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# **Images of light and emotions**

a photographic research about individual and collective emotional sensibility towards lighting atmospheres.

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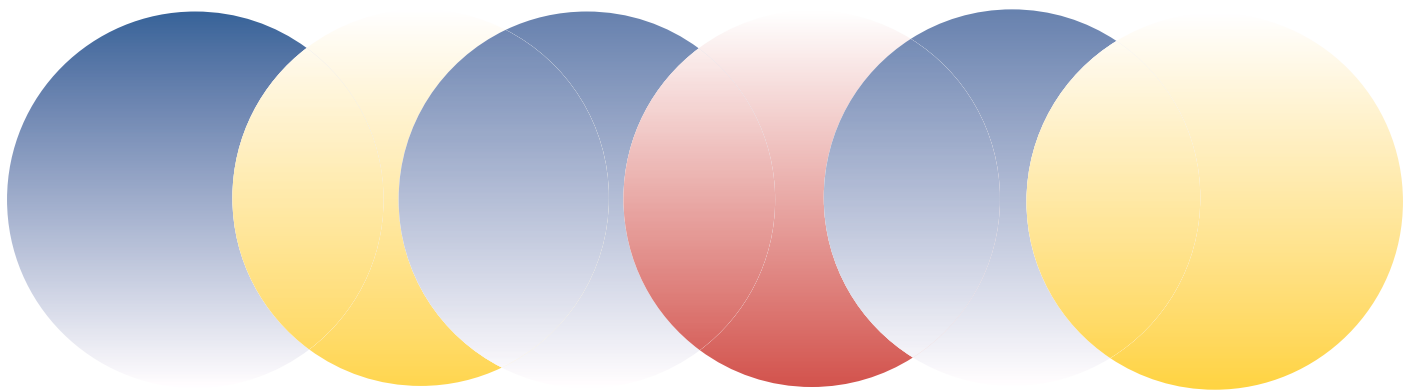


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Atmospheres

by Marta Albè





*"We find beauty not in the thing itself but in the  
patterns of shadows, the light and the darkness,  
that one thing against another creates "*

Jun'ichiro Tanizaki

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Thank you.

# Abstract

How do we humans feel the light? Is there a correspondance between our inner feelings and emotions and the outer space that surrounds us? Are we aware/conscious of it?

Which personal meanings-values and emotions arise in us and how we consequently link them to a certain Lighting Atmosphere (indoor and outdoor) lit by natural or artificial light?

Driven by these questions, this thesis will investigate via a visual qualitative experiment driven among photography amateurs, how their emotional sensibility is deeply bonded with light and how this emotional atmosphere is felt and portrayed throughout the day. A collection of two pictures per day, for one week, in the morning and in the evening will be firstly analyzed under the lens of each singular participant's emotional sensibility, and then collectively grouped into common lighting Atmospheres.

The wide and colorful spectrum of the possible combinations between light and emotions investigated in this research shows the richness and the complexity of the human sensibility towards light, and raise awareness in consider these intangible human factors as essential in the lighting process.

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# 1.Introduction

This master thesis aims to go deeper in decoding which are the aspects of the human psychology that affect our way of perceive, relate and live the space that surrounds us, putting the focus on the lighting qualities and phenomena we experience everyday. Using a psychological approach as a basis to designing is still in a way underrated: light is approached and studied more in a quantitative way, but many other subjective and humanistic aspects of light are equally important to fully understand the complex and multiform phenomenon of light, included the way we process it through our psyche. This wide, complex and undervalued topic still needs further research: this thesis will develop the topics starting from the “deep sea” of human psyche as a basis. Since this matter needs further investigation and in-depth analysis, the results at the end of this thesis will try to find out if there are common patterns in the humankind of feeling and “sense” the world.

## 1.1 Aims and research question

How do we humans feel the light? Is there a correspondance between our inner feelings and emotions and the outer space that surrounds us? Are we aware/conscious of it? Which personal meanings-values and emotions arise in us and how we consequently link them to a certain light-environment (indoor and outdoor) lit by natural or artificial light? Driven by these questions, in my research I aspire to investigate how we experience light throughout the day, during two moments of it: under the morning light and under the evening one.

During these two parts of the day and through their different light conditions, my investigation aims to catch and collect the emotions that are triggered and that we freely associate, aiming to create a spectrum of human emotions correlated to light, both natural and artificial. The goal is to trace a sort of common and general/universal emotional spectrum which is linked to certain characteristics of light, amongst people with a similar geographical and social background. This emotional mosaic displaying a spectrum of human emotions is intended to trace a way that hopefully outlines the direction of a light that arise a sense of beauty, hope, meaningfulness and positive emotions, bringing together with it life-enriching values.

## 1.2 Motivation

Human psyche is like a wide and deep sea, and it can be challenging and ambitious to try to explore it, but I think it's crucial to face and embrace the complexity and continue exploring this path. Light brings emotions, values and arises psychological memories from ourselves.

From my perspective, the study of psychological effects of light and lighting on the individual should lead to an overall “holistic” approach to lighting design. I believe that it is important to talk about the language of lighting and the emotions that evoke in people: the users, are (or should be) after all, at the center of the design process. Lighting design should be focused on the quality instead of quantity and should not be defined in a rigid order, but rather provide a big map of different lighting variables in order to formulate an overall, comprehensive “lighting design map” of the visual and emotional characteristic of the space we inhabit.

These qualitative terms eventually refer to what makes us deeply human beings: identity, time and space, as, in the words of Juhani Paavola (2012):

*“Architecture articulates the experience of being-in-the-world and strengthens our sense of reality and self; Architecture relates, mediates and projects meanings. The ultimate meaning of any building is beyond architecture; it directs our consciousness back to the world and towards our own sense of self and being. Significant architecture makes us experience ourselves as complete embodied and spiritual beings.”*

### 1.3 Methodology

The methodology of this thesis consists of a literature review and an experiment.

In the first place, the literature review will serve as a theoretical basis for the experiment, exploring and trying to define the notion of human psyche focusing on Jung's theory of "archetypes" (the inner primordial "images"), and an overview of the definition of emotion and feeling; in addition, it will be unravel how these concepts are intimately bonded with light and architecture, why and how they are mutually influenced and reciprocally defined, and how their union is essential for a meaningful lighting experience.

The goal is to decrypt of what a real meaningful light Atmosphere is made of, given that is the base of a meaningful user experience.

In the second part of the thesis, a qualitative users experiment will be driven, via asking a group of 5 people, living in Northern Italy (Note: the choice has been to pick people from the same climate/daylight exposure zone as this might potentially influence their response to light), aged in a range of 30-36 years old, with a similar social background and working in the creative-artistic fields, and an active Instagram profile where sharing pictures is a consolidated habit for them, to send me every day for a week, a picture taken with their own phone camera that shows an image of an interior or exterior space where they feel a particular significant and revealing feeling with it/towards it, and a small text where they explaining how they feel.

The target is therefore people with a marked tendency to express themselves, as professionals, using a creative thinking and being confident with artistic tools, such as photography and illustration.

What is asked to them is : "Please represent what you're feeling through a picture. Draw your emotions with the light: observe what is happening inside of you and try to portray it with a photo, as a painter would do it with a painting using brushes and colors."

In the text they are invited to write at what time of the day was the picture taken, and to write it immediately after having taken the picture; the reason behind that is to make sure what the emotional responses are influenced by. For instance, a photo depicting a narrow-dark corridor associated with the feeling of fear-stress-oppression, or a bright natural environment that arises a sense of joy-openness-serenity.

Then, the first step will be to cluster the pictures of each participant in groups of the 8 major emotions of Plutchik's Wheel of Emotions: Anger, Fear, Sadness, Disgust, Surprise, Anticipation, Trust, and Joy, showing their individual emotional sensibility and associations.

Later, all the whole 70 photographs will be analyzed and the lighting parameters of the indoor/outdoor environments pictures analyzed accordingly, using the 7 perceptual-based criteria of Anders Liljefor's will be used as units of measure:

- 1) Light level (dark-bright)
- 2) Spatial lighting distribution (uniform-varied)
- 3) Glare (invisible-disturbing)
- 4) Shadows (soft-hard)
- 5) Reflections (diffuse-strong)
- 6) Color of the light (warm-cold)
- 7) Colors of the space (unnatural-natural)

to group into macro collective Atmospheres of light, collecting all participants' pictures.

The goal is trying to find if there is a common and collective sensibility and similar Lighting scenarios among the five participants' pictures of a certain primary Emotion Group. Examples of possible scenarios: primary emotion Sadness associated with High uniformity levels and Low color intensity, or primary emotion Surprise related with High contrasts and High Brightness.

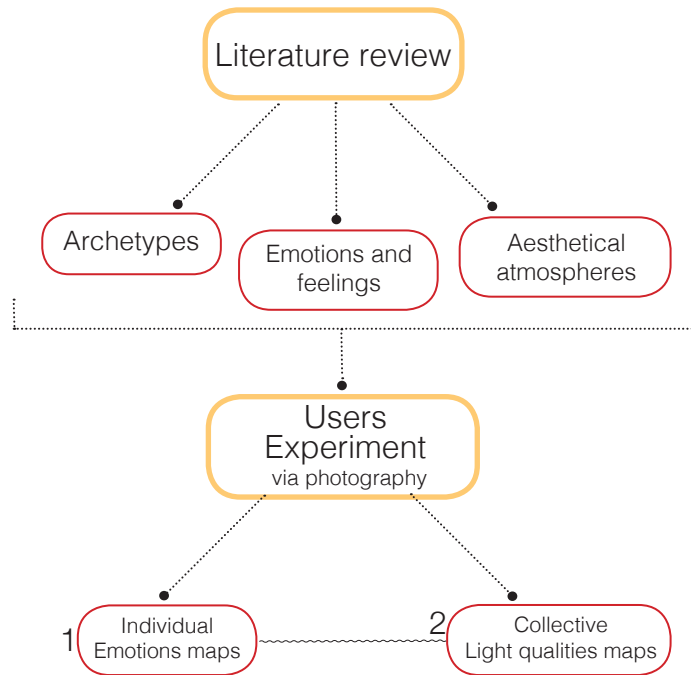


Fig 1. Diagram of the methodology for this thesis. (Illustration by Albè M., 2020)

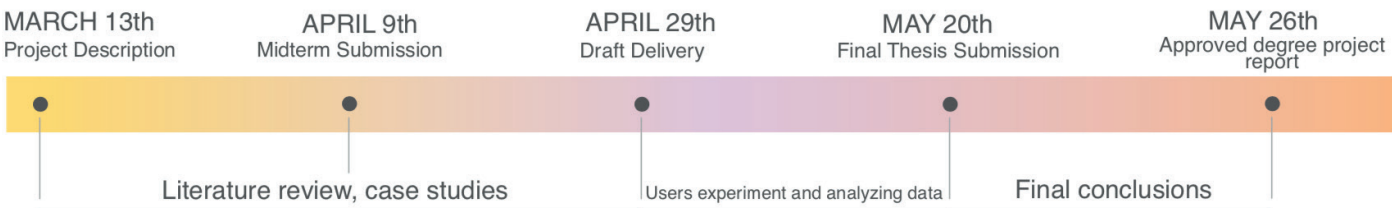


Fig 2. Diagram of the timeline for this thesis. (Illustration by Albè M., 2020)

**Keywords:** Lighting atmosphere, Photography, Perception, Aesthetic experience, Mapping emotions, Archetype, Meaning, Human centric lighting, Psychology

1.4 Delimitations

Given the vastity of the topic, and the quantity of studies in the field, the topics of the thesis can be expanded in a broader way, but the time given of the process is limited. Furthermore, the experiment will consider only a limited amount of people (5) with a specific socio-geographical background, so it not meant to be universally accurate and valid. For the future, it would be interesting to expand the target to different countries and culture to compare their answers, as this might potentially influence their response to light.

Another point to consider is that the analysis of the environment will be driven through a picture and thus the interpretation of the situation won't be as in real life, as a spectator phisically present (therefore missing many details, including the risk of the camera not catching the "real" lighting conditions. For example the picture could be over or lower-exposed and the colors falsed), but subjective.





## 2. Background literature

2.1 What is the “Human-centered-lighting” philosophy

Light is an essential element of life. Without light, there would be no life: this “existential” sentence is valid for all the living forms of life on the planet Earth. It is effective for plants, animals, fungi, cyanobacterias and humans. It is thanks to the Sun and consequently to light and to the its cycle of day/night that our inner clock regulates and set the cyrcadian rythms of the sleep-wake cycles every 24 hours. In the cyrcadian cycle, daylight has the indispensable and essential biological-psychological role that influences humans, as it regulates cortisol, which is the hormon released during the diurnal cycle and its release is incre-ased in response to stress and low blood-glucose concentration, and melatonin, the hormone responsbile for the sleep-wake cycle, associated to calmness and relaxation. But there is more than that. Considering light as a fundamental part of humankind’s life, and given its direct, essential and powerful con-sequences, the practice of lighting design should put the human factor at the core of its discipline; taking in consideration also qualitative and subjective matters of how light affects wellbeing, comfort and mental health. Embracing complexity and approaching the lighting discipline considering different aspect of the human-scien-ce should be the challenge this “human-centered-lighting-philosphy” needs to face, and this thesis aims to raise a richer debate about new forms of approaching the subject.

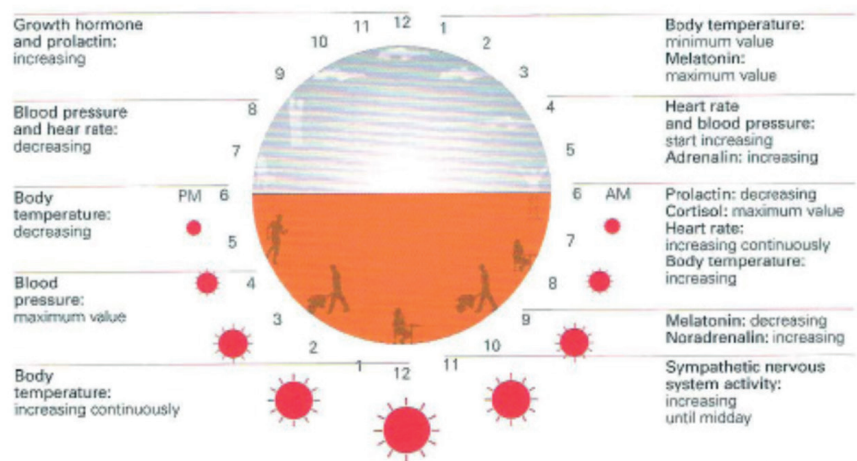


Fig 3. Correspondance between day+night time and certain physiological functions. Illustration from iGuzzini Research, 1993/2007

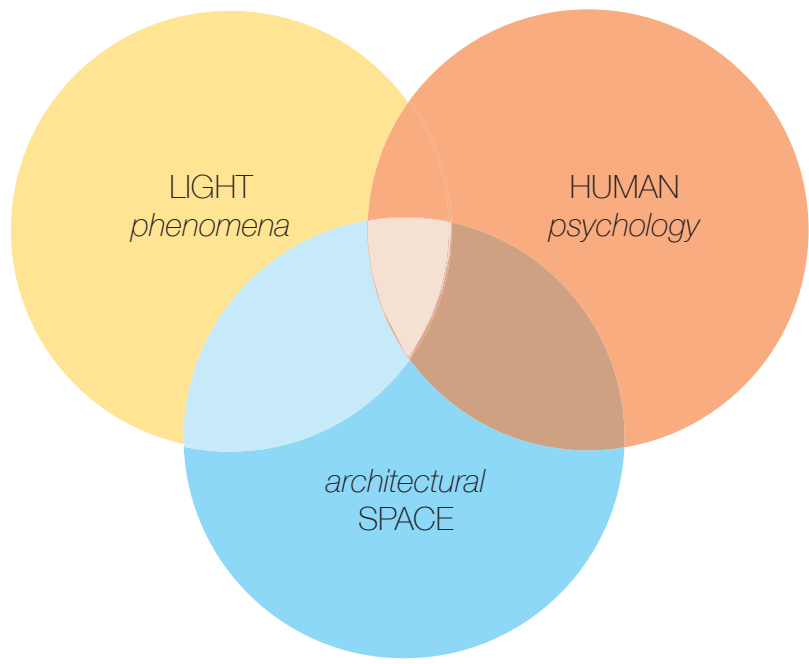


Fig 4. Factors of Architectural lighting design, in the human-centered perspective. (Illustration by Albè M., 2020)

## 2.2 Jung's archetypes: primordial inner images

The word "Archetype" comes from the ancient greek, with the meaning of "Image", and it is composed of the words "archè" (ἀρχή), that means «start, original principle», and "typos" (τύπος), meaning "model, example, pattern".

In his book "Man and his symbols", swiss father of Analytical psychology Carl Gustav Jung, largely talks about the archetypes and their functions in the human psyche.

He embraces Freud's theory of an **individual unconscious** that each human being has, as the hidden, deep, unaware and represses because too painful part of our psyche which is not directly accessible, but comes out only in dreams or in a hypnotic state, but brings it further to a broader dimension, of the **collective unconscious**.

Where does our Individual unconscious comes from? For Jung, it is not a result of a tabula rasa, and it is not only determined by the environment that surrounds us, but for him it is born out of a collective unconscious which is shared amongst the whole mankind, and it contains ideas and memories which are communal and conjoint amongst all the cultures and the time.

Jung suggest that some ideas are innate and universal, and some examples can be found in the myths of distant and different civilisations, independently, and in religions and arts too.

And within the collective unconscious these common paths or model or images can be synthetized in the concept of **archetypes**.

But Jung writes in part one of "Man and his symbols" that:

*"The term 'archetype' is often misunderstood as meaning certain definite mythological images or motifs, but these are nothing more than conscious representations. Such variable representations cannot be inherited. The archetype is a tendency to form such representations of a motif—representations that can vary a great deal in detail without losing their basic pattern."*

This means that every individual can give a certain specific shape, and the archetype cannot stereotyped with fixed representation rules.

Moreover, starting from the original meaning of the archetype from the greek philosophy as a primordial idea, paradigm or model to whom all the successive forms take as the original, the essential forms, Jung finds, amongst many, four principal archetypes that are models inside each human's mind and psyche.

These are the Anima/Animus, the Self, the Shadow and the Persona.

Moreover, examining the Shadow archetype, it can be interesting to the aims of this thesis research can what Jung suggested about it.

Jung theorizes that the primary meaning of this archetype is considered to be the negative, hidden part of one's self, and that is a part of one's public persona to be ashamed of and to repress, considering it as a very unfavourable trait. But, to resolve this inner conflict and build a stable and sane personality, it is essential, according to Jung, to solve it and integrate this unconscious part in the individualisation process of one's self. Master this obscure and mysterious "dark side" and incorporate it in a harmonious way, giving meaning and dignity to the dark interiority of self.

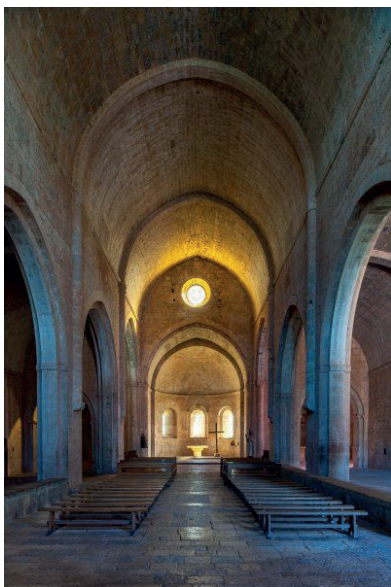


Fig 5. The historical Cistercian Abbey of Le Thoronet, Florielle, France 1136. The openings over the altar well represent the symbology of the Christian religion, where the daylight of God comes in to save the sinners sitting in the darkness, and metaphorically in the evil of the original sin.

Picture from: <https://www.spiegel.de/fotostrecke/bildband-ueber-kirchen-in-europa-foto-strecke-163674.html>

## 2.3 Light archetypes in architecture

Similarly, if we draw a parallel with architectural lighting design, it is clear how also in the space (as in a person) shadow must bond together with light accordingly, and their union is crucial to a harmonious result for the complete overall completion and perception of the space. The ambiance and quality of a space is greatly affected by the quality of light and shadows together.

It is an aspect that has been remarkably treated and illustrated to a “western audience” by the Japanese writer and theorist Junichiro Tanizaki in his book “In praise of shadows”.

In his quintessential and seminal book, he explains how the real spirit of the traditional Japanese house, and the whole eastern aesthetic, is a fine and delicate balance between the darkness and lightness of the space, preserving their differences but at the same time integrating and giving shape to a harmonious, reflective and meaningful result. The daylight is precisely used and filtered through openings, the traditional paper-Shoji dividing panel that both creates beautiful combination of light patterns, and also connect the man with the nature and enrich the materials and texture of the surfaces.

Extremely important is the concept of “penumbra”, this threshold between light and darkness (conscious and unconscious) a space of poetic narrative that enhances our senses, feelings, thoughts, and ultimately our esthetic and existential values. It is fascinating to note how the western dicotomy between body/soul, material/ immaterial, ethic/aesthetic, are here totally merged and solved as an harmonious unity and beauty.



Fig 6. Typical Japanese domestic interior. Picture from: <https://dialecticsanddesiderata.wordpress.com/2017/10/29/in-praise-of-shadows-1933/>

Pallasmaa (Pallaasma, 2012) also puts stress on the importance and value of the shadows as a great trigger of imagination and daydreaming, and of an inner and reflective dimension as, in his words:

*“In order to think clearly, the sharpness of vision has to be suppressed, for thoughts travel with an absent-minded and unfocussed gaze. Homogeneous bright light paralyses the imagination in the same way that homogenisation of space weakens the experience of being, and wipes away the sense of place”.*

and furthermore: *“Deep shadows and darkness are essential, because they dim the sharpness of vision, make depth and distance ambiguous, and invite unconscious peripheral vision and tactile fantasy”.*

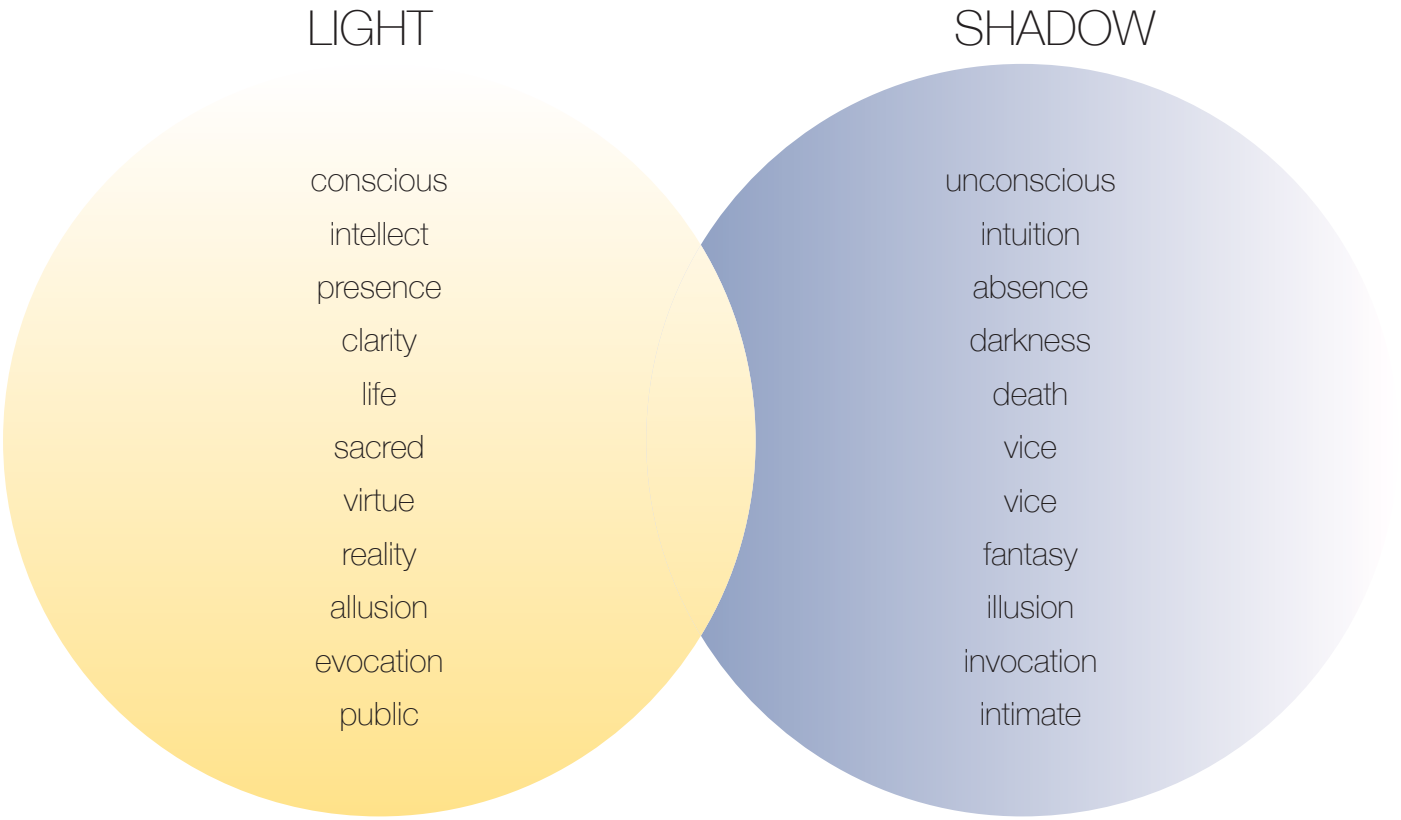


Fig 7. The dual dialectic of light and shadow and the meanings associated. Visual interpretation of Gustavo Avilés & Talina Aguila's perspective on book "You say light, I think shadow". (Illustration by Albè M., 2020)



## 2.4 Archetypes in lighting design

Furthermore, in his book “Man and his symbols”, talking about the four functions of the Coscience, which are Thought, Sentiment, Intuition and Sensation, Jung explains how these categories allow men to face the impressions and the stymuli of the external world, and from his inner worlds (intimacy). For him, the creation and the creativity and the artifacts that humankind has been crafted and buildt, are made of a psychic unconscious process, in wich they project their psychic “matter”. They are in a way object of rational thoughts, but they are also coming from other depths, to express the deeper contents of the coscience and of the spirit.

In a similar way, In his book “La valigia senza manico” Enzo Mari, one of the most recognised and radical italian designer, artist, and theorist, talks about design as a discipline that refers to the archetypes.

If, on the opposite side, science aims to the exact, immutable and replicable paradygms, which describes the world and his phenomena objectively, the horizon of design and architecture pertain to art (a qualitative dimension), and consequently to the archetype.

In the definition of Mari, an archetype is what appears for the first time and then it remains, something which cointains in itself all the highest knowledge. For example, Platos’ thought is the archetype of philosophy. It is certainly a matter of design because the “object” shoud contain in itself the highest quality possible, to express as values: because design and architecture always express semantic values and qualities.

This interesting perspective can be valid for lighting designers and light as well, as a tool which conveys meanings, qualities, values, and of course, emotions. But do **archetypes of light** that universally convey similar meanings, qualities, values and emotions to people, exist?



Fig 8. To gather around a bonfire, to celebrate or to tell stories, is an ancient ritual that is common in different culture worldwide. It could be seen as an archetype of social aggregation correlated to light, and a trigger of a sentiment of inclusion.  
Picture from: [https://www.pinterest.it/pin/689402655432891639/?nic\\_v1=1aS3ZXVywLAOEICovptcOqkiYUQhmqtpg9NQyno3FMqJwWXOcAKooe-j%2BxtCvnRxgZC](https://www.pinterest.it/pin/689402655432891639/?nic_v1=1aS3ZXVywLAOEICovptcOqkiYUQhmqtpg9NQyno3FMqJwWXOcAKooe-j%2BxtCvnRxgZC)

## 2.5 The wheel of moods and emotions

“Emotion” from Latin “emovere” “move out, remove, agitate,” from assimilated form of ex “out” (see ex-) + movere “to move”.

(from: <https://www.etymonline.com>)

Another important topic that is investigated in this thesis is the relationship between people and light (natural and artificial) and how they bond it, consciously and unconsciously, with an emotion.

But what is an emotion?

There is not an univocal scientific answer, but we can define it as a biological state related to the nervous system, that responded to a certain external stymuli.

Everyday, every minute of our life, we are constantly experience emotions, and we are moved by internal and external stymuli that drive us to respond to something that happens outside.

As Esther M. Sternberg, writes in her book “The Balance Within: The Science Connecting Health and Emotions”:

*“Every minute of the day and night we feel thousands of sensations that might trigger a positive emotion such as happiness, or a negative emotion such as sadness, or no emotion at all: a trace of perfume, a light touch, a fleeting shadow, a strain of music. And there are thousands of physiological responses, such as palpitations or sweating, that can equally accompany positive emotions such as love, or negative emotions such as fear, or can happen without any emotional tinge at all. What makes these sensory inputs and physiological outputs emotions is the charge that gets added to them somehow, somewhere in our brains. Emotions in their fullest sense comprise all of these components. Each can lead into the black box and produce an emotional experience, or something in the black box can lead out to an emotional response that seems to come from nowhere.”*

Psychologist Rober Plutchik worked towards a classification of the emotions between primary and secondary. He classified eight primary emotions -**Anger, Fear, Sadness, Disgust, Surprise, Anticipation, Trust, and Joy**- that vary in intensity and that can be bixed between them, like colors, forming a new type of emotion. So the combination of Joy and Trust gives Love, or Joy and Anticipation as Optimism.

Each primary emotion has a polar opposite one, so that: Joy is the opposite of Sadness, Fear is the opposite of Anger, Anticipation is the opposite of Surprise, Disgust is the opposite of Trust.

The third dimension of the cone represents the intensity of the emotion felt, which can be more or less intense, and this is also indicated by the colour: taking Anger as example, when is mild it turns into Annoyance, while when it intensifies, becomes Rage, which is associated to dark, vivid red. Emotions are often complex, as a result of a combination of two or more distinct emotions.

In the graphical representation of “The wheel of emotions” we see how to read it.

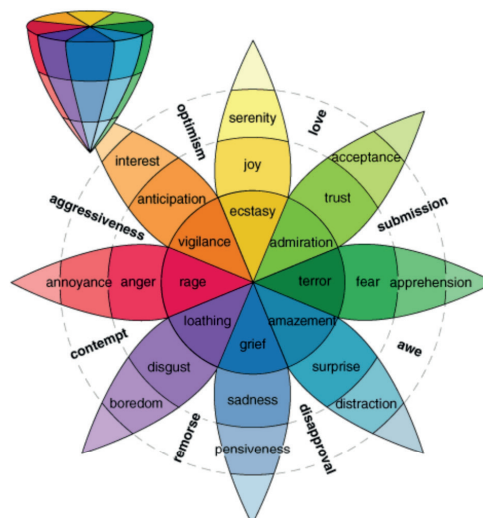


Fig 9. Plutchik's wheel of emotions.

The core circle shows the 8 primary emotions, as base for all other emotions, grouped into polar opposites

Illustration from: [www.ee.columbia.edu](http://www.ee.columbia.edu)

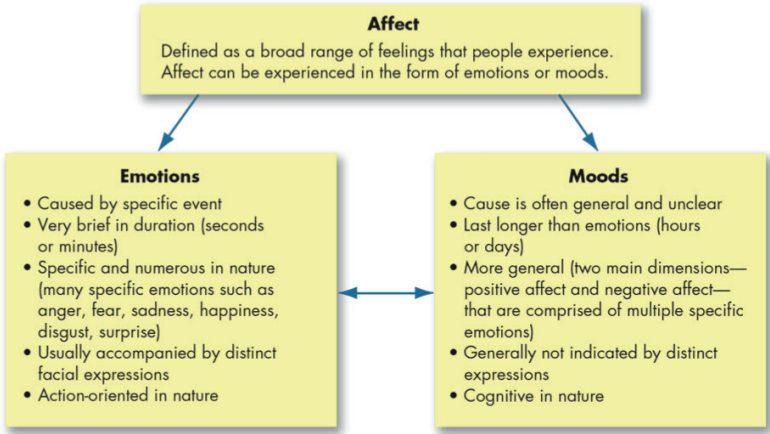


Fig 10. Characteristics and relationships between affects, moods and emotions.  
From: [www.pearson.com](http://www.pearson.com), cited in Raluca Dascalita's Thesis "That meaningful light: a phenomenological approach to meaning in lighting design", 2018.

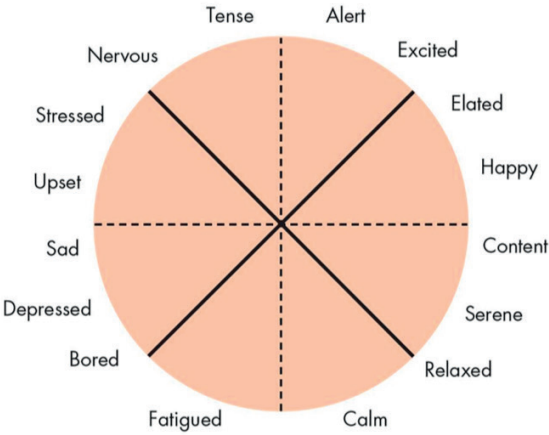


Fig 11. The wheel of moods. From: [www.pearson.com](http://www.pearson.com), cited in Raluca Dascalita's Thesis "That meaningful light: a phenomenological approach to meaning in lighting design", 2018.



## 2.6 Light as an emotional trigger and tool for architecture to create Atmospheres

*"The task of art and architecture in general is to reconstruct the experience of an undifferentiated interior world, in which we are not mere spectators, but to which we inseparably belong."*  
(Pallaasma 2005)

According to Pallaasma (2009) in chapter 7 "Emotion and Imagination", a great form of art and architecture make us experience and confront with our existence and being in the world by touching ourselves deeply, and make us deal with our own existential boundaries.

Only authentic architecture and art can evoke and intensify feelings and emotions already stored in our memory.

A full, mental, rich sensorial and emotional encounter with architecture is indispensable for create a meaningful architectural experience, that lead to appreciation and understanding.

It is important to note that the building or the space is not a carrier itself of an absolute and objective meaning or symbol, but it rather has a quite socratic "maieutic" power to make us confront with ourselves, and thus let arise and develop and these sentiments inside us.

In this aesthetic experiential exchange something magic happens: I project my emotions into the space, I am moved by my own sensibility as is it evoked and, at the same time, reflected back by a certain architecture. It's a very powerful and personal identification with the work of architecture.

*"A great building enhances and articulates our understanding of gravity and materiality, horizontality and verticality, the dimensions of above and below, as well as the eternal enigmas of existence, light and silence"*  
(Pallaasma 2009)



Fig 12. Peter Zumthor, Therme Vals, Vals, Switzerland, 1996  
The rigorous architecture of the space have an ethereal richness, that address all the five senses of the user. The mist of the water provide a quite tangible feeling of silence and suspension.  
From: [https://www.archdaily.com/798360/peter-zumthors-therme-vals-through-the-lens-of-fernando-guerra?ad\\_medium=gallery](https://www.archdaily.com/798360/peter-zumthors-therme-vals-through-the-lens-of-fernando-guerra?ad_medium=gallery)

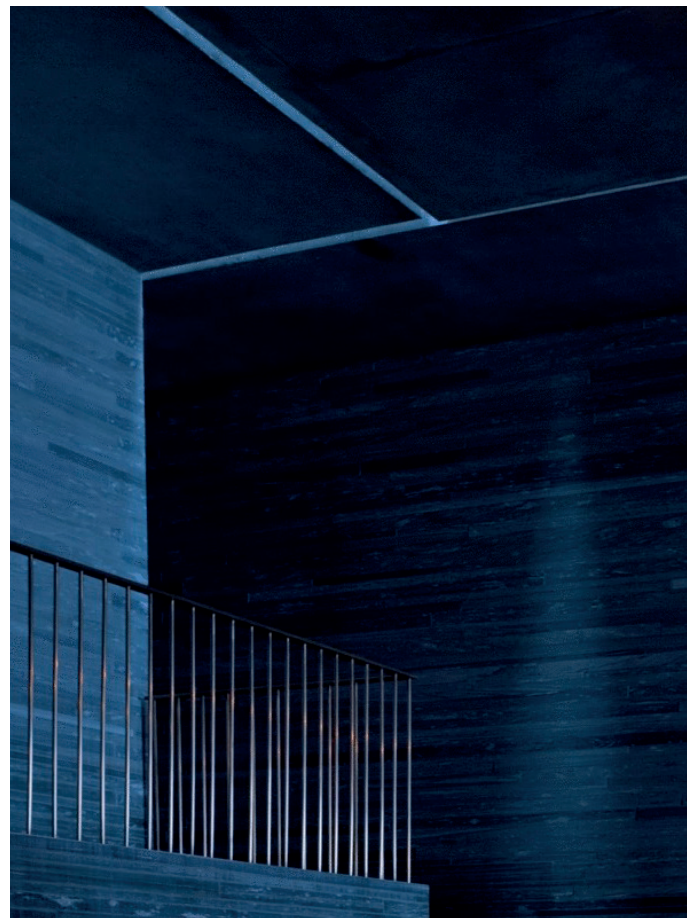


Fig 13. Peter Zumthor, Therme Vals, Vals, Switzerland, 1996.  
Detail of the the small gap in the roof coverage, which allows a gentle cone of daylight to come in, and create symmetrical lines of light.  
From: [https://www.archdaily.com/798360/peter-zumthors-therme-vals-through-the-lens-of-fernando-guerra?ad\\_medium=gallery](https://www.archdaily.com/798360/peter-zumthors-therme-vals-through-the-lens-of-fernando-guerra?ad_medium=gallery)

The poetic of the building is strongly bonded and given by the touch of the light: this “magic” touch enables the space to enfold itself forming different zones of **daylight** (Madsen 2007).

Light is an essential ingredient in touching and move peoples’s emotional sensibility This quality of architecture is basically creating an atmosphere, according to Swiss architect Peter Zumthor (2006).

But how do light participate in this process?

If beauty lies in the eye of the beholder, on the other hand there are certain characteristics of the space that are indispensable to create a beautiful atmosphere and a unforgettable architecture experience, and one of this is “The light on things”: Zumthor describes the quality of light falling on the surfaces and materials, and how important is their creation of shadows and depth, their intrinsic brilliance and reflections. In his designing process he imagines the space as a “dark box” in which he hollows up the darkness by adding the light inside, and create a harmony of volumes.

Furthermore, Zumthor stresses that are especially the powerful qualities of **daylight** that moves him so deeply, as in his words: “*daylight (..) I feel it almost a spiritual value*”.



Fig 14. Peter Zumthor, Kolumba Diocesan Museum, Cologne, Germany, 2007. The renovation of the medieval church sums the Architect's principle towards a meaningful architectural atmosphere: the carefully chosen materials (grey bricks, tufts, basalt and brick of the ruins) and their behaviour interacting with the daylight, create an immersive and reflective experience. Daylight plays a big role, and Kolumba can be defined as a “shadow museum which will evolve in the course of the day and the seasons.”  
From: <https://divisare.com/projects/273884-peter-zumthor-helene-binet-radu-malasin-cu-kolumba-diocesan-museum>

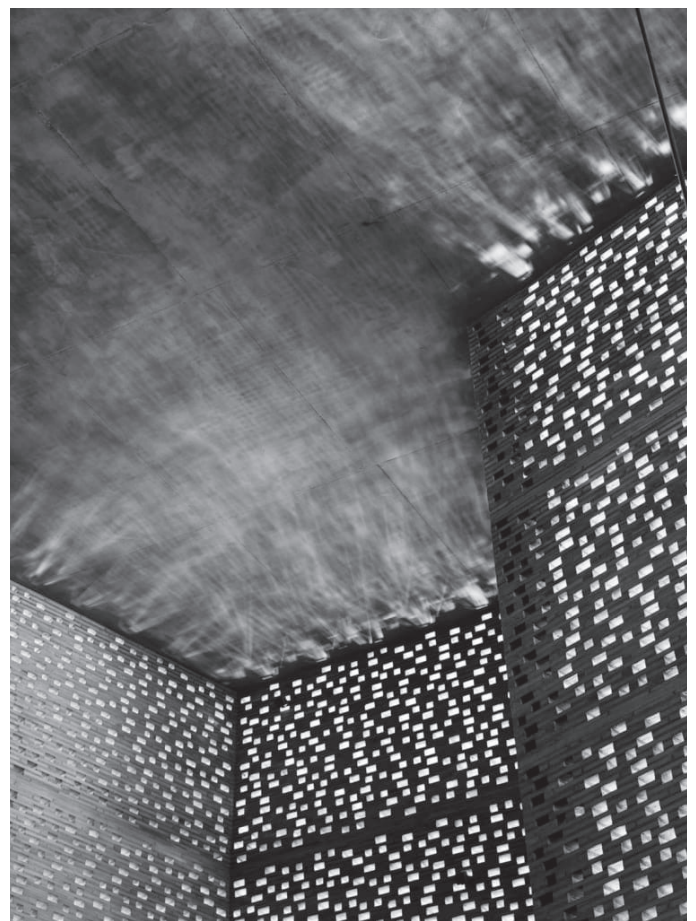


Fig 15. Peter Zumthor, Kolumba Diocesan Museum, Cologne, Germany, 2007. Detail of the openings that allow daylight to penetrate the building from all directions.  
From: <https://divisare.com/projects/273884-peter-zumthor-helene-binet-radu-malasin-cu-kolumba-diocesan-museum>

2.7 Towards Atmospheres of light

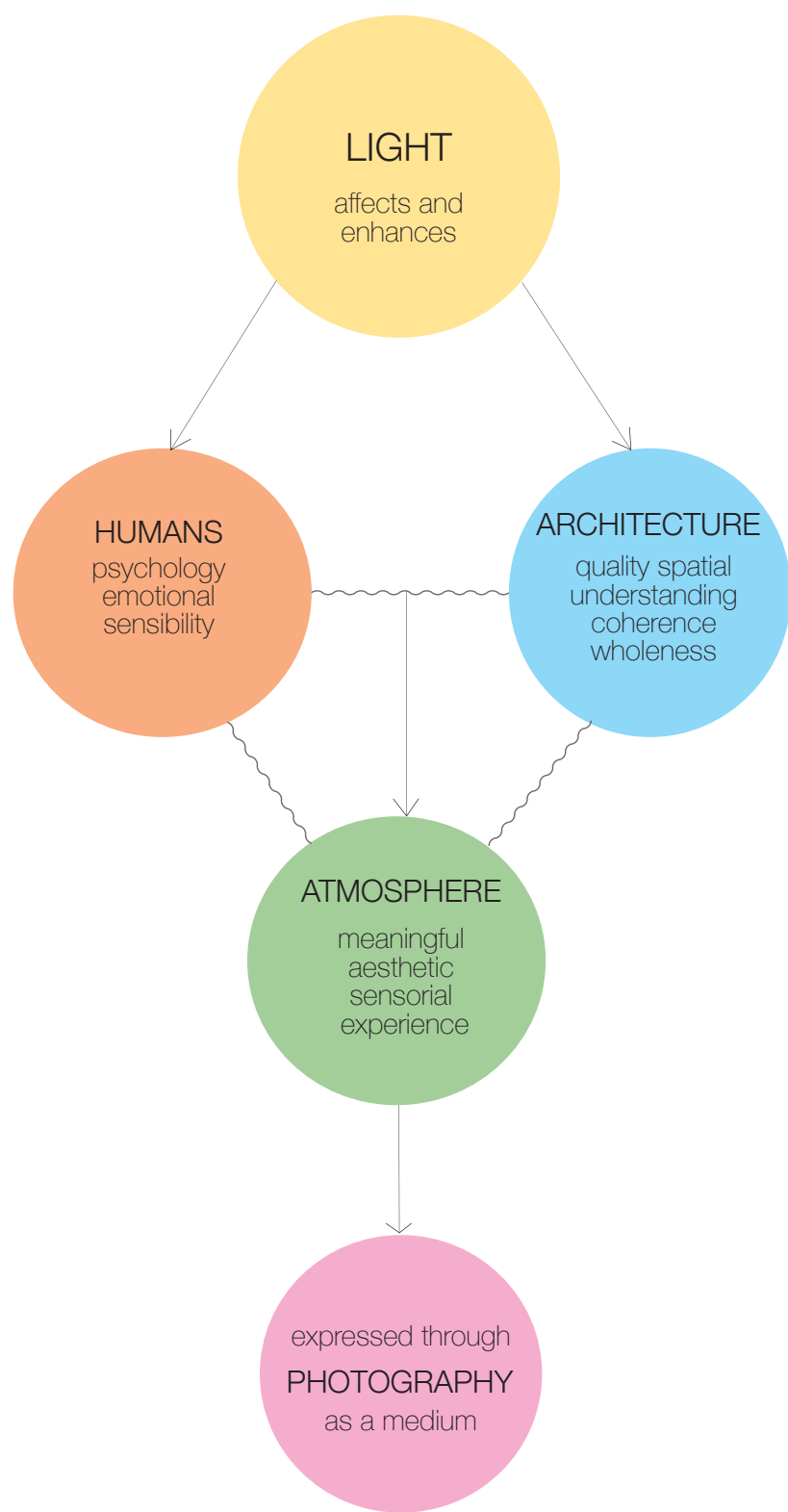


Fig 16. Diagram of the creation of a Light Atmosphere. (Illustration by Albè M., 2020)

## 3.Experiment



### 3.1 Description: the setting of the experiment during the Covid-19 lockdown

Given the exceptional times in the moment this thesis was written, the forced lockdown and the consequential social and physical isolation imposed by the Italian Government due to the dramatic and quick spread of Covid-19 in Italy and in the world, the experiment had to be adjusted.

In that totally unusual and never experienced before setting, people were locked in their houses since March 9th 2020, without the possibility to leave their houses in the ray of 200 mt. The only places where people were allowed to go were supermarkets and pharmacy, but it was recommended not to go more than 1 time per week. The whole country was on hold, schools, university, offices, bars, restaurants and productive sites were temporary closed. Streets, squares, public spaces and the whole cities were empty: silence and wind resonate in the air. People followed this policy, and at the time this experiment was starting, it was still uncertain when the lockdown would have going to end, and when a normal life would be back.

At the very beginning of the birth of the experiment's idea, it was thought that the users could move freely and get in touch with different environments and daily situations: this was of course not possible anymore.

The interior spaces where one can have an interaction with are their house, and in lucky situations, their garden. But there were probably some positive aspects in this change: the users are confronted with him/herself to live their home in a very deep and reflective way, somehow "forced" to live the space they are living in a pretty intense and more-than-normal intimate way. Eventually, the domestic set of the experiment was inside a social experiment itself.

### 3.2 Photography as a bridge to connect and visually portray light and emotions

We live in a world submerged by images, and the significant trend to share and show images of our lives on social media, such as Instagram, and sharing them with a online community is now a part of our life.

By doing so, people open a window to our life, thoughts, moments, perspective and thus communicate emotions and feelings. Susan Sontag writes of a *"mentality which looks at the world as a set of potential photographs"* and that *"reality has come to seem more and more what we are shown by camera"*; to some extents, the writer was prophetic if we look now at our habits in 2020.

Ethimologically, the word "photography" derives from the union of the two worlds from the ancient Greek φωτός (phōtos) "light" and γραφή (graphé) "drawing", thus literally "drawing with light".

In this experiment, the participants were asked to "draw with the light" their emotions via taking a picture, interpreting and depict visually their emotion on a picture.

They were also allowed to manipulate images with filters and other apps and see how they think their emotion would be better represented, as an artist would do to express their sentiments on a canvas.

Photography is a form of visual art, and art is indeed an intentional self-expression: through photography we tell our memories, personal stories, our identity in time.

According to photographer Luigi Ghirri in his book "Photography lessons", the sign of the photographer must orientate towards a point of balance between our inner self and the exterior: something universal that continues and will continue to exist in the future, even without us.

Photography is the medium through which the link between light and emotions is revealed, and for this reason it has been chosen as part of the methodology.



Fig 17 and 18. Luigi Ghirri's photographs from the series "Italian landscape". The light qualities give an unique character to the home interior, and to the countryside landscape.

Images from: <https://www.internazionale.it/foto/2016/08/04/luigi-ghirri-foto>

### 3.3 Participants description

The target chosen for the experiment was people with an artistic-creative profession, with a age range between 30 and 36 years old, and most important, a passion and interest for photography.

They are people that habitually picture moments of their everyday life, they are confident in using visual social media like Instagram where they share their digital visions with their friends and followers, adding captions or tag, and they interact with their followers and users-community receiving and responding to comments, likes and pictures or temporary-stories.

#### 1\_Participant A

Gender: Female

Age: 35 years old

Nationality: Italian

Based in: Italy

Profession: Content creator and freelance photographer

#### 2\_Participant B

Gender: Female

Age: 32 years old

Nationality: Italian

Based in: Italy

Profession: Phd student in art history

#### 3\_Participant C

Gender: Male

Age: 36 years old

Nationality: Italian

Based in: Italy

Profession: Visual artist and Professor at Academy of Fine arts

#### 4\_Participant D

Gender: female

Age: 31 years old

Nationality: Italian

Based in: Italy

Profession: Graphic designer and illustrator

#### 5\_Participant E

Gender: Female

Age: 31 years old

Nationality: Italian

Based in: Italy

Profession: Dental hygienist and amateur photographer

### 3.4 Experiment instruction

## Lighting experiment instruction

Dear participant,

hello and thank you for taking part in this artistic research about light and emotions.

You have been selected because of your sensitive and capturing eye.

This experiment will last for exactly one week. It starts on Wednesday the 22nd of April 2020 and will last till Tuesday the 28th of April 2020.

During this week, what I kindly ask you is to take two pictures with your cell-phone camera (or a photo camera) that best represent your mood-feeling or a particular emotion that fills you and that you feel is meaningful for you.

Please represent what you're feeling through a picture.

Draw your emotions with the light: observe what is happening inside of you and try to portray it with a photo, as a painter would do it with a painting using brushes and colors.

You are also allowed to manipulate the picture, adding filters and such if you think this can help to better express and portray your vision/feeling.

You are also invited to add a brief description on how you feel and what are you on, immediately after having taken the picture. You can use hashtags, keywords, a poem, or a text of a song if you feel like, there are no limitations to express yourself.

When? The first picture should be taken at the beginning of the day (6.30-12 am), the second in the latest part (12 am- 8.30 pm).

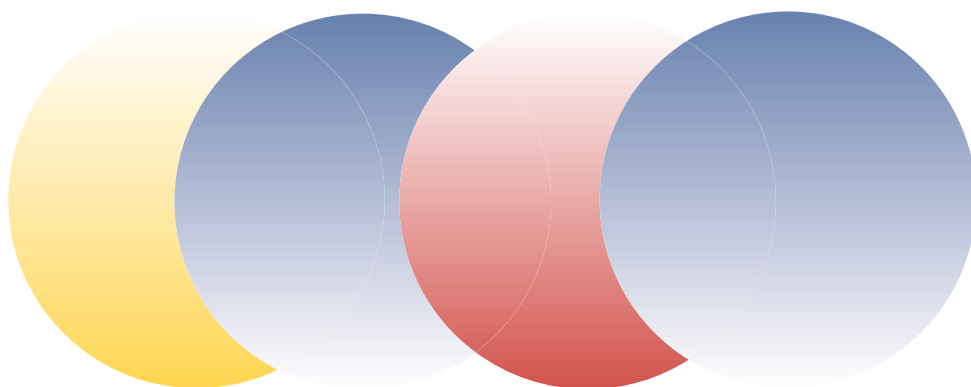
During this unique time of lockdown we can have more time to observe, interpretate and represent what we're feeling. It will be a creative and reflective exercise.

Your pictures will be kept anonymous, no-one else but me will know they belong to you.

You can send them to me at: [martamarta.albe@gmail.com](mailto:martamarta.albe@gmail.com), or via Whatsapp/Telegram: +393283696869

Thank you again for your precious time.

Marta



### 3.5 Results Participant A

MORNING

EVENING

Day 1\_22.04



10pm

We are two parallel lines that will never meet: infinity requires too much confident patience.

#pensiveness #sadness

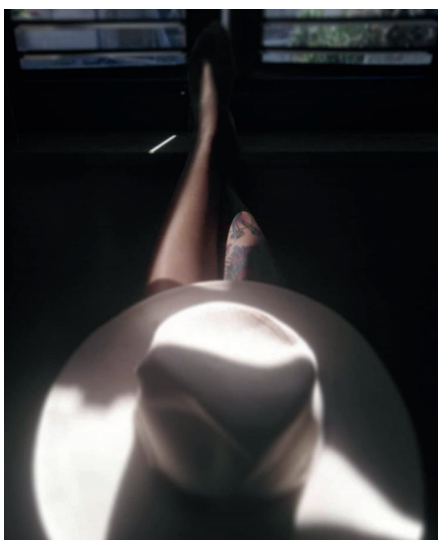


7pm

Of subliminal messages and lights at the end of the tunnel.

#distraction #surprise

Day 2\_23.04



12am

Sketch for a summer on a solitary room.

#acceptance #trust



6pm

Let's get dressed like sailors, prepare sandwiches, raise these sails: today we will sail to the Neverland.

#serenity #joy

Day 3\_24.04



11am

"It crumbles my heart to think of us part, oh To know that you hope for the night to be through, oh And the last thing I save is the palm of your wave" \_ Bibio, The palm of your wave

#solitude #sadness



6pm

These hands never move, but it is not the watch that is broken: it is time that teaches us the salvation of patience.

#serenity #joy



MORNING

EVENING

Day 4\_25.04



9am  
"I'll be your mirror, Reflect what you are, in case you don't know  
I'll be the wind, the rain and the sunset  
The light on your door to show that you're home"  
I'll be your mirror, The Velvet Underground **#trust**



4pm  
Sicilian laces, the snack prepared by my grandmother, outside the Jasmine flower in bloom.  
**#vigilance #anticipation**

Day 5\_26.04



11am  
And so we will say goodbye, at a distance, fluttering hand. And I have never endured those kisses on the cheeks, actually. **#anticipation**

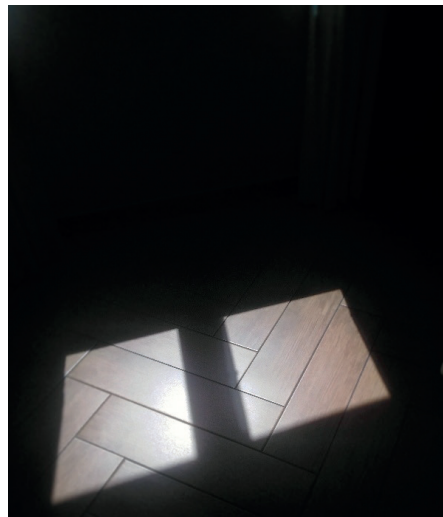


3pm  
"The scent of the sea, I don't smell it, it's gone, why don't you come back here, Close to me" Summer, Bruno Martino  
**#fear**

Day 6\_27.04



10am  
My cat cuts out its spaces, selects precise corners of solitude, and silently, in front of that hedge, every day, with the image, it puts its thoughts on stage.  
**#amazement #surprise**



5pm  
I am here. You there. Always opposite. Always divided. And I, in order not to continue to wear ourselves out, I don't even have the courage to go over it and open the window.  
**#solitude #sadness**

MORNING

EVENING

Day 7\_28.04



12am

Umbratile: adj. [from the Latin 'umbratilis']

def. Lover of solitude, shy, introverted, full of inner shadows. So many that they come out.

**#loneliness #sadness**



4pm

"Some days when the sky goes down and maybe I go out shopping at the market I find the warm circle of the square, where the light does not fly but devout acquies itself in every object to reveal the intimate color.

A love circle that knead together time and distance, a dense molasses so similar to the paste of my heart, that I don't even go in, I'm already inside. "By Patrizia Cavalli

**#grief #sadness**



Participant A  
Chart overall emotions

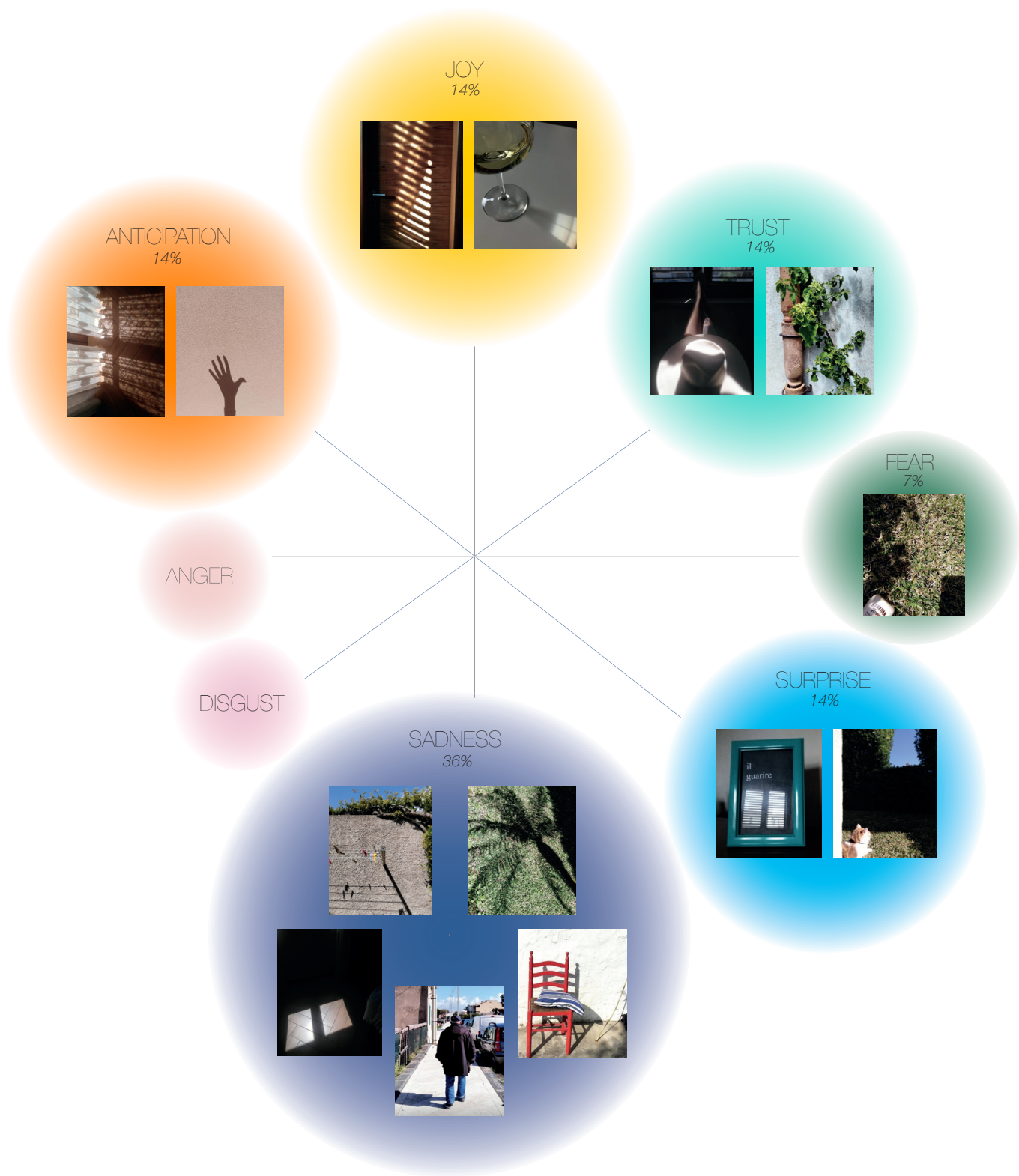








Fig 19. Chart of Participant A emotions. (Illustration by Albè M., 2020)

### 3.5 Results Participant B

	MORNING	EVENING
Day 1_22.04	 <p>10.34am The fresh air of the morning and the smell of wet flowers after the night's rain. Waking up sad yet hopeful, after a troubled night. <b>#sadness #anticipation</b></p>	 <p>1.34pm Tangled life. Apathy, insecurity, anxiety. <b>#fear</b></p>
Day 2_23.04	 <p>11am The sea in a curtain. Dreaming of the sea. <b>#surprise</b></p>	 <p>2pm I want to escape. Desire for freedom, denied. <b>#anticipation</b></p>
Day 3_24.04	 <p>10.15am Wads of flowers, dreams, fluffy, sweet little clouds. <b>#serenity #joy</b></p>	 <p>5.30pm Sweetness of the sun, tranquility, lukewarm melancholy. <b>#tranquility #joy</b></p>



MORNING

EVENING

Day 4\_25.04



1.30am  
#liberation #hope #memory

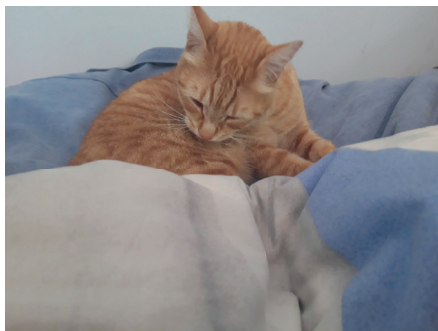
#anticipation



6.52pm  
Countryside in the city #inspiration #peace.

#inspiration #joy

Day 5\_26.04



11.25 am  
Spring cleaning #serenity #sweetness  
#serenity #joy



5.40 pm  
#enthusiasm #boredom  
#anticipation #disgust

Day 6\_27.04



12am  
Mystery and pensiveness #humidity

#sadness



7.43pm  
#Worry #monsters #fear

#fear

MORNING

EVENING

Day 7\_28.04



12am  
#Excess of unused energy #Violence #unexpressed rage  
**#anger**



6pm  
#Yoga # intimacy #solitude #malincony # sadness #sensua-  
lity  
**#sadness**

Participant B  
Chart overall emotions

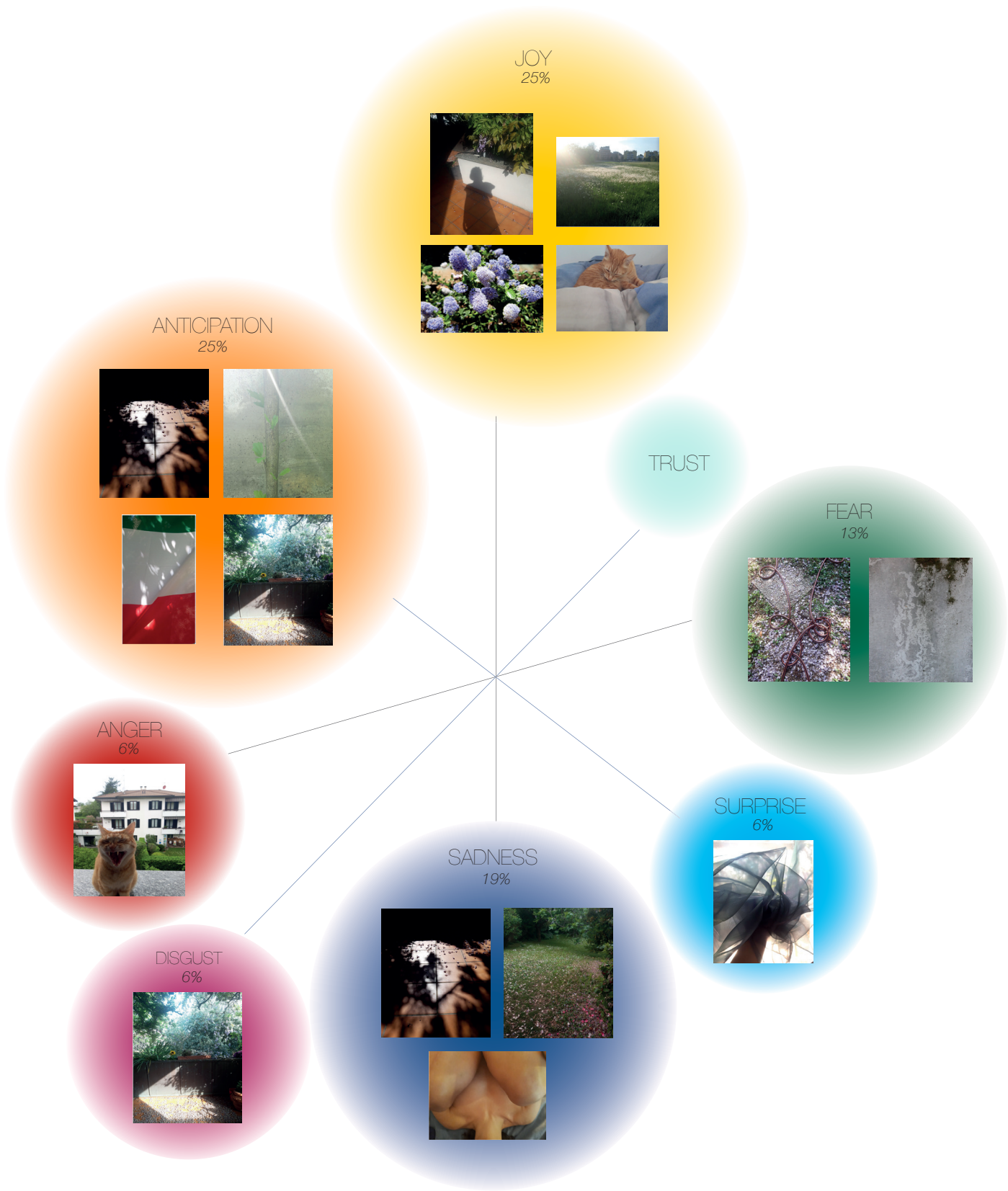



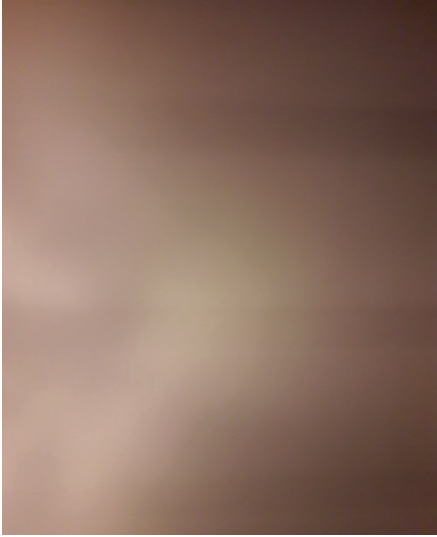

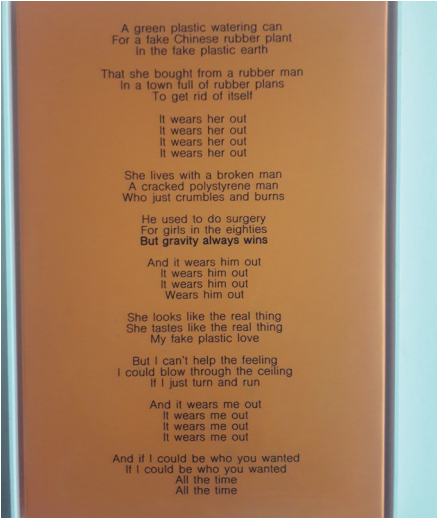


Fig 20. Chart of Participant B emotions. (Illustration by Albè M., 2020)



3.5 Results Participant C

	MORNING	EVENING
Day 1_22.04	<div></div> <div>11.20am</div> <div>#trust</div>	<div></div> <div>2.21pm</div> <div>Something else</div> <div>#pensiveness #sadness #trust</div>
Day 2_23.04	<div></div> <div>10.09</div> <div>Reading</div> <div>#distraction #surprise</div>	<div></div> <div>9.14pm</div> <div>Looking for something.</div> <div>#pensiveness #sadness</div>
Day 3_24.04	<div></div> <div>10.08am</div> <div>#interest #anticipation</div>	<div></div> <div>4.22pm</div> <div>Mirror</div> <div>#apprehension #fear</div>



MORNING

EVENING

Day 4\_25.04



12.09am  
A little bit more far away  
**#acceptance #trust**



1.08pm  
Thinking about nothing  
**#pensiveness #sadness #distraction #surprise**

Day 5\_26.04



11.26am  
**#apprehension #fear #acceptance #trust**



6.20pm  
**#annoyance #anger #boredom #disgust**

Day 6\_27.04



12.22am  
**#interest #anticipation**




5.11pm  
Maybe we can stick the parts, who knows  
**#interest #anticipation**

MORNING

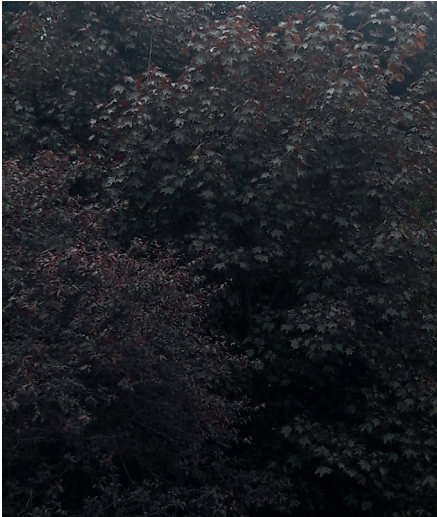
EVENING

Day 7\_28.04



11.07am

#pensiveness #sadness



1.08pm

#distraction #surprise



Participant C  
Chart overall emotions

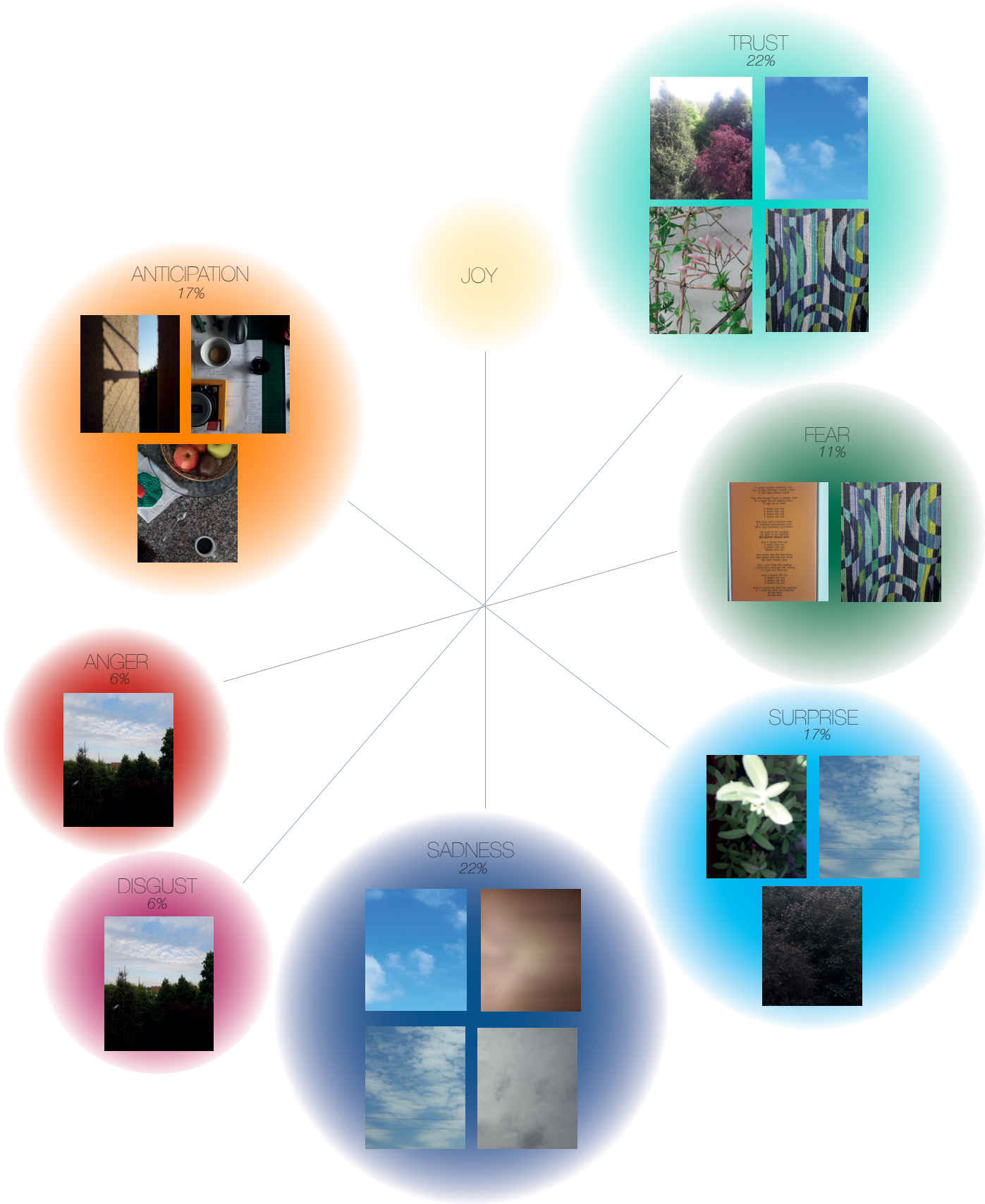

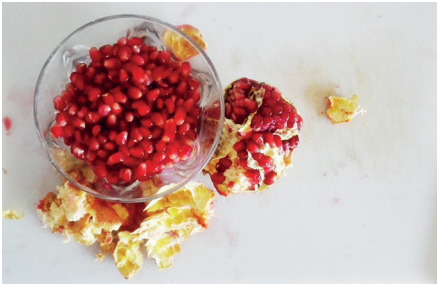


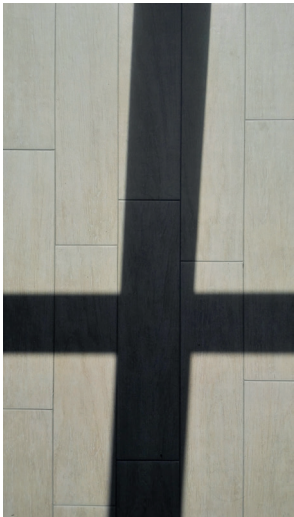
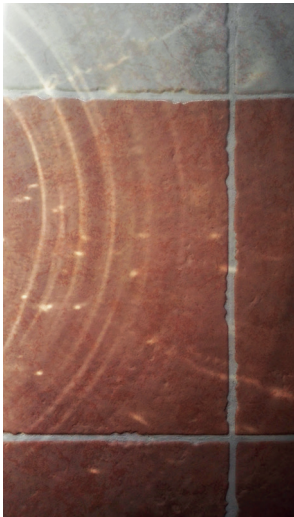


Fig 21. Chart of Participant C emotions. (Illustration by Albè M., 2020)

3.5 Results Participant D

	MORNING	EVENING
Day 1_22.04	<div></div> <div><p>08:07 I feel the need to stretch like the shadows that take shape again after the night. To gather myself from the many scattered places that I visited at night, and to return clear and compact. But calmly, I haven't fully woken up yet.</p><p>#serenity #joy #trust</p></div>	<div></div> <div><p>13:36 Patience. Like the one it takes to shell a pomegranate. The rind has become hard, but one must be strong and slow and delicate at the same time in order not to inadvertently squeeze the grains. I take half an hour, every grain that yields to the pressure of the fingers, a sacrificial victim for some guilt to be eradicated.</p><p>#serenity #joy #trust</p></div>
Day 2_23.04	<div></div> <div><p>08:01 Like me in my home with a wooden ceiling, my tubes of color remain confined in their boxes. Like my emotions, they are waiting for better times. They remain painted in power, only imagined stories. There is peace and there is order in this waiting.</p><p>#pensiveness #sadness #acceptance #trust #anticipation</p></div>	<div></div> <div><p>19:48 My favorite moment of the day is when I sit on the windowsill waiting for the sunset. I feel like a spectator of a show, sorry for the joke, timeless. The colors always light up after a while the sun has crossed the horizon. First, while waiting, I have time to observe the panorama and my framed shadow, and to transfer a little wonder from one to the other. To love, even, to my blurred outlines.</p><p>#surprise #wonder #joy #acceptance #trust</p></div>
Day 3_24.04	<div></div> <div><p>11:04 Misaligned. I feel I have a desired direction, but I have not yet oriented myself perfectly. According to the Mill of Shadows, it's a matter of minutes.</p><p>#anticipation #apprehension #fear #trust</p></div>	<div></div> <div><p>14:11 If I were still a child, I could spend hours playing with the sequin case that casts these reflections. I would chase the shape of the light of the window and rub the poor case in all ways to have always new shapes and svirgoli. But I'm an adult, my lunch break is about to end. I am content to fantasize for a moment, to record a memory. I just grasp things as they are and go back to work.</p><p>#surprise #interest #anticipation for the reflections</p></div>

MORNING

EVENING

Day 4\_25.04



09:44

When I prepare breakfast in the strawberry season, I take it even more comfortably. Not infrequently, the sectional strawberries smile, and I enjoy all those smiles that make me nice. Much more infrequent, however, are hearts. Today is my parents' thirty-third wedding anniversary and is the second year in a row that I can't celebrate it with them. I dedicated this heart to them in a strawberry and I felt equally close. **#love #joy #trust**



19:46

As I sit on the windowsill waiting for sunset, I'm listening to an audio-story, Distance by Raymond Carver, read by Fabrizio Falco. I feel like I have a sea or a lake (that lake that I can't see from my window) inside the ribcage. Just when the sun casts this defined ray towards the park, I deeply feel that I have found a new friendly author who knows where to look, when looking for the truth. **#wonder #surprise #admiration #trust**

Day 5\_26.04



12:20

I had woken up early but went back to sleep. It's Sunday, I got up to open the window, drink a glass of water, but then I went back to bed. My sheets are gray and seem cumulo-nimbus. Normally I regret getting up late and missing hours of light, but today I feel gray like my sheets. The wind will swell or dissolve me, I still don't know.

**#boredom #disgust #acceptance #trust**



20:05

I just finished getting nervous about countless work mishaps. I remember, in the midst of annoyance, carving out a moment of sunset: I only see the last moments. With all my heart, I was looking forward to this day ending. After the sun has crossed the horizon, I reserve the right not to think about problems, but only about pleasant things. Darkness is the time of rest. **#annoyance #anger #acceptance #trust**

Day 6\_27.04



9:11

These objects are always next to me on the table where I telecommute. This morning I look at them there, closed, and I know that I have no desire to open anything. The email, the work files, the books I'm reading, my notebooks, not even my eyes I wanted to open, this morning. The case belonged to my father. The trumpet fantasy calls me back to order: I imagine my grandmother exhorting me in Sicily.

**#boredom #disgust #apprehension #fear**



14:13

I went on to work even while having lunch, until I decided to take a few minutes to prepare coffee. While I waited for the moka to warn me, muttering to be ready, I lay down on the sofa, but soon my sight convinced me that today I would not have reserved any tiny joy to keep in the jealous herbarium of memory. That it was worth going back to work immediately. Today rain and monotony.

**#boredom #disgust #sadness**



MORNING

EVENING

Day 7\_28.04



08:15  
A typical example of a smile in strawberries. Today it's raining, it's cold, I can't connect to the work email. But I had a nice dream before waking up and strawberries, as often, smile at me. The truth is that it would be enough to turn the strawberry upside down to see a grimace of terror. Obviously, it matters more from what angle we choose to observe reality. Today, no matter how much my life will sprout, this strawberry smiles at me.  
#joy #trust









16:34  
When I first put on my glasses as a child (I was already very nearsighted), I remember discovering a quantity of details that I had no idea could even exist. I considered the possibility, only by taking off my glasses, to see my superpower blurred or clear at will. I am always amazed when the surfaces of things, only because they are wet and reflective, take on sharper contours. Lucidity and sharpness go hand in hand with one of the banks of my superpower.  
#surprise #wonder for the reflections

Participant D  
Chart overall emotions



Fig 22. Chart of Participant D emotions. (Illustration by Albè M., 2020)

3.5 Results Participant E

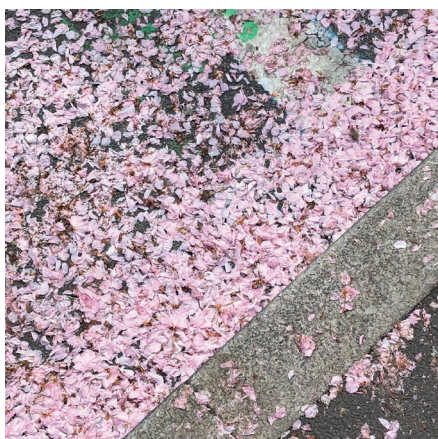
	MORNING	EVENING
Day 1_22.04	 <p>11.46am My daily life is now made up of readings and research, of music that always plays in the background and precious moments spent walking in the woods behind the house. Today I cannot concentrate on my readings and my gaze continues to rest on the shadows of the trees in the garden projected onto the lawn, I simply feel joy in observing the light that makes space between the branches and refracts everywhere. #simplicity <b>#joy</b></p>	 <p>5.53pm I find myself running towards the sun in a golden explosion of light that is reflected on the walls of the house. I feel full of hope and I rejoice because I feel that at this moment light energy flows within me. <b>#joy #hope</b></p>
Day 2_23.04	 <p>8.22am These days away from the world awaken internal storms and dormant emotions in me, there are days when I can tame them and keep them at bay and days when I seem to be crushed by them. I hung this postcard taken in Paris on the wall of my room which reminds me in simple words of a great truth: what you are missing find it in yourself and this thought gives me peace and serenity. <b>#joy</b></p>	 <p>2.15pm I am spending the quarantine at my parents' house, in the house where I have so many memories and where I go back as a child. I am used to living alone and, initially, having to stay closed at home for so long and having to divide a small space scared me, but here I feel safe and I feel I can express my whole self without ever being judged. <b>#safeness #serenity #joy</b></p>
Day 3_24.04	 <p>11.01am Today I feel trapped just like the small statues in this small sculpture given to me by a friend. <b>#fear</b></p>	 <p>11.15pm Throughout the day I felt restless and in the late evening I find myself looking at my ring which represents a snake biting its tail: the gold leaf. It is the symbol of universal energy that is consumed and constantly renewed, the cyclical nature of things that start again from the beginning after reaching their end. I reflect on cyclical time, on the eternal return and recognize the dual and changing nature of my moods, of my feelings. <b>#fear</b></p>



MORNING

EVENING

Day 4\_25.04



10.07am

I am amazed to observe the delicacy of these pink petals that previously found themselves together to form a flower and now, as if to mark the inexorable nature of the passing time, they find themselves scattered on the ground ready to be swept away by the wind and rain, waiting to take on another form. **#surprise #amazement**



3.30pm

I feel relaxed and a little lazy today and I postpone my efforts until tomorrow, I allow myself to the pleasure of reading all afternoon. My body abandons itself just like the languid female bodies of these watercolors. **#calmness #relax #joy**

Day 5\_26.04



11.57am

I love the play of light and shadow projected on the walls. During an exit my eyes stop on this door and I have a great curiosity: I would like to open it and find out what's behind it, discover the life that flows within those walls.

**#anticipation**

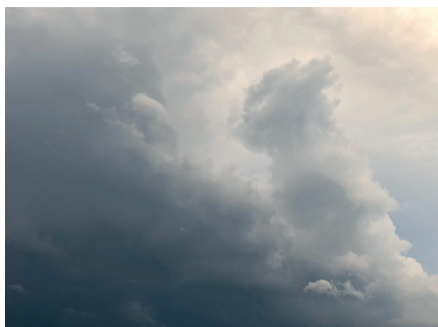


3.47pm

Looking at these flowers, I feel grateful for what I have, just like Curtis Mayfield's song says.

**#joy**

Day 6\_27.04



12.00am

Angry skies. I feel restless and tense breathing the electric air, a temporal aspect that is about to explode.

**#fear**



6.37pm

Today it rained incessantly and this gloomy atmosphere made me want to listen to Tricky, my mind lingers on sweet memories of a distant love, I feel a great nostalgia for all that was.

**#sadness**

MORNING

EVENING

Day 7\_28.04



11.30am  
I feel bored and melancholic, I remember Baudelaire's poetry "spleen".  
**#sadness**



4.42pm  
I collect flowers that the violent hailstorm has detached from the branches and I feel pure and simple joy in giving them to my mom.  
**#joy**

Participant E  
Chart overall emotions

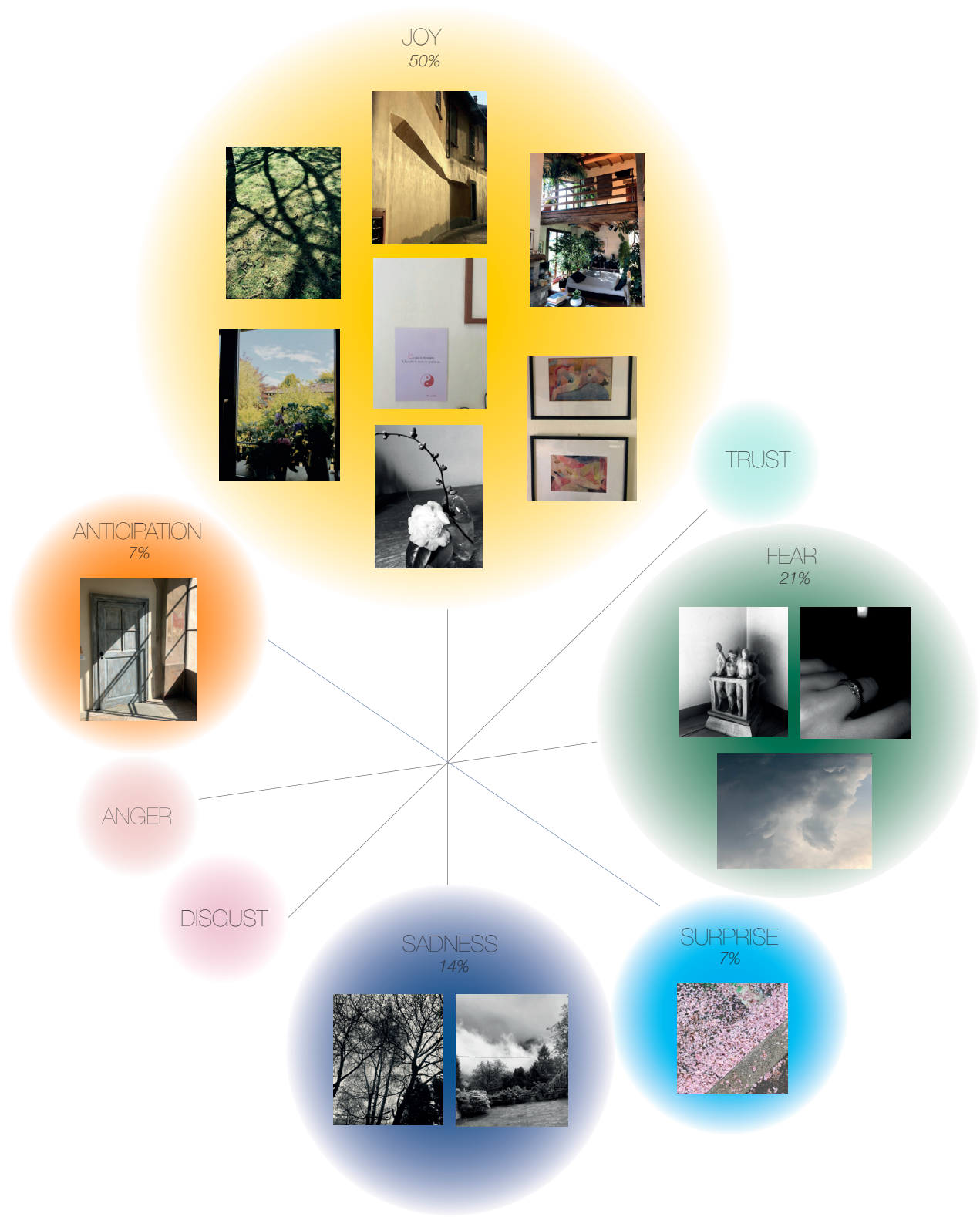


Fig 23. Chart of Participant E emotions. (Illustration by Albè M., 2020)



All participants (A, B, C, D, E)  
Overall charts

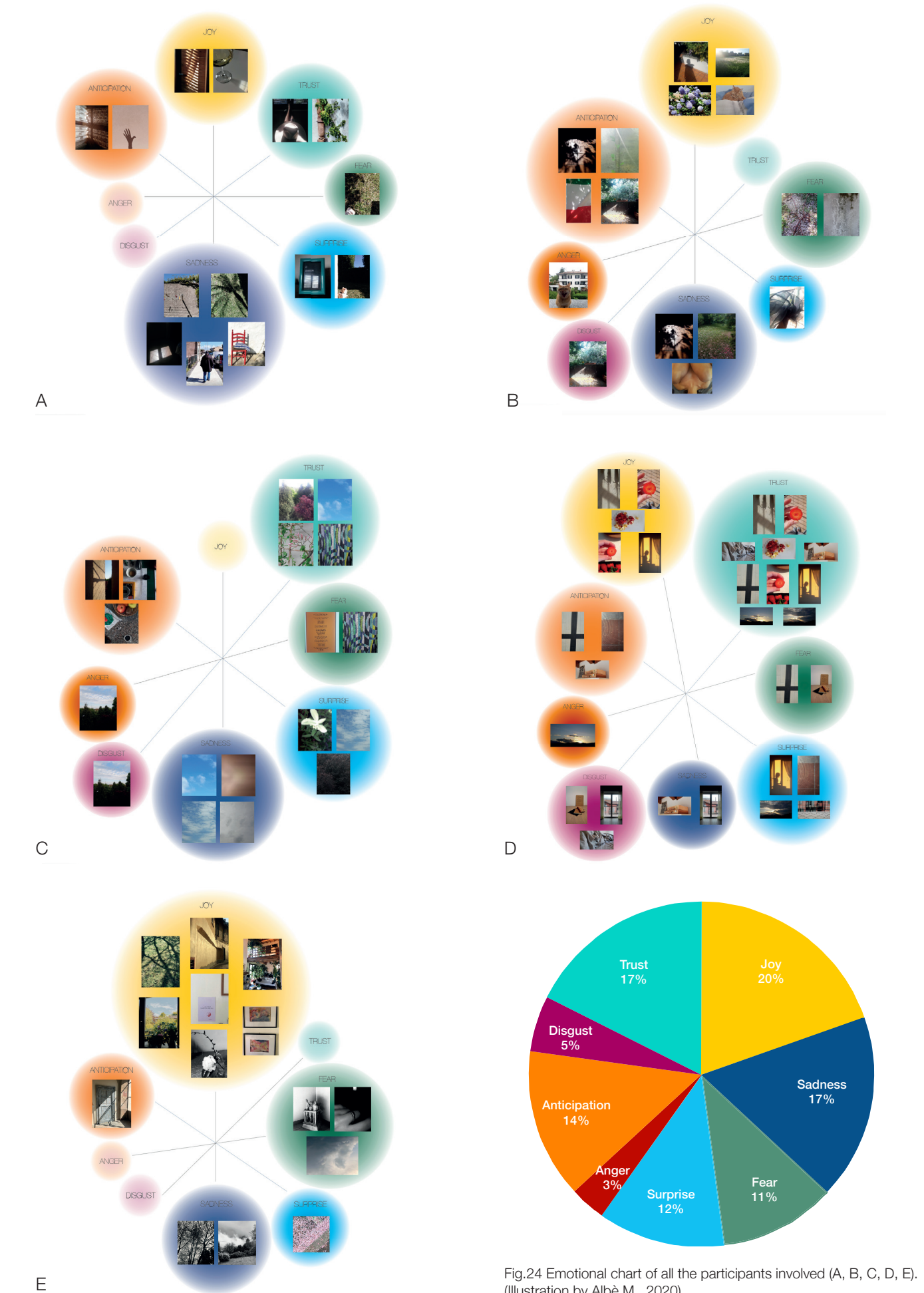


Fig.24 Emotional chart of all the participants involved (A, B, C, D, E).  
(Illustration by Albè M., 2020)

## 4. Discussion



## 4.1 Findings

The analysis of all the results is focused on qualitative aspects in order to encrypt the relationship between the users' emotions and the light in picture they took. The goal is to have an overview and see how the emotions are declined into the photographs lighting atmospheres.

In the first part of the experiment each participant had of course his/her own style and a certain visual tendency, but the main question of this analysis was to established if there was an "universal", common sensibility in order to seek if any fil rouge was to be found in the whole group of people, as a "collective unconscious" (as described in the previous Background literature chapter).

In the following paragraphs the total 70 pictures are analyzed and grouped into 6 Lighting Atmospheres with common light attributes, and placed into the Spectrum of the 8 primary emotions of Plutchick. The lighting attributes are derived partly from the perceptual-based scale of Anders Liljefor.

The six groups of macro Lighting Atmospheres will be presented and analyzed and described in the following pages.



1. HIGH CONTRASTS AND SHARP SHADOWS



2. UNIFORMITY OF BRIGHTNESS AND WEAK/SUBTLE SHADOWS



3. REFLECTIONS OF THE MATERIALS



4. VIVID COLORS



5. SKIES AND SUNSETS



6. BLACK AND WHITE



4.2 Atmosphere 1: HIGH CONTRASTS AND SHARP SHADOWS

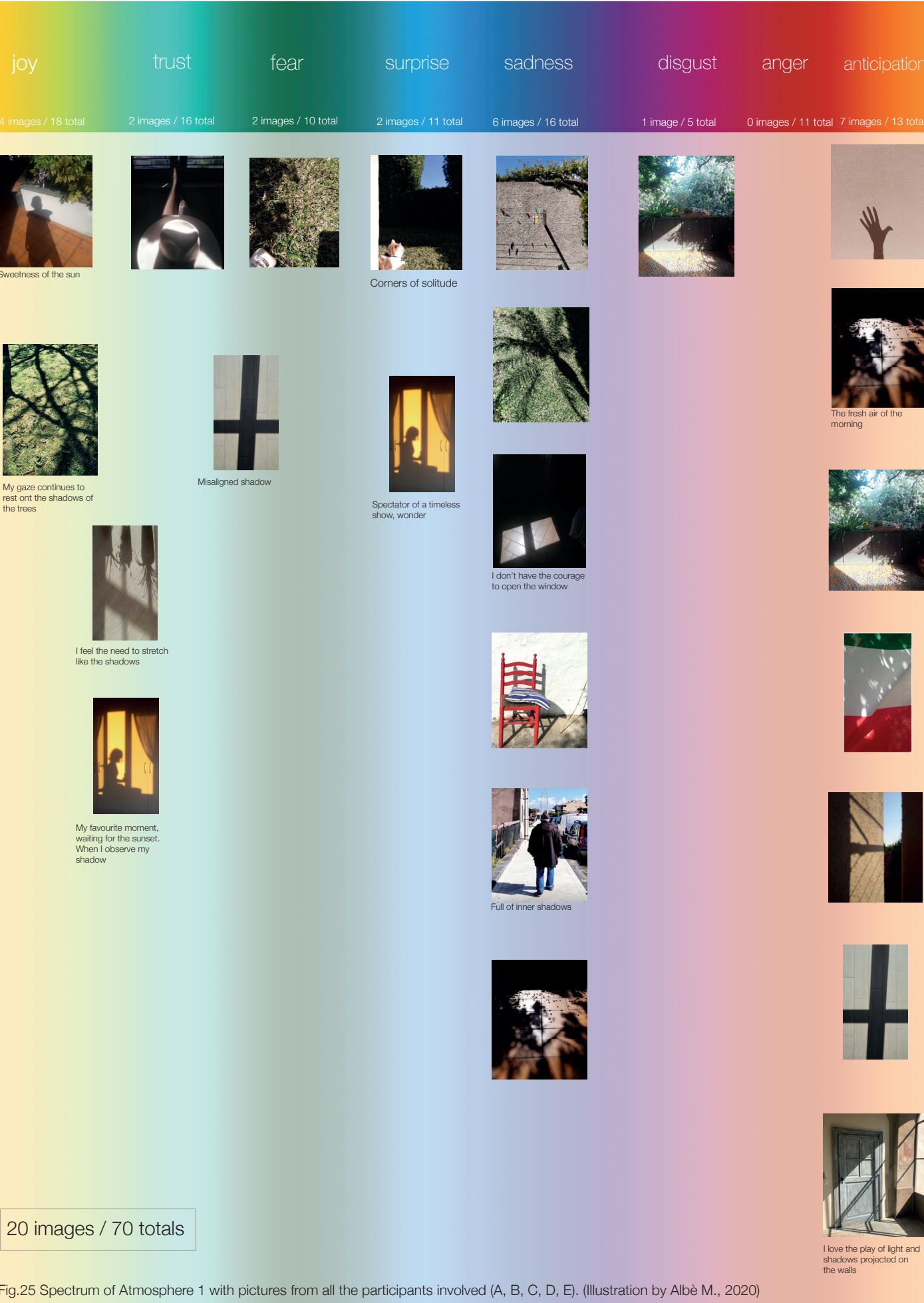


Fig.25 Spectrum of Atmosphere 1 with pictures from all the participants involved (A, B, C, D, E). (Illustration by Albè M., 2020)

4.3 Atmosphere 2: UNIFORMITY OF BRIGHTNESS AND WEAK/SUBTLE SHADOWS

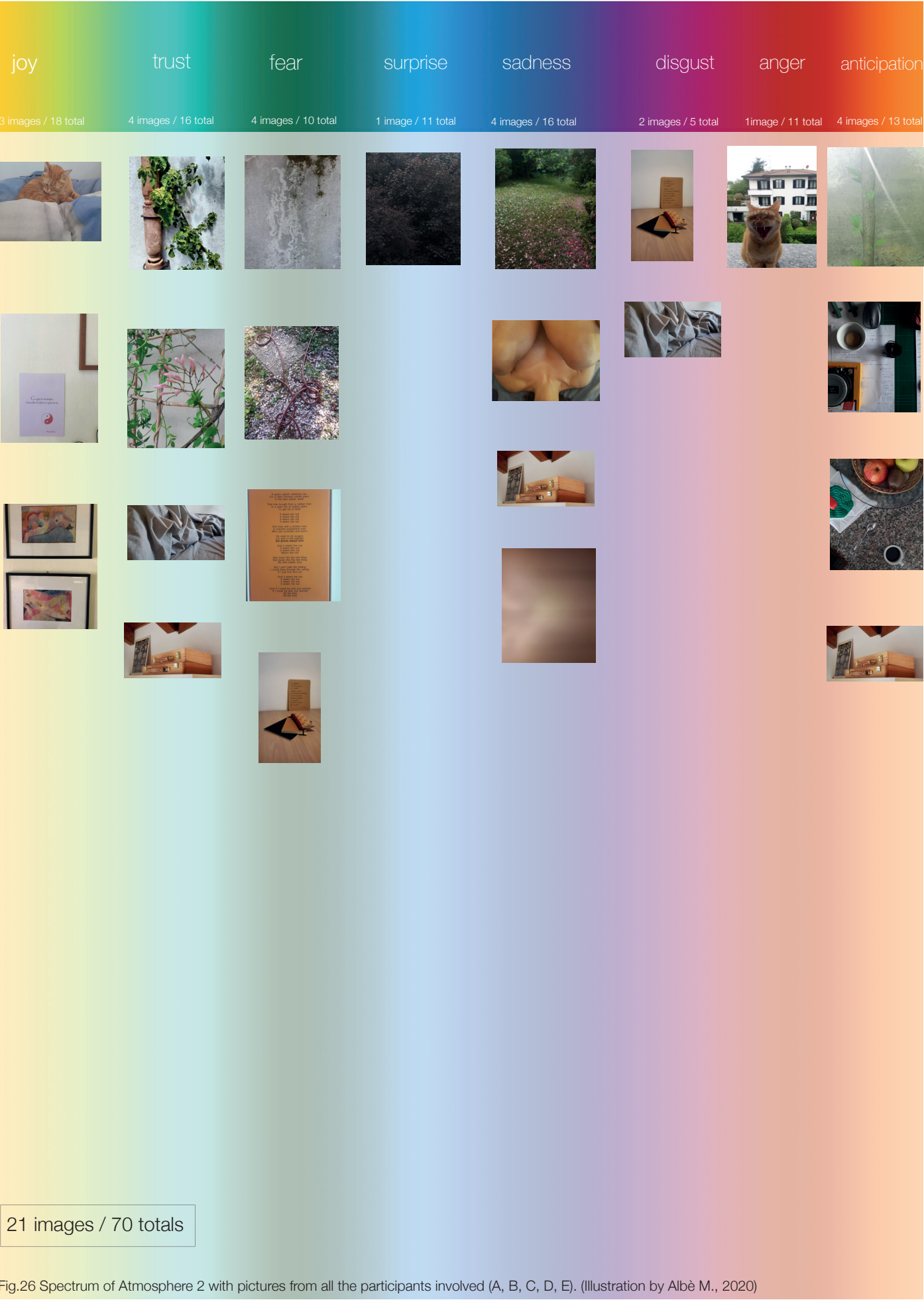


Fig.26 Spectrum of Atmosphere 2 with pictures from all the participants involved (A, B, C, D, E). (Illustration by Albè M., 2020)

4.4 Atmosphere 3: REFLECTIONS OF THE MATERIALS

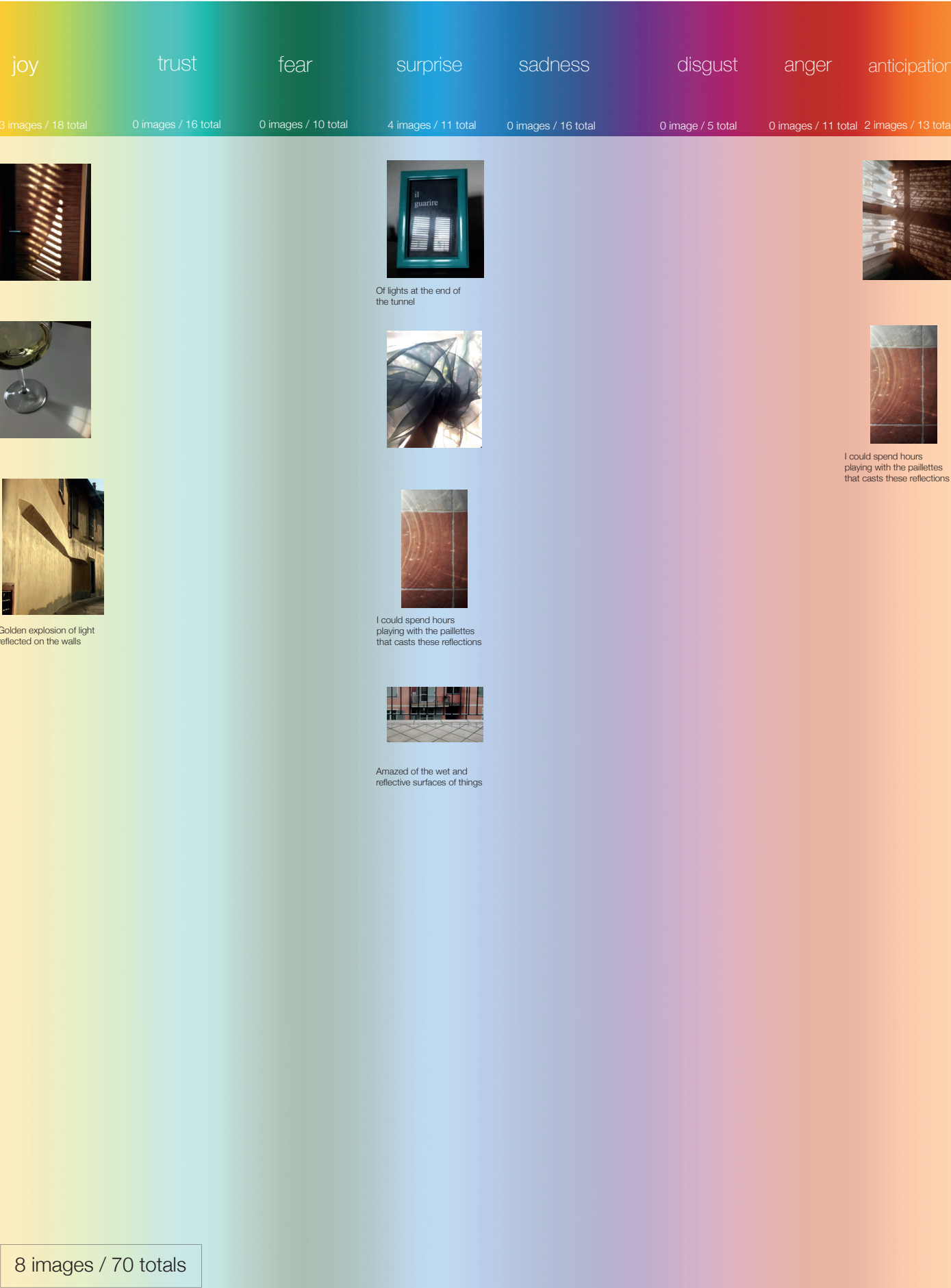


Fig.27 Spectrum of Atmosphere 3 with pictures from all the participants involved (A, B, C, D, E). (Illustration by Albè M., 2020)



4.5 Atmosphere 4: VIVID COLORS

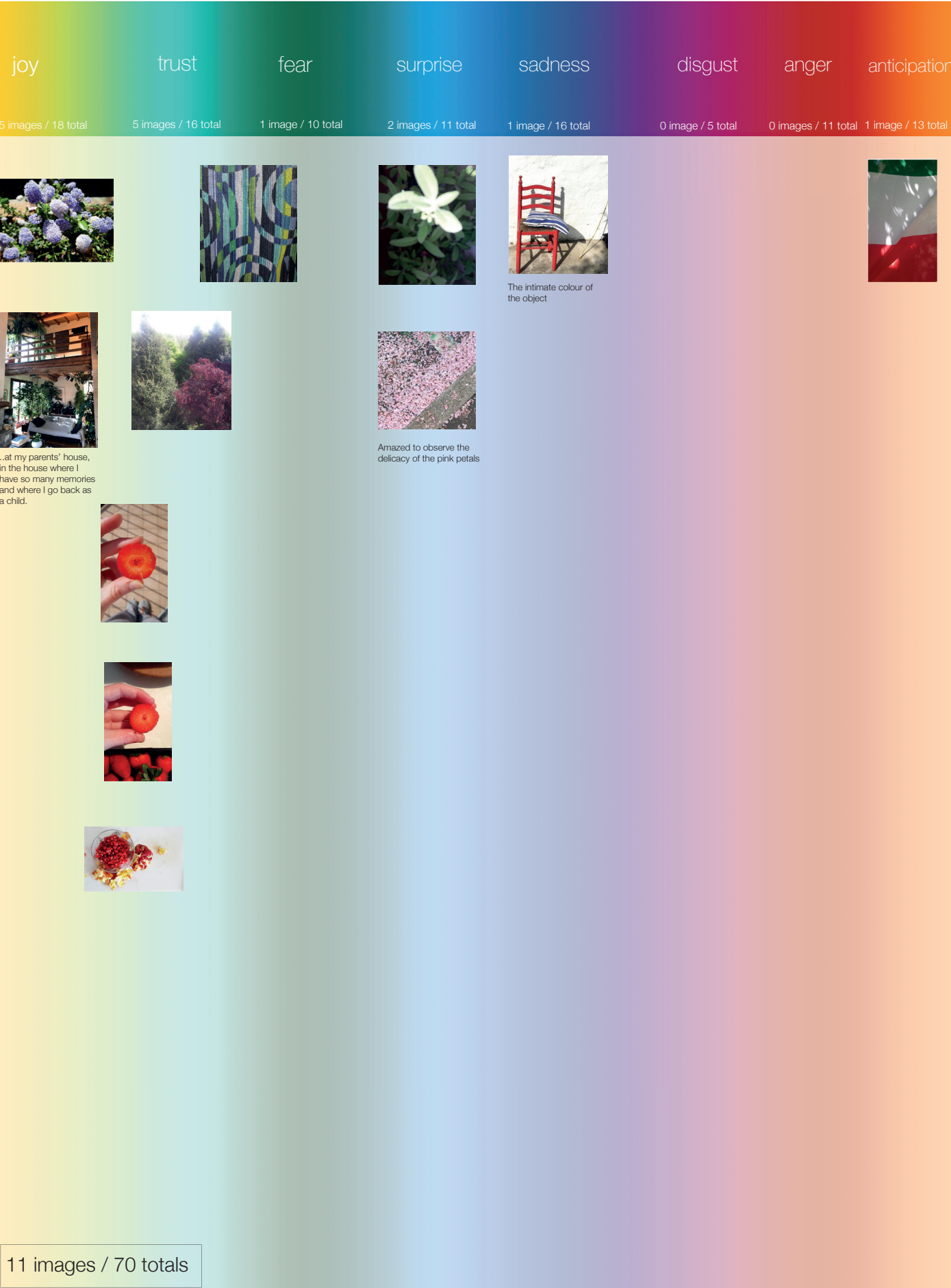


Fig.28 Spectrum of Atmosphere 4 with pictures from all the participants involved (A, B, C, D, E). (Illustration by Albè M., 2020)

4.6 Atmosphere 5: SKIES AND SUNSETS



Fig.29 Spectrum of Atmosphere 5 with pictures from all the participants involved (A, B, C, D, E). (Illustration by Albè M., 2020)

4.7 Atmosphere 6: BLACK AND WHITE

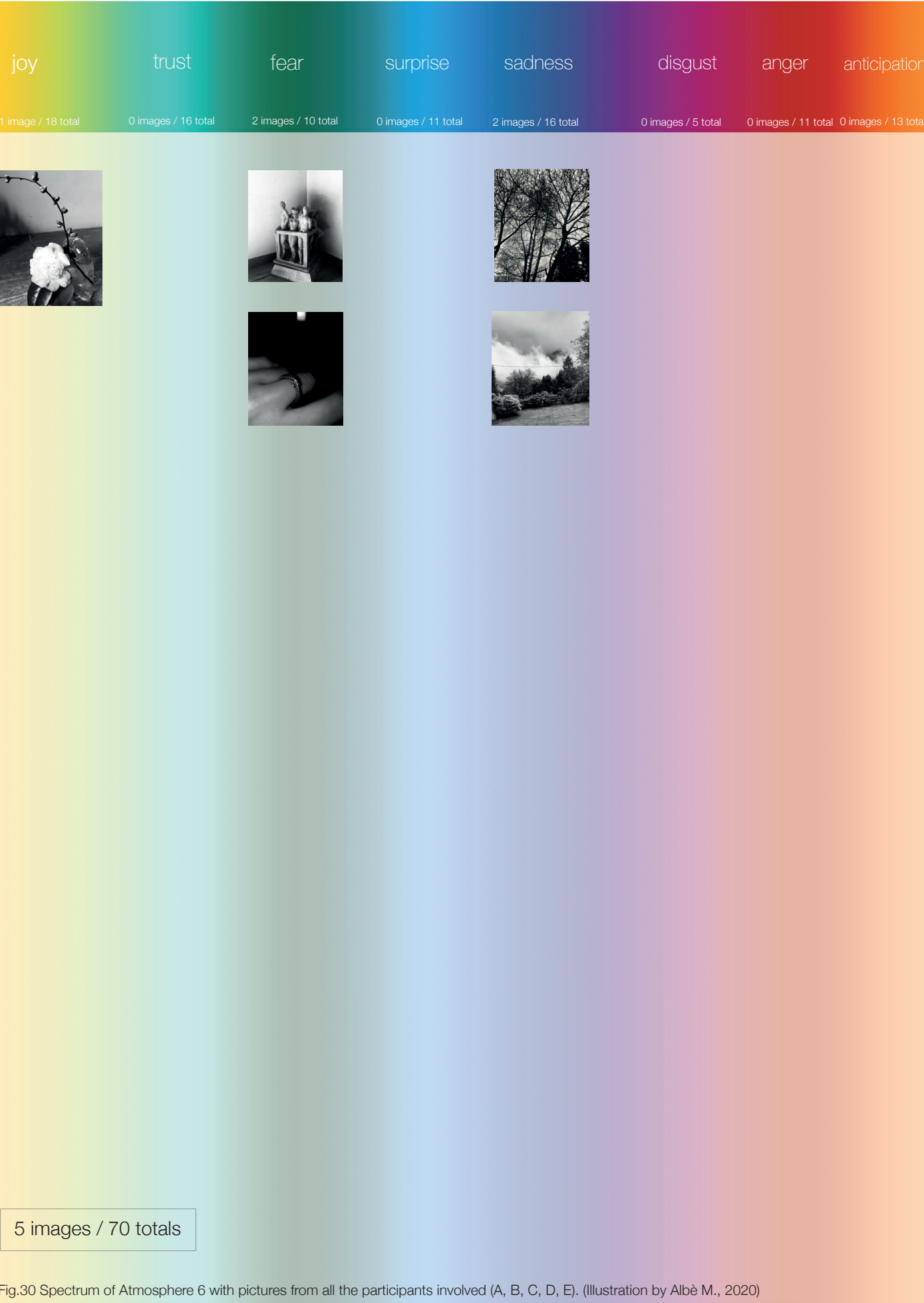


Fig.30 Spectrum of Atmosphere 6 with pictures from all the participants involved (A, B, C, D, E). (Illustration by Albè M., 2020)



1.HIGH CONTRASTS AND SHARP SHADOWS

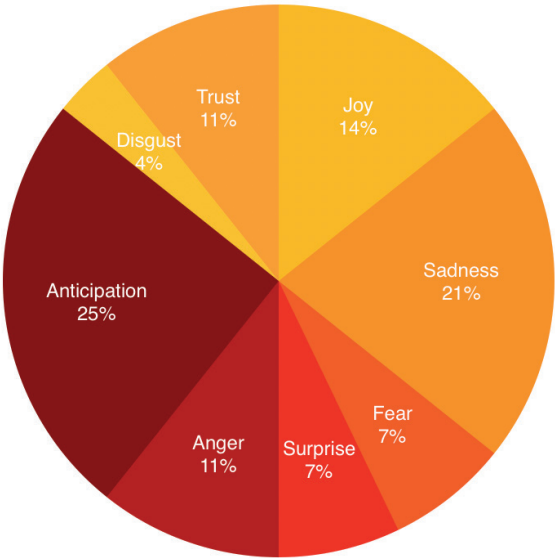


Fig 31. Chart of emotions of Atmosphere 1. (Illustration by Albè M., 2020)

2.UNIFORMITY OF BRIGHTNESS AND WEAK SHADOWS

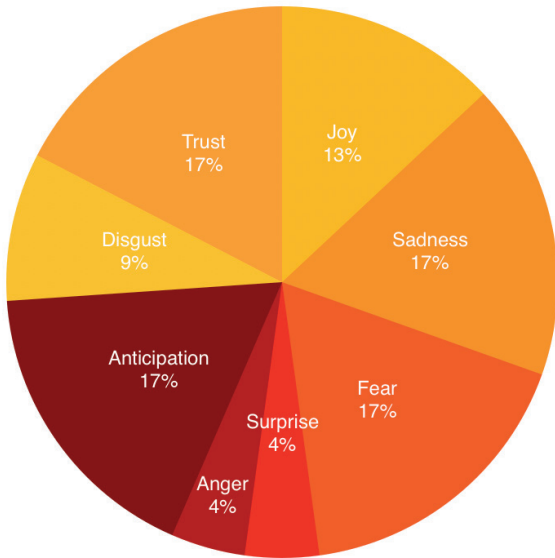


Fig 32. Chart of emotions of Atmosphere 2. (Illustration by Albè M., 2020)

3.REFLECTIONS OF THE MATERIALS

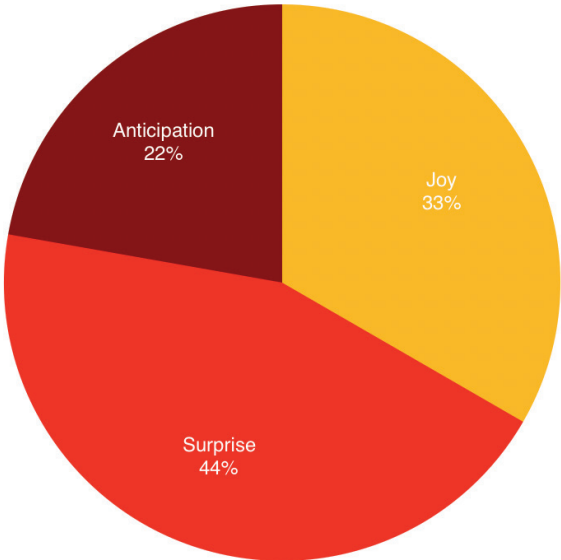


Fig 33. Chart of emotions of Atmosphere 3. (Illustration by Albè M., 2020)

4.VIVID COLOURS

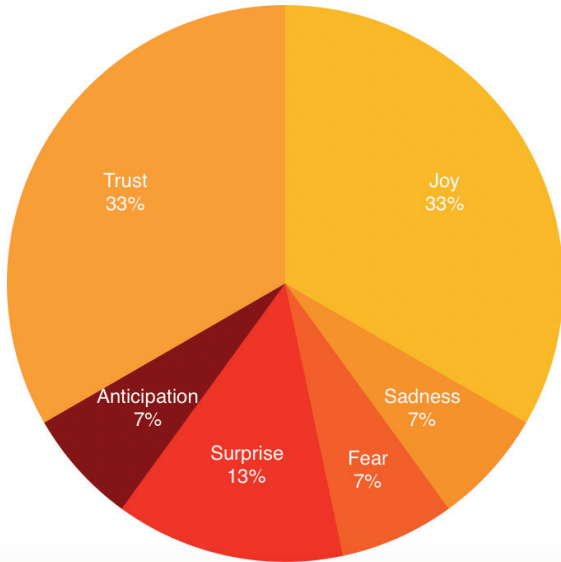


Fig 34. Chart of emotions of Atmosphere 4. (Illustration by Albè M., 2020)

5.SKIES AND SUNSETS

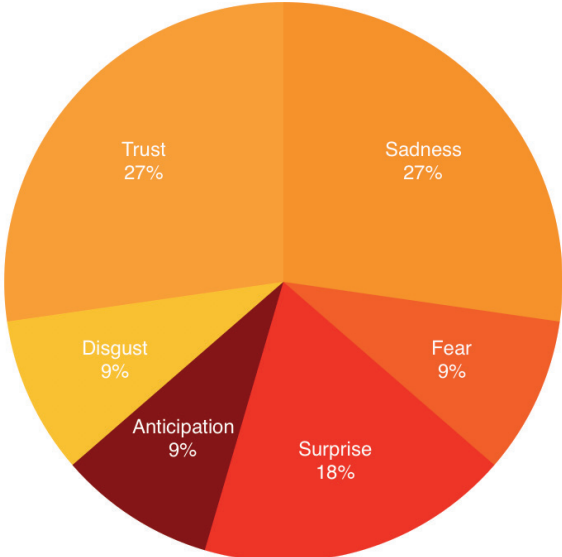


Fig 35. Chart of emotions of Atmosphere 5. (Illustration by Albè M., 2020)

6.BLACK AND WHITE

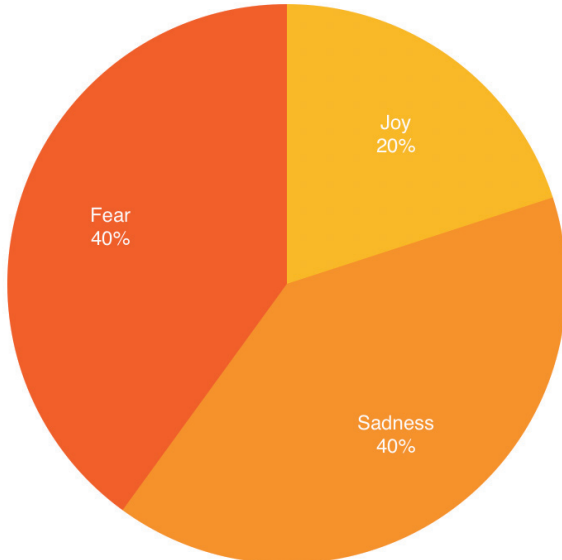


Fig 36. Chart of emotions of Atmosphere 6. (Illustration by Albè M., 2020)

## 4.1 Discussion

The six groups of Atmospheres were analyzed on the basis of the 7 perceptual-based criteria, pointing out main light qualities characteristic of the photographs, that all the participant experienced.

The variability in participants' sensibility and responses to different light situations is evident, and this might depend on personal events that occurred before taking the pictures, as well as the unique participant's personal, cultural, and environmental experience of light, as well as their own sense of aesthetic.

For example, Participant E was the only one to use "Black and white" (Atmosphere 6) where Black is the predominant color, and are related to Negative emotions, Sadness and Fear. Only one was connected to Joy.

Atmosphere 5, "Skies and sunsets" were portrayed only by Participant C (Skies) for the majority linked to Sadness and Participant D (Sunsets), connected to Surprise and Trust.

The first two Atmosphere shows the major variety in terms of emotions.

## 4.2 Possible improvements of the experiment

The main improvement would consist of a broader number of participants of the experiment, but given the limited time and resources to analyse the data, the number of users was limited to only five people.

It would be also very interesting as a further step to involve people from different countries, and see the results linked with a different socio-anthropological background and age, in order to compare the overall answers, as this might potentially influence their response to light.

Furthermore, the time of the experiment could also be extended to more of a week, also to cover different times of the year and see if there is a major trend during the different seasons.

Additionally, another way to conduct the experiment would also be to set the experiment in a determined physical site (not possible at the time when the thesis was written, because of the social isolation) and collect responses from many people, so that to have a documented visual user-experience reviewed.

## 5. Conclusion

## 5.1 Conclusion

Just like the daylight, emotions come and go almost as fast as the change of the weather conditions, and as naturally as daylight conditions, they are fluctuating and developing, melting, morphing as a reaction of adaptation to respond to different stimuli.

It was fascinating to see how the association from the inner to the outer-world of each participant had a unique and personal perspective on (and with) the world, and how this is bonded with the lighting qualities and conditions (brightness, shadows and colors).

The reasons behind their associations are personal, and to find in their personal memories and background, as well as in parts of their unconscious that they might not be deeply aware of.

Anyway, as expressed in the experiment with the pictures captured by each participants and their personal comment and captions, light is indeed filled up with deeply emotional, symbolic, psychological and imaginary content, and this experiment showed a large and wide colorful spectrum of these possible combinations. In fact, each participant projected their inner sensibility towards a spatial lighting scenario, that became atmosphere, in the sense of an actively participated and meaningful moment of their existence, captured in one photograph.

There are no evidence that a specific lighting atmosphere would lead to a univocal, universal emotional response. But as said previously, it would be interesting to expand the numbers of participants in order to have a more consistent quantity of data to examine, to further explore if there are any trends.

The outcome and the value of this research lies in the process itself: the stress of investigating the human emotional sensibility towards lighting, as these people will be eventually the final users, and even to sensitize people about their personal relationship towards their feelings and the light they experience everyday, raising more awareness in one's self.

The hope and the challenge for lighting designers is to embrace the full spectrum of the human mind and soul, and design meaningful spaces and atmospheres that can hold and expand this rich human complexity.





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# Appendix

Original answers from the participants in Italian.

Participant A

Day 1

10pm

Siamo due rette parallele che non si incontreranno mai: l'infinito richiede troppa fiduciosa pazienza.

7pm

Di messaggi subliminali e luci in fondo al tunnel.

Day2

12am

Sketch for a summer on a solitary room.

6pm

Vestiamoci alla marinara, prepariamo i panini, facciamo gonfiare queste vele: oggi salperemo verso l'isola che non c'è.

#serenity

Day3

11am

"It crumbles my heart to think of us part, oh

To know that you hope for the night to be through, oh And the last thing I save is the palm of your wave" \_ Bibio, The palm of your wave

6pm

Queste lancette non si muovono mai, ma non è l'orologio a esser rotto: è il tempo che ci insegna la salvezza della pazienza.

Day4

9am

"I'll be your mirror, Reflect what you are, in case you don't know

I'll be the wind, the rain and the sunset

The light on your door to show that you're home"

I'll be your mirror, The Velvet Underground

4pm

I pizzi di Sicilia, la merenda preparata da mia nonna, fuori il gelsomino in fiore.

Day5

11am

E ci saluteremo così, a distanza, mano svolazzante. Chè io poi alla fine quei baci sulla guancia mica li ho mai sopportati.

3pm

"Il profumo del mare, Non lo sento, non c'è più', Perché non torni qui, Vicina a me" Estate, Bruno Martino

Day6

10am

Il mio gatto ritaglia i suoi spazi, seleziona precisi angoli di solitudine, e in silenzio, davanti quella siepe, ogni giorno, con l'immagine mette in scena i suoi pensieri.

5pm

Io qui. Tu là. Sempre opposti. Sempre divisi. E io che per non continuare a logorarci, non ho neanche il coraggio di passarci sopra e aprire la finestra.

Day7

12am

Umbratile: agg. [dal latino 'umbratilis']

def. Amante della solitudine, schivo, introverso, pieno di ombre interiori. Così tante che vengono fuori.

Umbratile: adj.

4pm

'Certi giorni quando il cielo s'abbassa e esco magari a fare la spesa

al mercato io trovo il cerchio caldo della piazza, dove la luce non vola ma devota s'acquatta in ogni oggetto per rivelare l'intimo colore.

Cerchio amoroso che impasta insieme insieme il tempo e la distanza, una melassa densa così simile alla pasta del mio cuore, che io neanche entro, sono già dentro.'

By Patrizia Cavalli



## Participant B

### Day 1

10.34am

The fresh air of the morning and the smell of wet flowers after the night's rain. Waking up sad yet hopeful, after a troubled night.

1.34pm

#vitaingarbugliata. Apatia, insicurezza, ansia.

### Day2

11am

Il mare in una tenda. Dreaming of the sea.

2pm

Voglio scappare. Libertà desiderata ma negata.

### Day3

10.15am

Batuffoli di fiori, di sogni, soffici, dolci nuvolette. Joy, serenity.

5.30pm

Dolcezza del sole, Tranquillità, tiepida malinconia.

### Day4

1.30am

#liberazione #speranza #memoria

6.52pm

Campagna in città. #ispirazione #pace

### Day5

11.25am

Pulizie di primavera #serenità #dolcezza

5.40 pm

#entusiasmo e #noia

### Day6

12am

#Mistero #umidità

7.43pm

#Preoccupazione #mostri #paura

### Day7

12am

#Eccesso di energia inutilizzata #Violenza #rabbia inespressa

6pm

#Yoga #intimità #solitudine #malinconia #tristezza

#sensualità

## Participant D

### Day 1

08:07am

Sento il bisogno di stiracchiarmi come le ombre che, dopo la notte, riprendono forma. Di raccogliermi dai tanti posti sparsi che, la notte, ho visitato, e tornare nitida e compatta. Ma con calma, non mi sono ancora svegliata del tutto.

1:36pm

Pazienza. Come quella che ci vuole a sgranare un melograno. La scorza s'è fatta dura, ma bisogna essere insieme decisi e lenti e delicati per non spremere inavvertitamente i grani. Impiego mezz'ora, ogni grano che cede alla pressione delle dita, una vittima sacrificale per qualche colpa da estirpare.

### Day2

08:01am

Come me nella mia casa dal soffitto di legno, i miei tubetti di colore restano confinati nelle loro cassette. Come le mie emozioni, se ne stanno in attesa di tempi migliori. Restano dipinti in potenza, storie soltanto immaginate. C'è pace e c'è ordine in questa attesa.

7:48pm

Il momento che preferisco della giornata è quello in cui mi siedo sul davanzale ad aspettare il tramonto. Mi sento spettatrice di uno spettacolo, scusate il gioco di parole, intramontabile. I colori si accendono sempre dopo un po' che il sole ha oltrepassato l'orizzonte. Prima, nell'attesa, ho il tempo di osservare il panorama e la mia ombra incorniciata, e di trasferire un po' di meraviglia dall'uno all'altra. Di voler bene, perfino, ai miei contorni sfocati.

### Day3

11:04am

Disallineata. Sento di avere una direzione desiderata, ma di non essermi ancora orientata perfettamente. Secondo il mulino delle ombre, è questione di minuti.

2:11pm

Se ancora fossi bambina, potrei passare ore a giocare con l'astuccio di paillettes che getta questi riflessi. Inseguirei la sagoma di luce della finestra e stropiccherei il povero astuccio in tutti i modi per avere forme e svirgoli sempre nuovi. Ma sono adulta, la mia pausa pranzo sta per finire. Mi accontento di fantasticare un attimo, di registrarne un ricordo. Mi limito a cogliere le cose così come sono e torno al lavoro.

### Day4

09:44am

Quando preparo la colazione nella stagione delle fragole, me la prendo ancora più con comodo. Non di rado le fragole in sezione sorridono, e io mi beo di tutti quei sorrisetti che me le fanno simpatiche. Molto più infrequenti, invece, sono i cuori. Oggi è il trentatreesimo anniversario di nozze dei miei genitori ed è il secondo anno di fila in cui non posso festeggiarlo insieme a loro. Ho dedicato a loro questo cuore in una fragola e mi sono sentita ugualmente vicina.

7:46pm

Mentre siedo sul davanzale ad aspettare il tramonto, sto ascoltando un audio-racconto, Distanza di Raymond Carver, letto da Fabrizio Falco. Mi sento come se avessi un mare o un lago (quel lago che non posso vedere, dalla mia finestra) dentro la cassa toracica. Proprio nel momento in cui il sole getta questo raggio definito verso il parco, sento profondamente di aver trovato un nuovo autore amico che sa dove guardare, quando cerca la verità.

### Day5

12:20am

Mi ero svegliata presto ma mi sono riaddormentata. È domenica, mi sono alzata per aprire la finestra, bere un bicchier d'acqua, ma poi sono tornata sul letto. Le mie lenzuola sono grigie e sembrano cumulonembi. Normalmente mi spiace di alzarmi tardi e di perdere delle ore di luce, ma oggi mi sento grigia come le mie lenzuola. Il vento mi ingrosserà o mi dissolverà, ancora non lo so.

8:05pm

Ho appena finito di innervosirmi per un'infinità di contrattamenti lavorativi. Mi ricordo, nel mezzo del fastidio, di ritagliarmi un attimo di tramonto: ne vedo solo gli ultimi istanti. Con tutta me stessa, non vedevo l'ora che questa giornata si concludesse. Dopo che il sole ha oltrepassato l'orizzonte, mi riservo di non pensare a problemi, ma soltanto a cose piacevoli. Il buio è il tempo del riposo.

### Day6

9:11am

Questi oggetti sono sempre accanto a me sul tavolo dove telelavoro. Stamattina li guardo lì, chiusi, e so che non ho alcuna voglia di aprire alcunché. La mail, i file di lavoro, i libri che sto leggendo, i miei quaderni, neppure gli occhi avevo voglia di aprire, stamattina. L'astuccio era di mio padre. La fantasia a trombette mi richiama all'ordine: mi immagino mia nonna che mi esorta in siculo.

2:13pm

Sono andata avanti a lavorare anche mentre pranzavo, finché non ho deciso di prendermi qualche minuto per farmi un

caffè. Mentre aspettavo che la moka mi avvisasse borbottando d'esser pronta, mi sono stesa sul divano, ma presto la vista m'ha convinta che l'oggi non mi avrebbe riservato nessuna minuscola gioia da serbare nel geloso erbario del ricordo. Che tanto valeva tornare subito al lavoro. Oggi pioggia e monotonia.

Day7

08:15am

Un tipico esempio di sorriso nelle fragole. Oggi piove, fa freddo, non riesco a connettermi alla mail di lavoro. Ma ho fatto un bel sogno prima di svegliarmi e le fragole, come spesso, mi sorridono. La verità è che basterebbe capovolgere la fragola per vederci una smorfia di terrore. Conta di più, evidentemente, da che angolo scegliamo di osservare la realtà. Oggi, non importa quanto mi sbugiarderà la vita, questa fragola mi sorride.

4:34pm

Quando ho messo per la prima volta gli occhiali da bambina (ero già molto miope), ricordo di aver scoperto una quantità di dettagli che non avevo nemmeno idea potesse esistere. Consideravo la possibilità, soltanto sfilando gli occhiali, di vedere sfocato o nitido a piacimento il mio superpotere. Mi meraviglio ancora sempre quando le superfici delle cose, solo per il fatto di essere bagnate e riflettenti, assumono contorni più nitidi. Lucidità e nitidezza vanno a braccetto con una delle sponde del mio superpotere.

## Participant E

### Day 1

11.46am

La mia quotidianità è ormai fatta di letture e ricerche, di musica che mi fa sempre da sottofondo e di preziosi momenti spesi passeggiando nel bosco dietro casa. Oggi non riesco a concentrarmi nelle mie letture e il mio sguardo continua a posarsi sulle ombre degli alberi del giardino proiettati sul prato, gioisco semplicemente nell'osservare la luce che si fa spazio tra i rami e si rifrange in ogni dove. #simplicity

5.53pm

Mi ritrovo a correre verso il sole in un'esplosione dorata di luce che si riflette sulle mura della casa. Mi sento piena di speranza e gioisco perché sento che in questo momento scorre dentro di me energia luminosa.

### Day2

8.22am

Questi giorni lontani dal mondo risvegliano in me tempeste interne ed emozioni assopite, ci sono giorni in cui riesco a domarli e tenerle a bada e giorni in cui mi sembra di esserne schiacciata. Ho appeso sul muro della mia camera questa cartolina presa a Parigi che mi ricorda in semplici parole una grande verità: ciò che ti manca cercalo in te stessa e questo pensiero mi dà pace e serenità.

2.15pm

Sto trascorrendo la quarantena a casa dei miei genitori, nella casa dove ho così tanti ricordi e dove torno bambina. Sono abituata a vivere sola e, inizialmente, dover stare chiusa in casa così a lungo e dover dividere un piccolo spazio mi spaventava, ma qui mi sento al sicuro e sento di poter esprimere tutta me stessa senza essere mai giudicata.

### Day3

11.01am

Oggi mi sento in trappola proprio come le statuine in questa piccola scultura regalatami da un amico.

11.15pm

Per tutta la giornata mi sono sentita irrequieta e in tarda serata mi ritrovo a osservare il mio anello che rappresenta un serpente che si morde la coda: l'oroboro. È il simbolo dell'energia universale che si consuma e si rinnova di continuo, la natura ciclica delle cose che ricominciano dall'inizio dopo aver raggiunto la propria fine. Rifletto sul tempo ciclico, sull'eterno ritorno e riconosco la natura duale e mutevole dei miei stati d'animo, delle mie sensazioni.

### Day4

10.07am

Provo stupore nell'osservare la delicatezza di questi petali rosa che prima si ritrovavano insieme a formare un fiore e ora, come a segnare la natura inesorabile del tempo che scorre, si ritrovano sparsi sul terreno pronti a essere spazzati via dal vento e dalla pioggia, in attesa di assumere altra forma.

3.30pm

Mi sento rilassata e un po' pigra oggi e rimando a domani ogni mio impegno, mi concedo al piacere della lettura per tutto il pomeriggio. Il mio corpo si abbandona proprio come i languidi corpi femminili di questi acquerelli.

### Day5

11.57am

Amo i giochi di luci e ombre proiettati sui muri. Durante un'uscita i miei occhi si fermano su questa porta e provo una grande curiosità: vorrei aprirla e scoprire cosa c'è dietro, scoprire la vita che scorre dentro quelle mura.

3.47pm

Guardando questi fiori mi sento grata per ciò che ho, proprio come dice la canzone di Curtis Mayfield.

### Day6

12.00am

Cieli arrabbiati. Mi sento irrequieta e tesa respirando l'aria elettrica, aspetto temporale che sta per esplodere.

6.37pm

Oggi ha piovuto incessantemente e questa atmosfera cupa mi ha fatto venire voglia di ascoltare Tricky, la mia mente si sofferma su ricordi dolciamari di un amore lontano, provo una grande nostalgia per tutto ciò che fu.

### Day7

11.30am

Mi sento annoiata e melancolica, mi viene in mente la poesia di Baudelaire "spleen".

4.42pm

Raccolgo fiori che la violenta grandinata ha staccato dai rami e provo pura e semplice gioia nel donarli a mia mamma.



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