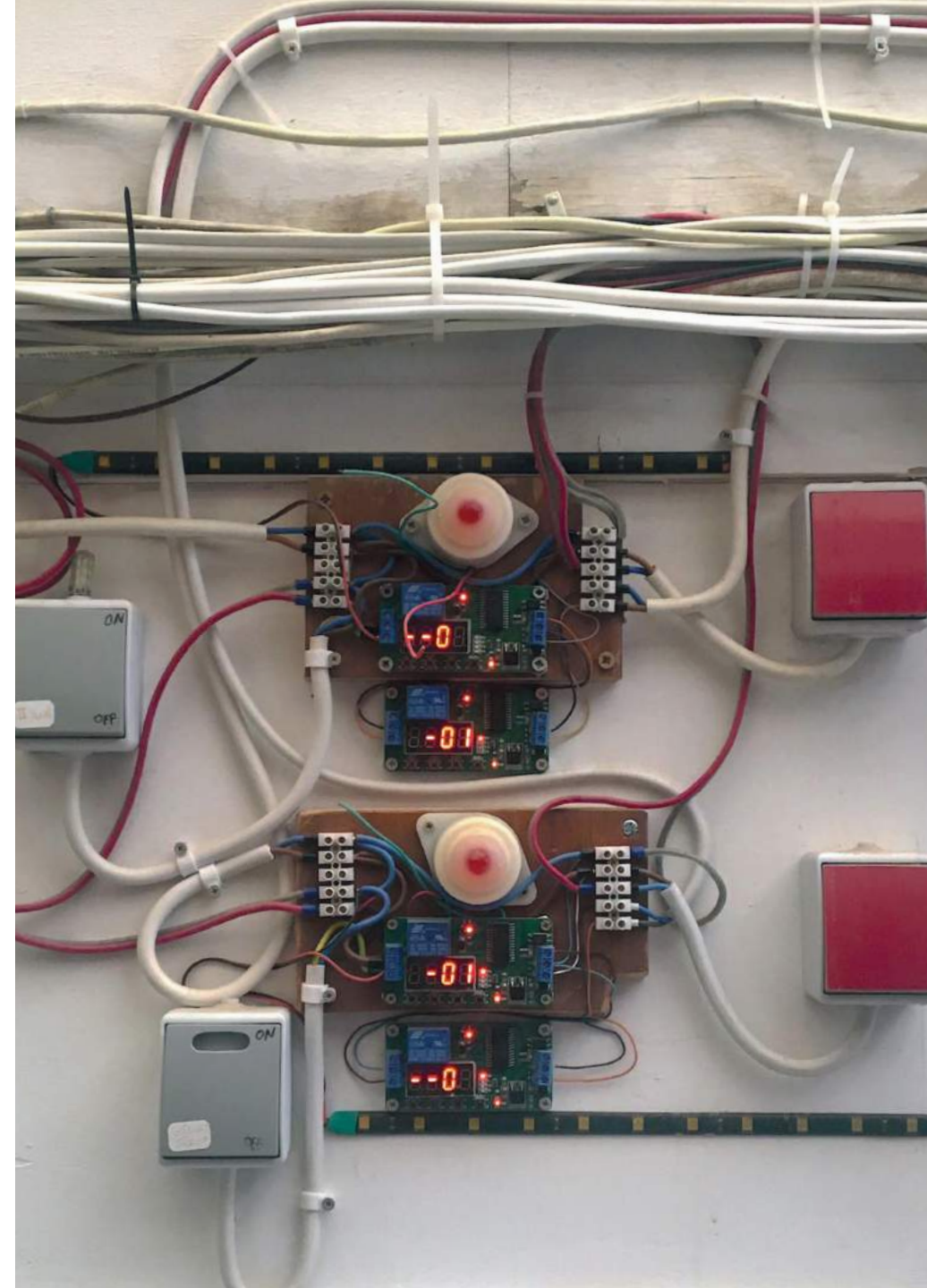
LAB REPORT

HM-FSS-3: Fire Alarm Reliability and Satisfaction

SCIENCE



“Homemade
Fire Security System”
Paul OstroVerhy, 2022
pencil, 15/21 cm, (1)



ART & SCIENCE

“HM-FSS-3”
Paul OstroVerhy, 2022
digital collage

Exploring the interaction between Science and Art

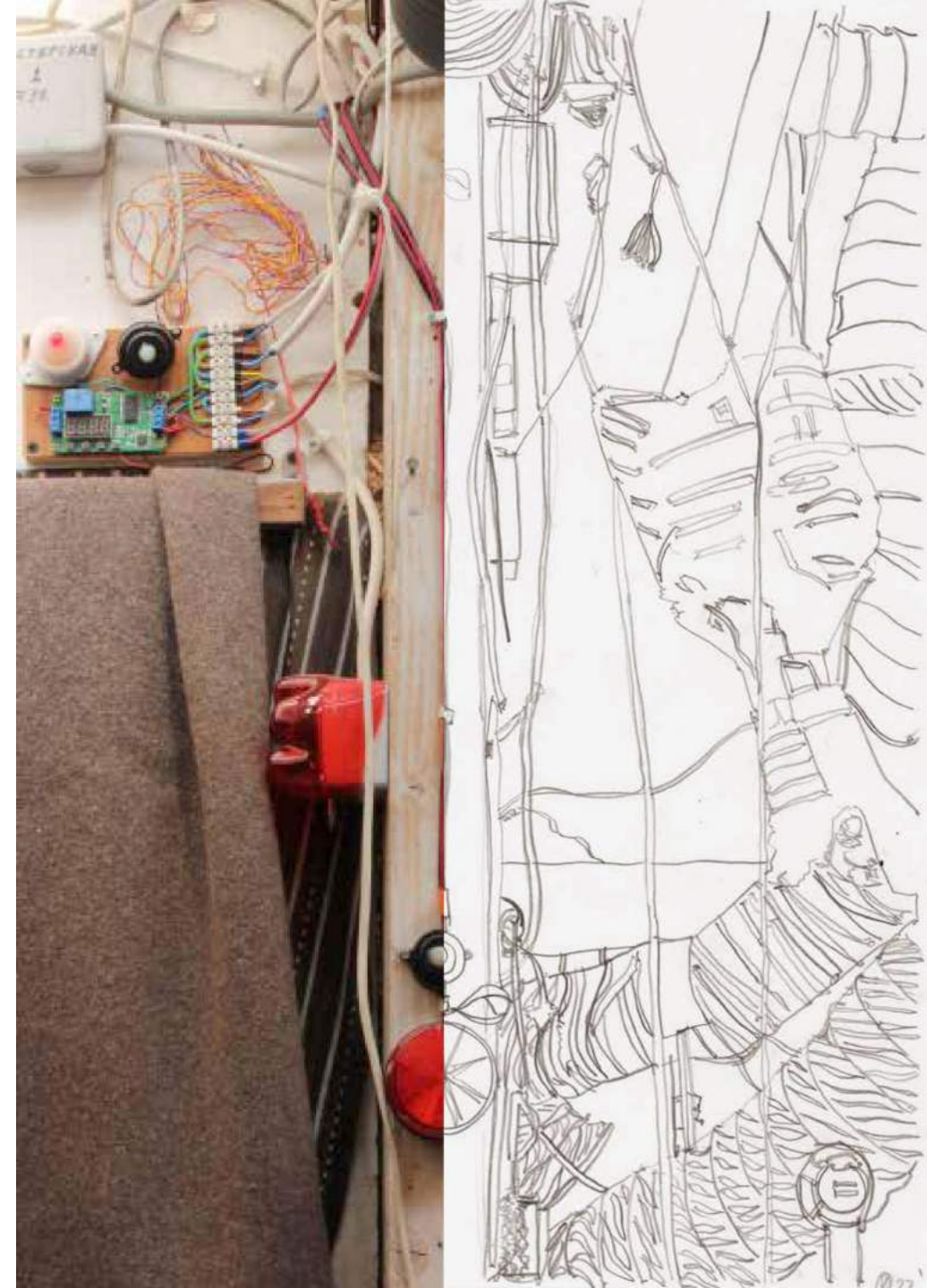
When I first started to research the theme of formation, I decided to look into the internal urban industrial complex bric-a-brac of an art studio in Paris. The various electric wires, ladders, paint brushes, boxes, ventilation systems and even homemade fire alarm systems fascinated me. This resulted in a series of photos from which I started to work around with.

At the same time, during the 2023 Easter holidays I underwent an internship with a Stanford student that specialises in electrical engineering. With this tutor we investigated this space, especially the homemade fire alarm system, conducting a scientific lab report.

Consequently, not only did I investigate this art studio through artistic lenses, photography and drawing, but also through scientific lenses, looking at the fabric which constitutes this space from which I was drawing my inspiration for the theme of formation.

As such, this scientific lab report was happening simultaneously to my artistic research, and they are therefore intertwined to each other.

Sometimes they even started to overlap, which is why I thought that I should include this scientific lab report to my formation portfolio.

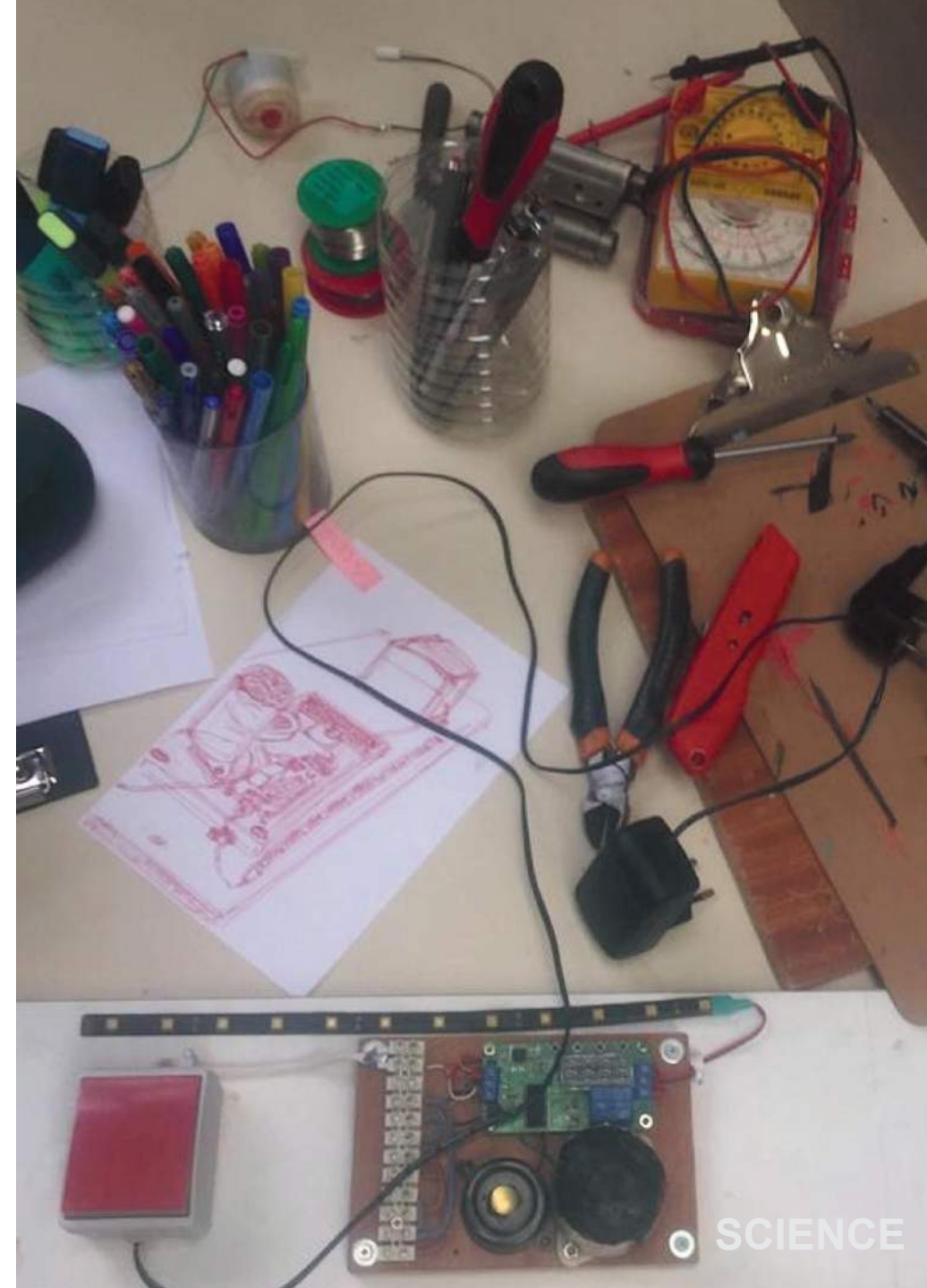


Introduction

Homemade fire alarm systems are easier to be adapted to the specific demands of a particular house. In this context, a fire alarm system is not linked to smoke detection. An interview done with the creator of the homemade fire alarm system which we are investigating revealed that the homemade fire alarm system was first implemented twenty years ago. The creator told us that the sensitive nature of the previous commissioned fire alarm to burnt toast meant it consistently went off, resulting in numerous complaints from the neighbours. In response, with the help of an ex-aviation electrical engineer, a new non-automatic system was built within eight months. However, because it was created twenty years ago and does not contain the quality assurance of a standard factory-made fire alarm, we wanted to ensure that it still works effectively.

“Working table”
Paul OstroVerhy
photo, 2023

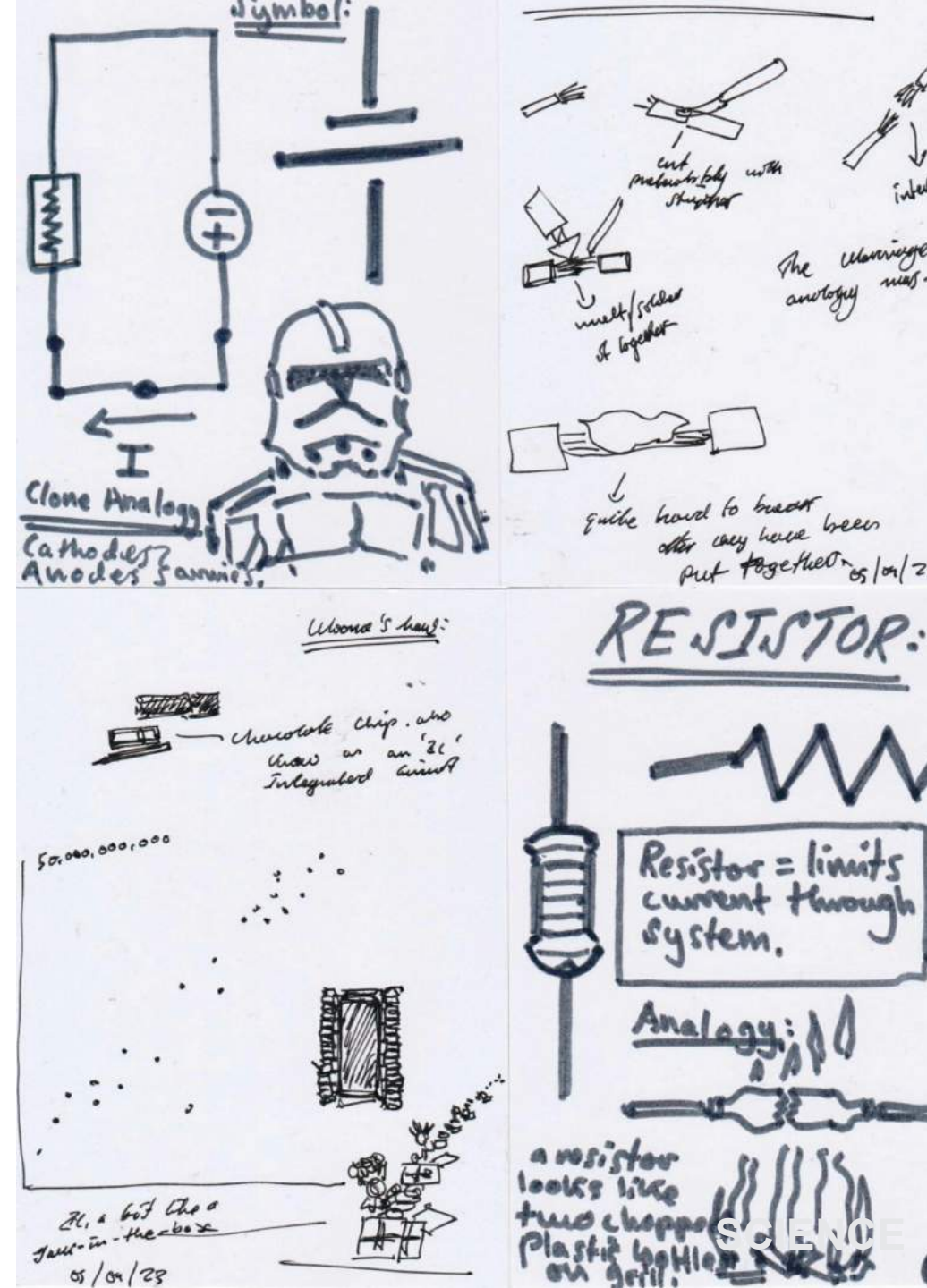
The purpose of this experiment is to ensure that people within the house are living in a secure environment that contains a homemade fire alarm system. Two experiments are going to be made: a quantitative and qualitative experiment. The former aims at quantifying the reliability of the homemade fire alarm system by measuring voltage and current at several fire alarm points in the house. The latter aims at surveying people in the house to find out their comfort level vis-a-vis the homemade fire alarm system. The dependent variable of the former has been determined as the fire alarm location, whilst the latter's dependent variable are the people surveyed. The hypothesis for the quantitative experiment is as follows: if we measure the voltage of the fire alarm points in the house on the top floor and bottom floor, the homemade fire alarm models on the top floor will be less reliable than the ones on the bottom floor. The hypothesis for the qualitative experiment is the following: if we survey people in the house, the response will indicate a unilaterally high comfort level with the homemade fire alarm system.



Methods

The following experiment will be done in the city of Paris, France. It will be conducted throughout April 2023. There are two parts of the experiment that are to be done separately. Both parts of the experiments concern the same fire alarm, which can be visually seen in the figure 1, 2 and 3 below. The fire alarm consists of a CE030 Multifunction Time Delay Relay Board, a switch, a power source, a red light, a sound emitter, connectors, light strip, wires, and two wooden boards attached to one another. Once the fire alarm is connected to a power source and the switch is subsequently turned on, the sound emitting device in the fire alarm fulfills its function of sonority due to the signal transmission being successful with the help of a connector. The beeping sound continues until it is eventually turned off. Meanwhile, the CE030 Multifunction Time Delay Relay Board puts on a timer of four minutes that can be visually seen. There is also a light strip that immediately emits a non-flashing green light. After four minutes a red light starts flashing and a louder, faster-beating beeper is turned on.

“Working sketches”
Paul OstroVerhy, 2023
marker on A6 paper

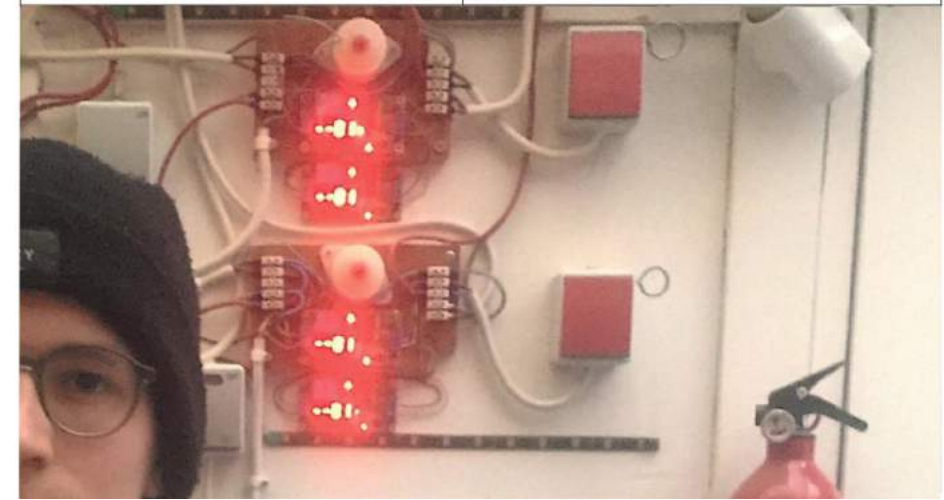
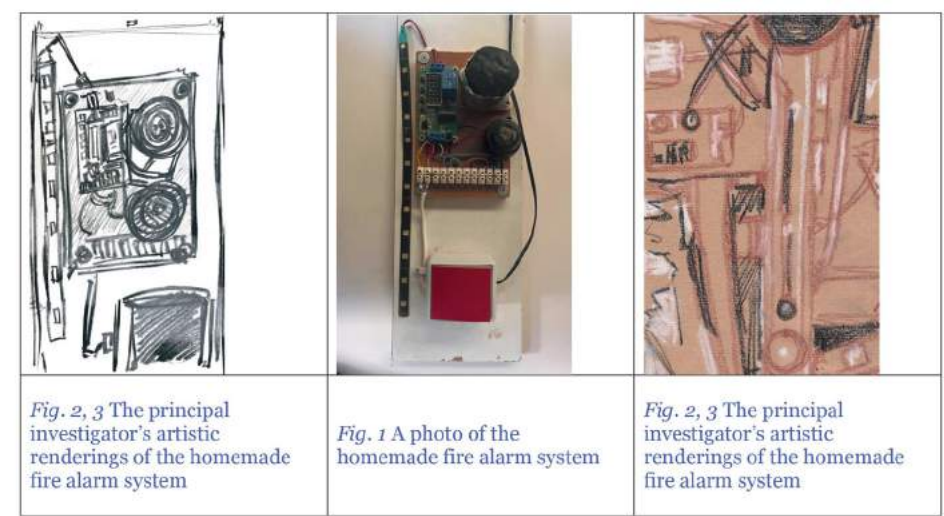


PART I

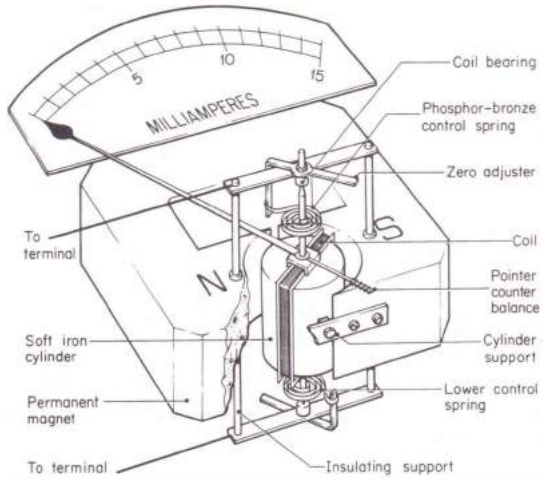
Quantitative Experiment

“Working sketches”
Paul OstroVerhy, 2023
ink on A6 paper

For each fire alarm station in the house, ensure that the fire alarm station is attached to a voltage source. The fire alarm station model can be visually seen in figures 1,2, and 3 below. There were 25 fire alarms, and Chat GPT randomly selected 10 of them. Figure 5 shows the rooms that have fire alarms, shaded in blue. Those shaded in blue were all numbered, and the rooms that were randomly selected for the experiment had their numbers circled in red. Fire alarm stations 6 and 11 were not tested despite being circled in red due to sabotage complaints.



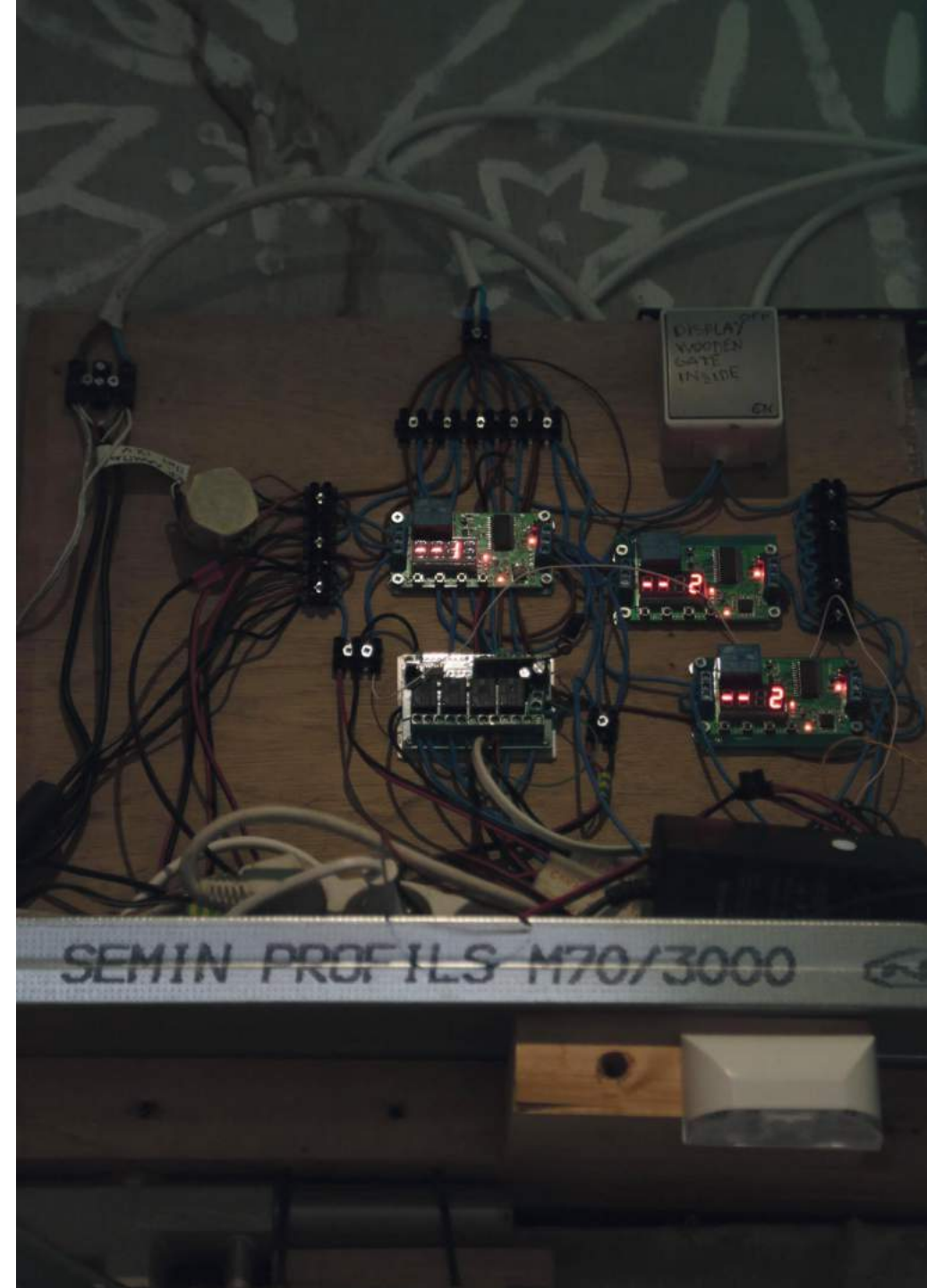
Voltmeter



We used a voltmeter with red and black probes to test each fire alarm station according to the points in Table 1. These were tested when the fire alarm was on. The test points are visually marked on the fire alarm. Figure 4 (previous page), a schematic of the fire alarm station, also shows where the test points are. Whenever a particular fire alarm model is turned on, the voltage at each test point should be subsequently recorded on a written paper using a pen.

Test Point	Red	Black
A	DC+	DC-
B	NO	DC+
C	NO	DC-
D	DC-	Common

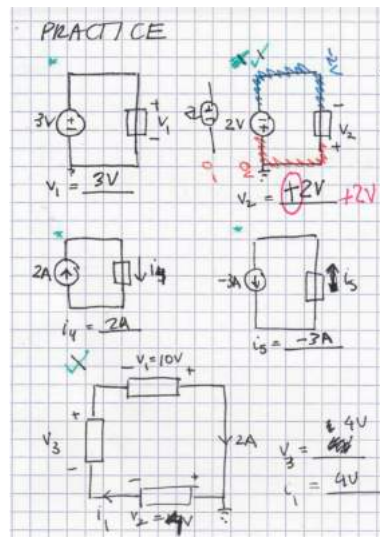
Table 1. Test points for the voltmeter.



Results

Table 2 was made following the testing of the selected fire alarm stations' voltage with a voltmeter when they were turned on. Table 3 (next page) was created to see the average, average without outliers and range of the four test points. We spotted two outliers on test point B and C on location 15, both being 0 volts. We spotted an anomaly on test point C in which the result kept decreasing at a gradual pace mostly starting from a range of 0.30-0.34 volts.

Locations	Voltage at A	Voltage at B	Voltage at C	Voltage at D	Observations:
1 (Bottom floor)	10.49	-9.97	0.34 then gradually decreasing	-10.47	The second alarm was turned on after a countdown from 6 minutes, very interesting. More messy wires, on top of the door, rather clean but different sound/light model.
3 (Bottom Floor)	10.25	-9.72	0.31 then going down gradually, it's all a bit vague at the start.	-10.27	It's one of the normal models, nothing too spectacular.
8 (Bottom Floor)	10.64	-10.23	0.34 then going down gradually, why is it so close to 0.34 always. This is very strange.	-10.62	Lots of wires, looks older, it's a bit of a mess really, because there is so much dust on top of the red switch that it got glued to the switch itself. This is abysmal.
13 (Bottom Floor)	11.28	-10.75	0.34 going downwards gradually.	-11.25	No switch for this one. The switch to turn it on is the red one connected to the ground floor general which in turns has a wire going to the garage one
15 (Bottom Floor)	11.48	0.00	0.00	-11.45	Very very strange results for the second one. This is the general fire alarm for the ground floor. Ping Pong room for ground floor general, measured with switch turning on being the general one.
23 (Top Floor)	11.23	-10.68	0.33 and then decreased slowly. Don't actually know when it stops.	-11.21	It's a normal one. It's our model that's quite an exception, but there was the Badoit here cut quite short.
22 (Top Floor)	10.91	-10.33	0.30 and decreased slowly. Was at 0.13 when we turned it off. But no probe on it resulted in no lowering of numbers. "Weird, right?" Helen. "Keep an eye on that one?" Helen.	-10.88	Less dirt, more wires, different light sound model, switch is below. The powersource comes in two wires too, but one wire is actually two wires stuck together.
18 (Top Floor)	10.71	-10.13	0.36 fluctuated a little but the usual gradual going down.	-10.73	Looks in good order, quite clean and new. Although the switch is rather far away, beside the door way down in contrast the alarm is above the door entrance.



“Working sketches”
Paul OstroVerhy, 2023
ink on A6 paper

Table 2. The voltage results of each fire alarm station tested and observations.

Voltage at different fire alarm stations

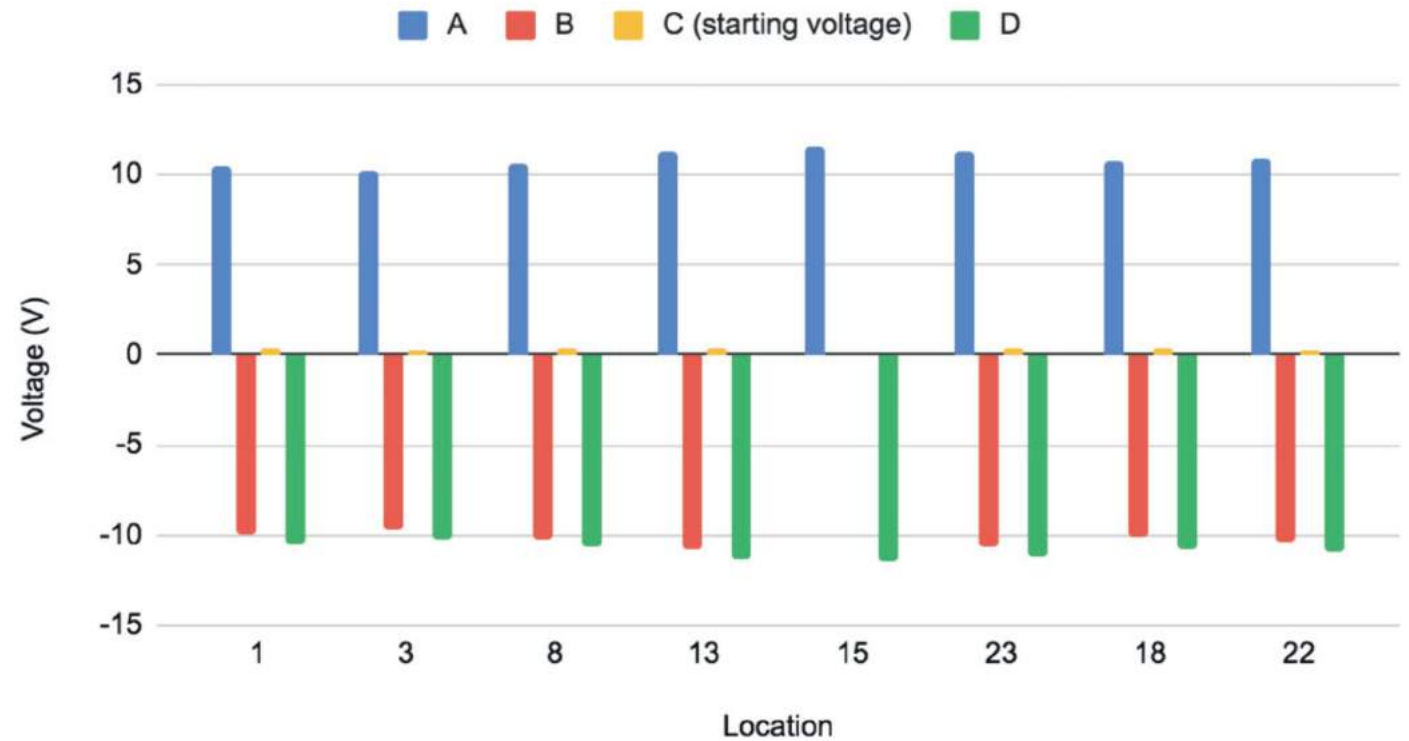
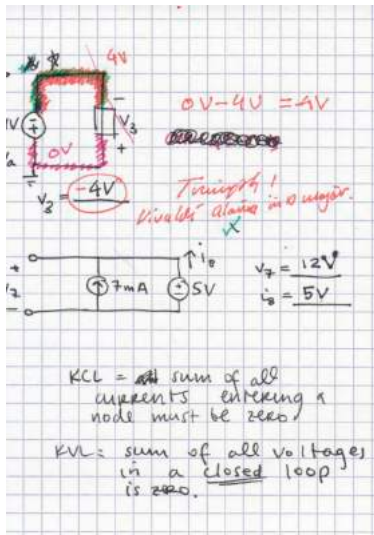


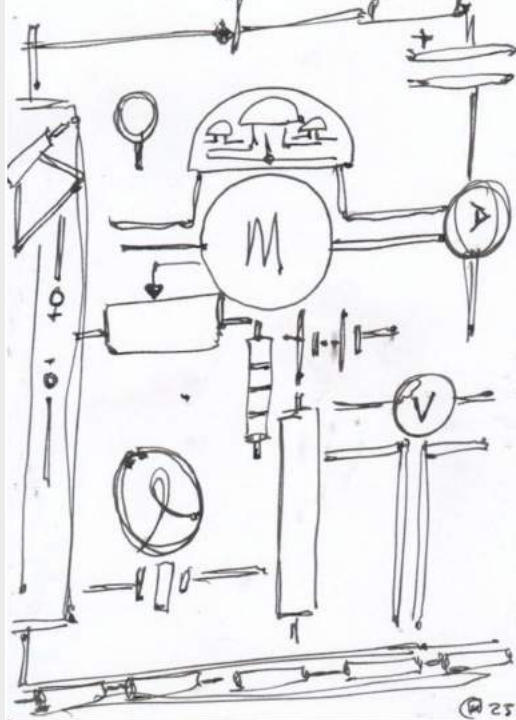
Figure 6. Bar Chart showing voltage at different fire alarm stations.

	A (Voltage)	B (Voltage)	C (Voltage)	D (Voltage)
Average	10.87	-8.98	0.29	-10.86
Average (no outliers)	10.87	-10.26	0.33	-10.86
Range (no outliers)	1.23	1.03	0.06	1.18

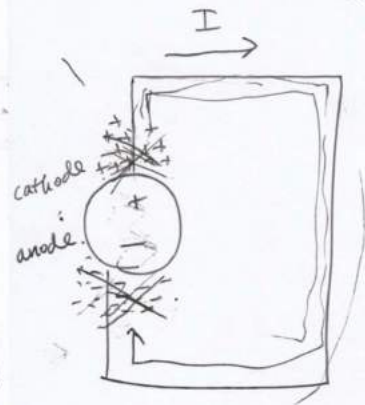
Table 3. Table showing the average, average without outliers and range of each test point.

“Working sketches”
Paul OstroVerhy, 2023
ink on A6 paper

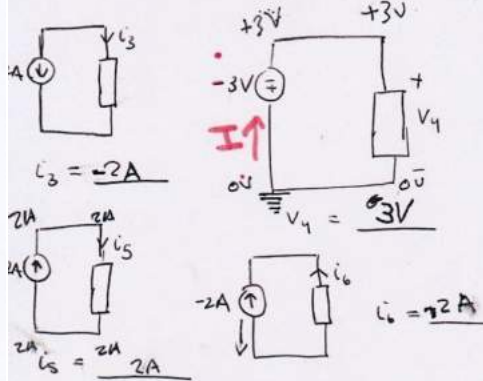
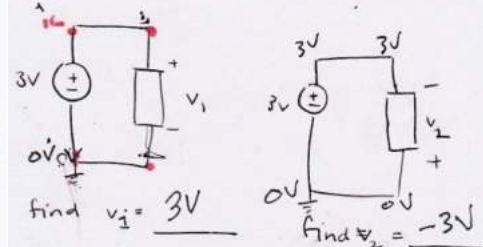




$V =$ potential energy per unit charge
 $= \frac{V}{J/S}$ ← potential energy
 ← time.



Practice

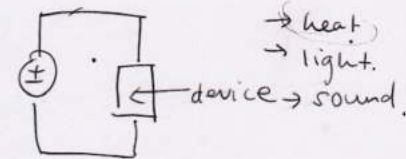


POWER

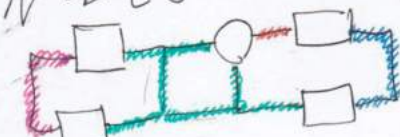
POWER = GOD - "Paul"
 "It cannot be seen"
 "but it can be felt"
 * energy lost/sec by the circuit *

$P = IV$

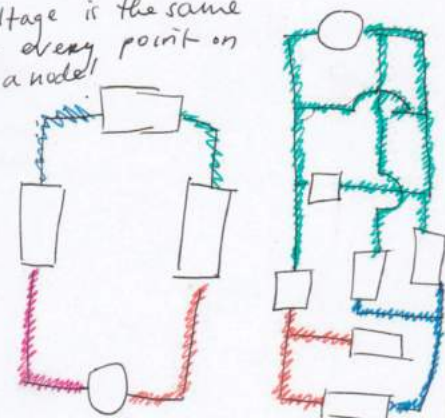
ENERGY IS CONSERVED



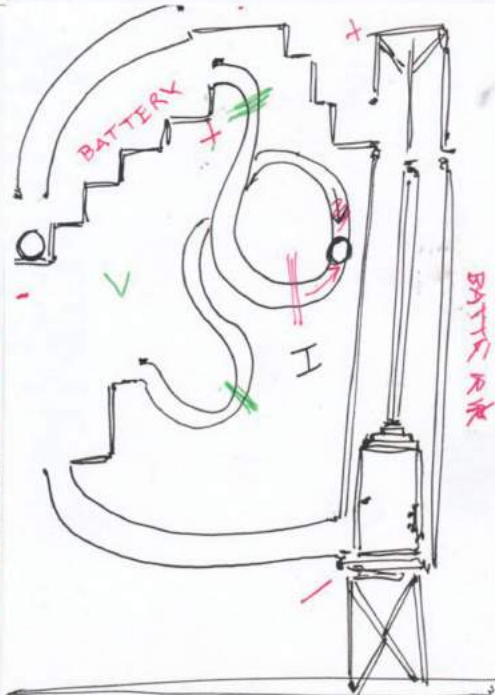
NODES



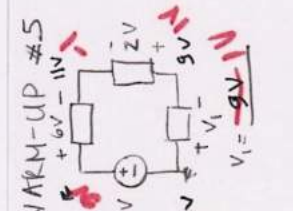
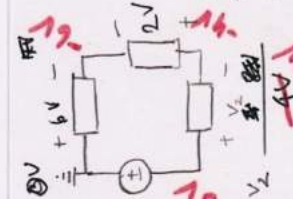
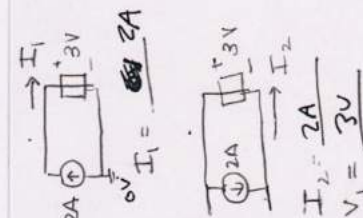
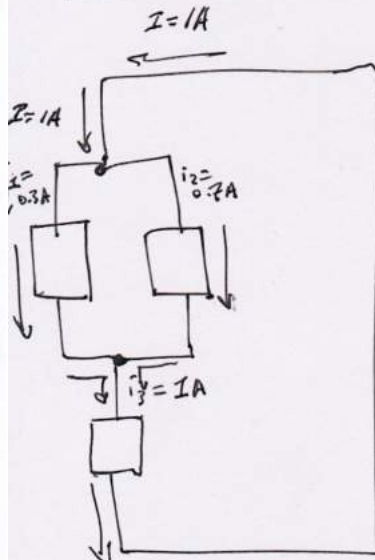
Voltage is the same at every point on a node!



+ vs -



Electronics: Circuits:



Resistance is not futile... it's preactive voltage current.

"Working sketches"
 Paul OstroVerhy, 2023
 ink on A6 paper

PART II

Qualitative Experiment

Each person in the house was given the same survey (Fig. 6) on a printed piece of paper. Each person had to fully answer and complete the survey without the consultation nor help of a phone, person or any other tool, being, entity or item that may help them and hinder their results. We gave the survey to 9 people total.



“Orangery”
Paul OstroVerhy
photo, 2023

Where are you from?
Gender:
Age:
Eye Colour:

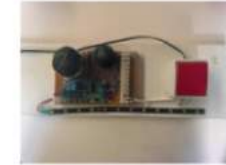
1. On a scale of one to five, how safe do you feel living with a homemade fire alarm system.

1 2 3 4 5

2. With four smiley faces, which one corresponds to how you feel living with a homemade fire alarm system.



3. Does this photo of a homemade fire alarm system make you unsure of its effectiveness? Yes / No



4. Do you have trust in the homemade fire alarm system? Yes / No

5. Have you been in a fire situation in the past? Yes / No

6. Do you worship fire? Yes / No

7. Would you rather have a factory-built fire alarm system and suffer its devastating consequences of being over-sensitive to toast or keep the status quo? Yes / No

8. What do you think could be made better? Write response below.
.....
.....
.....

9. Are you aware of how the fire alarm system station functions? Yes / No

10. On a scale of one to five, how happy would you feel in a fire situation?

1 2 3 4 5

Figure 6. Survey handed out to people to be completed.

Results

Table 4 was created to show the results of the survey's responses. There was an outlier in question no. 6 in which one person said they worshipped fire.

That same person had significant trust and high satisfaction in the home made fire alarm system. In worshipping fire, they stated that they would feel very happy in a fire situation. Two people said they would feel extremely happy in a fire situation, whilst the overwhelming majority stated they would feel unhappy and deeply unhappy. Two people felt unhappy living within a home-made fire alarm system whilst the majority said they were happy and greatly happy. One person said they did not have trust in the homemade fire alarm system whilst every other person said they had. One person had eyes of different colour. The average for safety was 4.22 out of 5, suggesting a high sense of safety living within a homemade fire alarm system. The average satisfaction of living within a homemade fire alarm system was 3.44 out of 4, suggesting a high sense of satisfaction. The average to how happy a person would feel within a fire situation was 2.22 out of 5, suggesting only a minority would feel happy in a fire situation.

Question	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6	Person 7	Person 8	Person 9
From?	Germany	Canada	Ukraine	Russia	France	Russia	Ireland	USA	UK
Gender:	F	M	M	M	F	M	F	F	F
Age:	18	20	58	24	52	22	31	24	28
Eye Colour:	Brown	Brown	Vairons	Blue	Green	Brown	Green	Green	Blue
1 Safety	4	5	5	5	5	5	3	3	3
2 Satisfaction	Light Green	Super Green	Super Green	Super Green	Super Green	Super Green	Super Green	Light Red	Light Red
3 Photo	No	No	Yes	Yes	Yes	No	No	Yes	Yes
4 Trust	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5 Past fire	No	No	Yes	No	Yes	Yes	Yes	No	No
6 Worship	No	No	Yes	No	No	No	No	No	No
7 Status quo	Yes	No	Yes	No	The status quo?	Status quo	Keep the status quo?	Yes	No
8. Suggestions	It's probably great how it is. The wires being out probably scares some people though.		Maybe to introduce again as it was, before: a phone call on every person's mobile the signal	No	Fire Extinguishers	I think that what could be made better is fire exit	In terms of preventing a fire. I think the sockets of the Territory should not be overloaded. While in relation to the fire alarm system. It should be tested once every 2 months.	A smoke detector.	Some way to detect smoke in case someone was not at home to see press the button.
9. Functions	Yes	No	Yes	Yes	No	Yes	No	Yes	No
10. Happiness in fire	2 (Cause I get to see it in action only)	1	5	5	1	2	2	1	1

Table 4. All the survey responses collected in a data sheet.

“Fire dancers”
Monique Cras
gouache on paper
detail, 1938



How safe do you feel living with a homemade fire alarm system?



“Orangery”
Paul OstroVerhy
photo, 2023

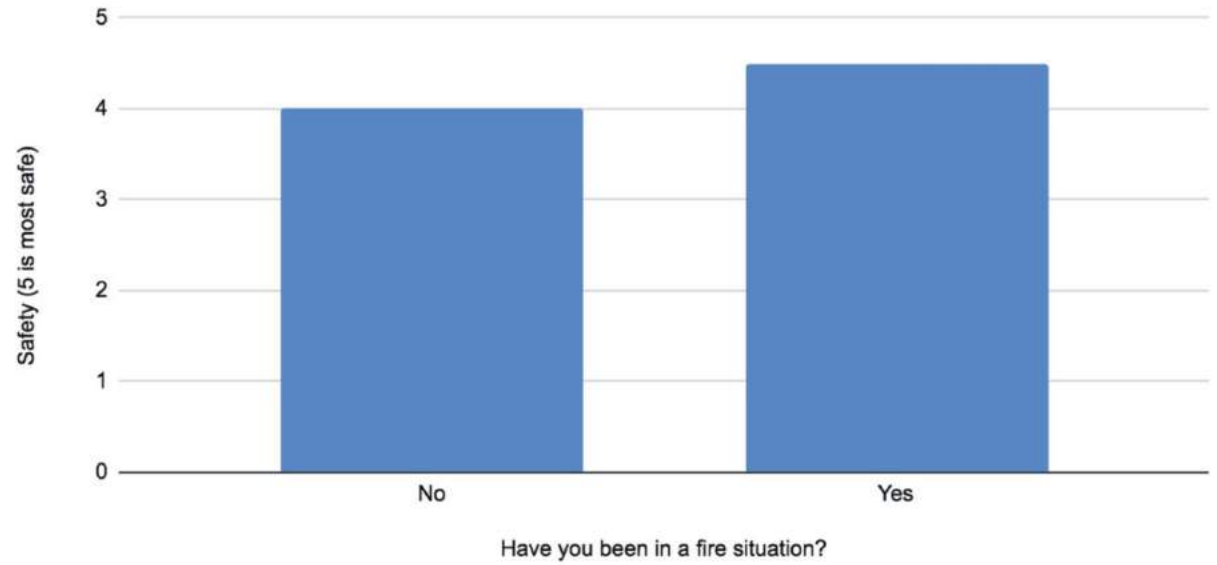
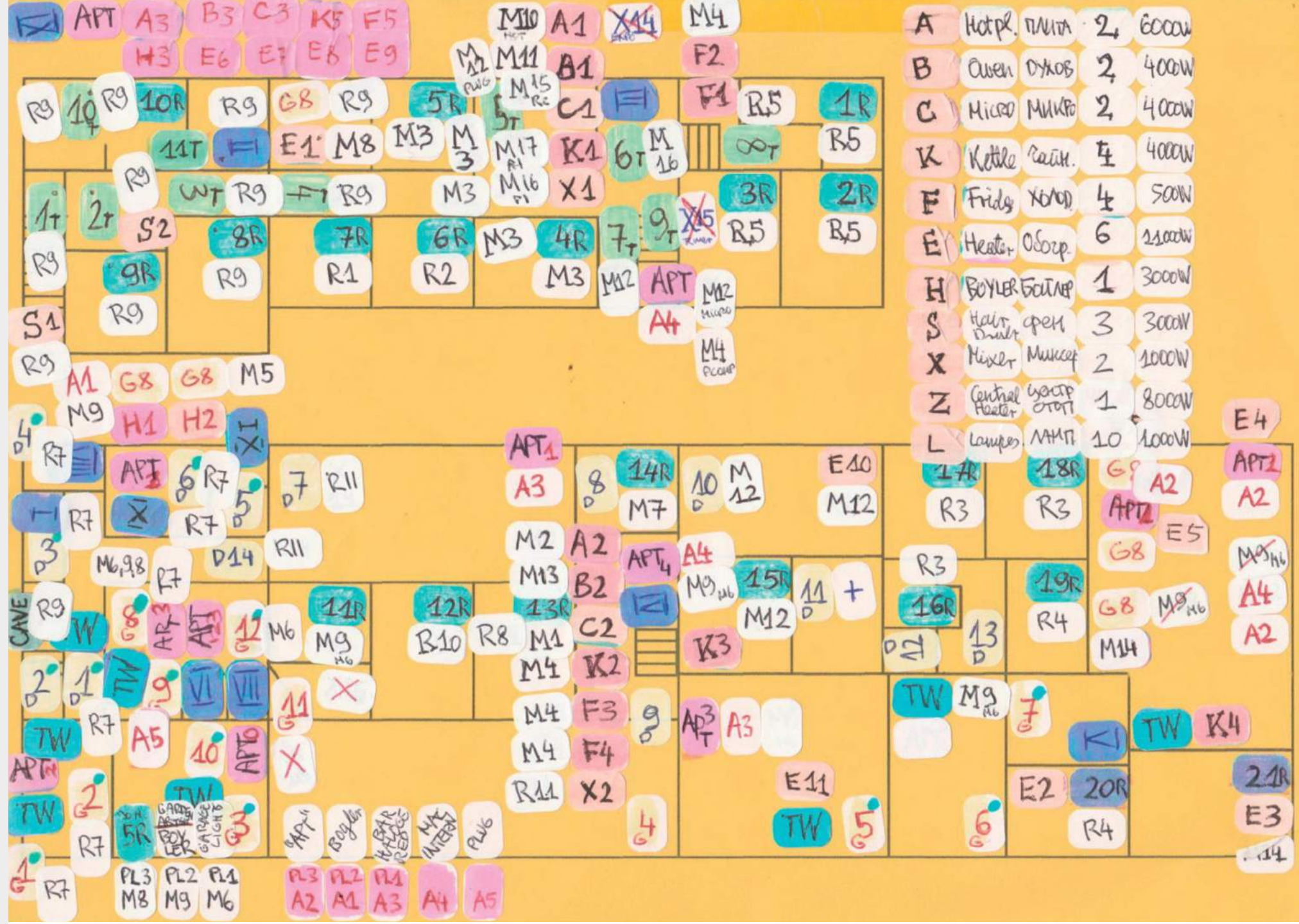


Table 5. Table showing a correlation between past fire situations and sense of safety in HFAS.



A	Hotpl.	11/11/11	2	6000w
B	Oven	DYKOS	2	4000w
C	Micro	MUKRO	2	4000w
K	Kettle	CAIK.	4	4000w
F	Fridg	XKROD	4	500w
E	Heater	OSORP	6	2500w
H	BOILER	BOILER	1	3000w
S	Hair Drier	open	3	3000w
X	Mixer	MUKROF	2	1000w
Z	Central Heater	YACOP STOT	1	8000w
L	Lamps	MMT	10	1000w

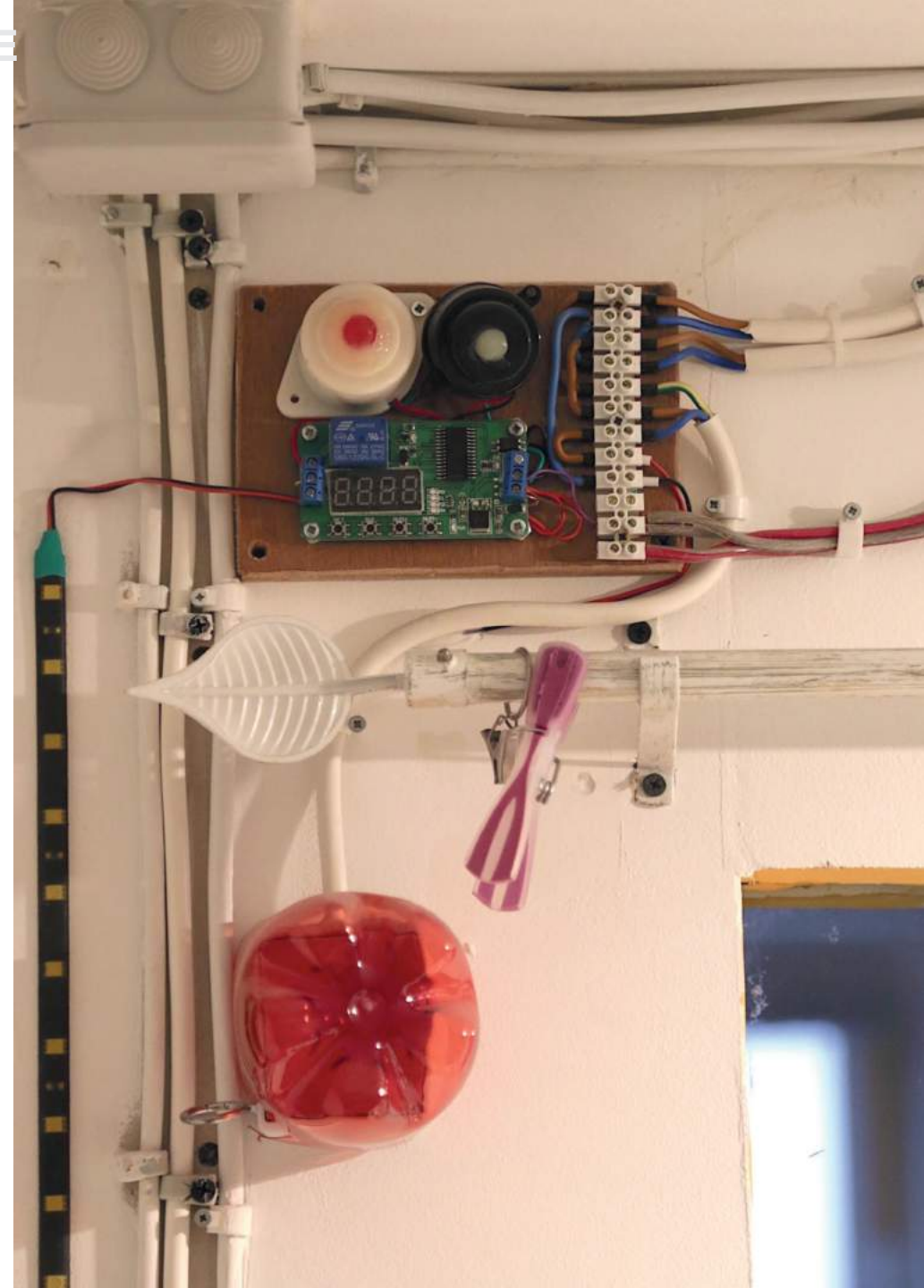
"ASC Scheme"
Paul OstroVerhy
Paris, 2022

DISCUSSION I

Quantitative Experiment

Several anomalies were found in the collected data. All test points C had an anomaly in which they decreased in voltage, which could suggest it is a normal behaviour. However, it could also have come from the fact that we leached voltage through the probe, or it could have been an inductor in the light/sound device causing the voltage to decrease exponentially. Another outlier was that test points B and C were 0 volts for location 15. This could come from the fact that location 15 was a different design than other stations within the fire alarm system, since it was the general fire alarm station regulating the whole bottom floor. It also could have been broken or simply a scientist error. Finally, the dust on top of the switch for location 8 was so settled that it was impossible to scrape off. The older version of the fire alarm station and the excessive dust suggest that it was used less and therefore might have become unfit and increased inconsistency. Therefore the bottom floor has overall less reliability.

The stated hypothesis was wrong because the top floor was not less reliable than the bottom floor. In fact, more anomalies were spotted on the bottom floor than the top floor. This could suggest that the top floor's fire alarms are newer and more reliable since it learnt from the trial-and-error of the first alarms implemented on the bottom floor. Calculating the range of each test point, the top floor had on average a smaller range than the bottom floor. The top floor's ranges for test point A, B, C and D were: 0.52 V, 0.55 V, 0.06 V and 0.48 V. The average was thus 0.49 V. In contrast, the bottom floor's range for test point A, B, C and D were: 1.23 V, 1.03 V (without the outlier), 0.06 V (without the outlier) and 1.18 V, thus making an average range of 1.17 V. We propose that the greater the range the lesser the reliability due to increased inconsistency. Therefore the bottom floor has overall less reliability.



DISCUSSION II

Qualitative Experiment

We also spotted some strange anomalies within the survey results. 22% of respondents said they felt extremely happy in a fire situation, whilst 78% of respondents said they would feel unhappy and deeply unhappy. Perhaps this small minority who would feel happy have a fire-fighter past and thus they would know how to respond or feel nostalgic. This is something to be tested next time. 11% of respondents stated that they had no trust in the homemade fire alarm system and that they would rather abolish the status quo because they would be uncomfortable in a fire situation. There was a correlation

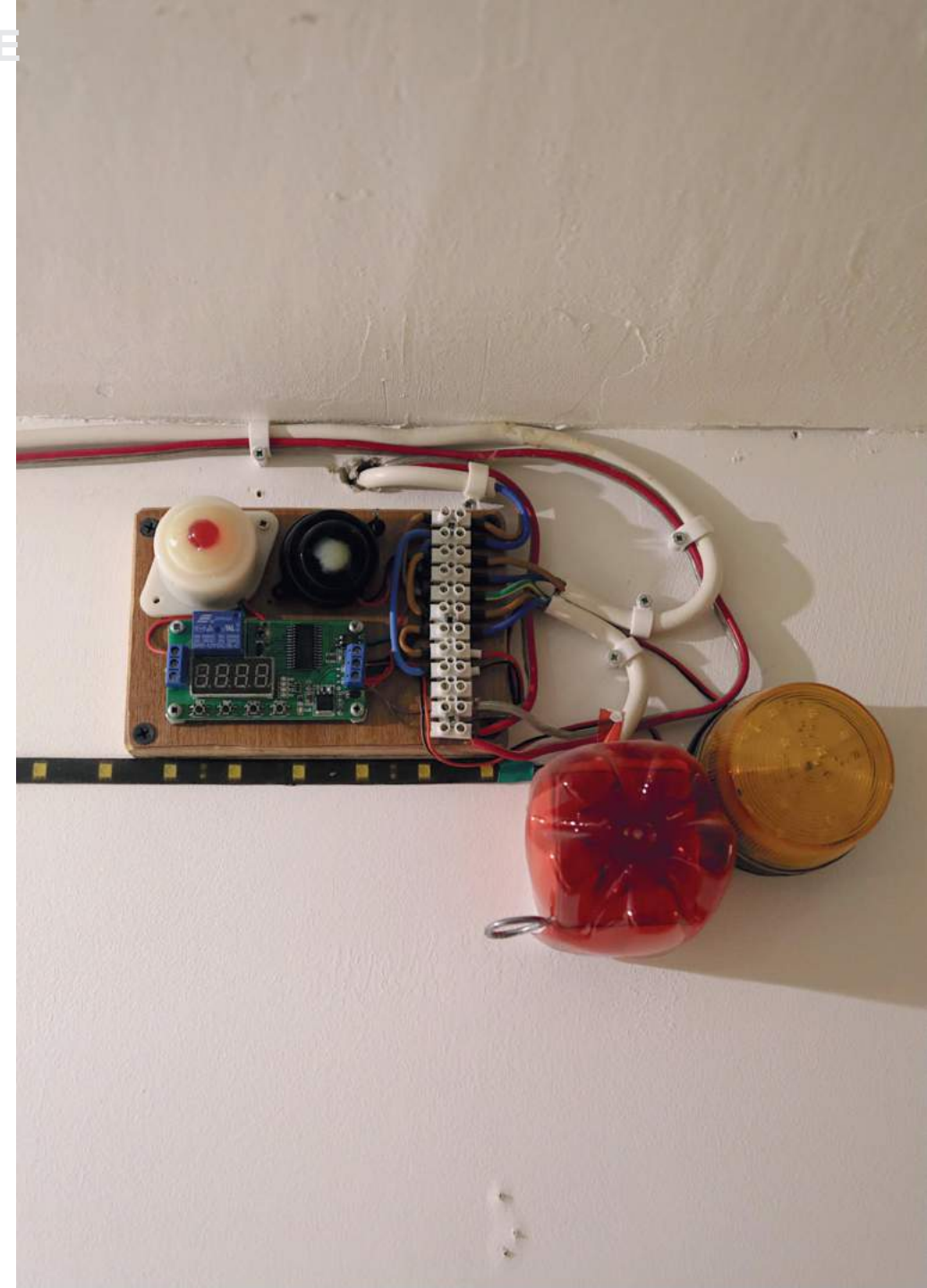
found between people in past fire situations and how comfortable they felt within a homemade fire alarm system. 56% of respondents were in a past fire situation and this same group would on average keep the homemade fire alarm system rather than switch it to factory-made.

Does this suggest people with a past fire situation experience are now less trustworthy of factory-made fire alarms rather than a home-made model?

This is something to research in the future. Only one person stated having eyes of different colour and that same person professed in both worshipping fire and having great happiness in being within a fire situation. Though data does not suggest a correlation, it is still worth exploring further next time. The hypothesis was partially correct, because whilst there was no unilateral high comfort living within the homemade fire alarm system, the average for satisfaction was 3.44 out of 4. This suggested a certain level of comfort living with a homemade fire alarm system.



“In the Artstudio”
Paul OstroVerhy
photo, 2023



CONCLUSION

Of the two experiments on the homemade fire alarm system, the hypothesis for the quantitative experiment was proven wrong. The hypothesis had been that the top floor's reliability would be greater than the bottom floor in terms of voltage. It proved to be the other way around, with more anomalies and a greater range on the bottom floor suggesting more inconsistency and therefore less reliability. Our second hypothesis was partially correct, as most respondents had on average great satisfaction with the fire system which reflects a high standard of comfort.

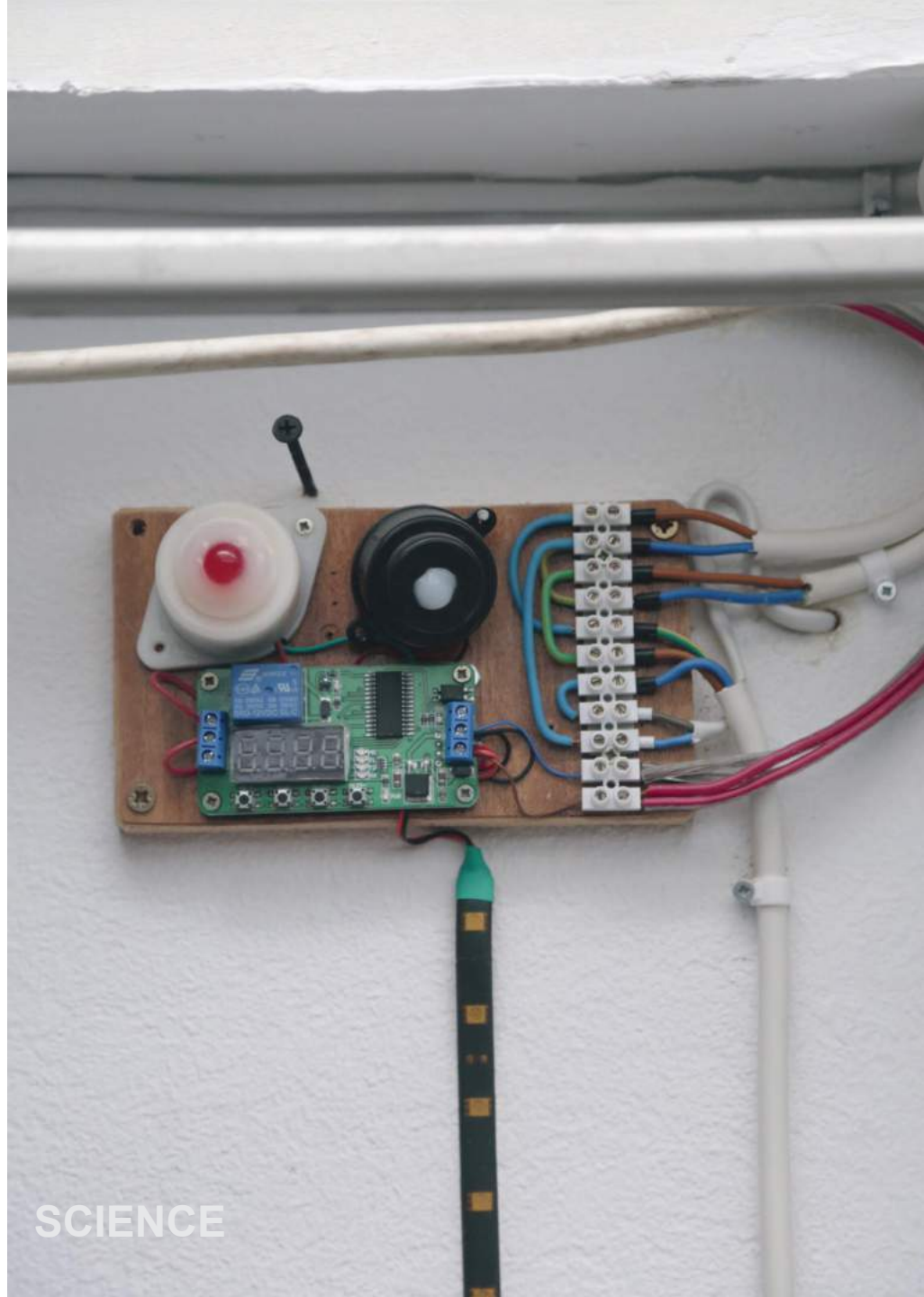
However, there were several limitations and sources of error. Time constraint was the greatest as it meant that some experiments were rushed and therefore had bigger risks of human error. The repeated noise of the fire alarm within the house created several noise complaints and in the pursuit of minimising complaints it meant that not everything could be done with ease. The lack of knowledge in the overall fire system wiring was another significant factor because it could have been the source of some anomalies. In

HM-FSS-3 is great!

tampering with the system, the scientist received complaints resulting in two locations not being tested. Next time, more knowledge in the wiring system would create greater accuracy. Another limitation factor was the linguistic barrier between survey respondents, which meant some survey responses were not as accurate as they could have been. In the future, writing surveys in the necessary languages would optimise accuracy. Human error was also inevitable. In subsequent experiments, the survey could add questions on the topic of military or fire-fighting background.

There were several typing mistakes in the survey that should also be adjusted. In the end, a lack of knowledge in how the system works could have been the source of unhappiness and a lack of trust in the system. This lab report showed me how external factors can have a deep influence on the results of the experiments. Despite time constraints, my motivation has been boosted as I discovered a new found love in collecting and translating data into charts.

Paul OstroVerhy, Paris, 2023



SCIENCE

Formation
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Stowe School
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