

Chapter 5 Color and Culture

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Abstract

Colour is a very complex element, it produces different effects depending on each society. Colours have a relationship with events and experiences that form the collective memory of world. Aesthetic perceptions change based on cultural backgrounds.

Products need to support different aesthetic values and aspirations according to different influences or trends, which can be local, global or a fusion of both. Since aesthetic preferences are directly linked to different CMF elements, the same colour, material or finish can be perceived differently depending on culture.

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1. Meaning Of Colours

It's important to know the true meaning of colours to communicate the right message.

In a CMF Design project, in addition to defining the correct chromatic combination it's important to know the meaning of each hue. Also, the color is connected with the context, this is a key player in the color choice. Color psychology studies how different colors determine human behavior.

1.1 White

White is a neutral color, the archetype of light. In some parts of the world, white has the opposite meaning.

The meaning of white is completely opposed to that of black color. This symbolizes the principle of the vital phase. In general, white expresses hope for the future. It is the symbol of purity, noble feelings, desire for change, virginity, spirituality, technology and glamour.

**CLEANING - PURIFICATION - ELEGANCE - EXCLUSIVITY -
PURITY - LIGHTNESS - NEUTRALITY - MEDITATION -
ABSENCE**

1.2 Black

Black is the absence of light, it evokes both, positive and negative emotions. The first association black has is with mystery, the unknown and the hidden. Black is also associated with style and is a popular color in retail. Black suits are often worn by business men and women, a black suit implies seriousness and professionalism.

**POWER - SOPHISTICATION - CHAOS - DARKNESS - DEATH -
AUTHORITY - MISTERY - PRIVATION - REBELLION**

1.3 Red

Red is a stimulating, fascinating, competitive color. It represents excitement, vital energy, domination and desire. In color psychology, red is the most intense color. And thus, can provoke the strongest emotions.

In some ways, red is the opposite of blue. Red speeds up our heart rate, blood flow, and body temperature. This color stimulates our senses of smell and taste, making us more sensitive to our environments.

EXCITEMEN - PASSION - DANGER - FERTILITY - SEDUCTION - SEXUALITY - AGGRESSION PASSION - LOVE - COURAGE - HATE

1.4 Orange

Orange is warm color, it combines the physical energy of red with the bright happiness of yellow. Since ancient times-long before it was called orange.

This color has had a strong impact. Today, orange continues to elicit strong reactions. Orange is also known to be a color of motivation, lends a positive attitude, and general enthusiasm for life. Overall, orange is great for bringing comfort in tough times, and creating a sense of fun or freedom in your visuals.

FUN - WARMTH - CREATIVITY - ENCOURAGEMENT - HEALTH - STIMULATION - HAPPINESS BALANCE - ENERGY - CONFIDENCE

1.5 Yellow

Yellow Is the colour of the day and the light. This colour stimulates the mind and it is good for communication. Studies show that the meaning of the color yellow can be warmth, cheerfulness, increased mental activity, increased muscle energy. Softer yellows are commonly used as a gender-neutral color for babies and young children. Light yellows also give a more calm feeling of happiness than bright yellows.

Dark yellows and gold-hued yellows look antique and be used in designs where a sense of classic is desired. Bright yellow is an attention-getter, and its contrast with black is the most visible color combination. This combination can be used to communicate a warning sign.

HAPPINESS - SUNSHINE - MIND-STIMULATION - HOPE - ENERGY - VITALITY - FRIENDSHIP COWARDICE - SICKNESS

1.6 Green

Green is the colour of vitality, it is linked to nature. This colour provides emotional and mental balance. It's a combination of yellow and blue. We use green in design for spaces intended to promote creativity and productivity. Green is a color that helps alleviate anxiety, depression, and nervousness.

Different shades of green have different meanings, for example while yellow-green stands for sickness, jealousy, and cowardice, dark green

represents greed, ambition, and wealth, and olive green represents the traditional color of peace.

Green is often used for the packaging of natural health products, it also implies safety.

**GROWTH - HARMONY - FRESHNESS - SAFETY - FERTILITY -
LUCK - WEALTH - HOPE PROSPERITY - NATURE**

1.7 Blue

The archetype of blue is water, the sea, but also the sky. It represents calmness, tranquility, tolerance, meditation. Like many colors, our response to the color blue is complex and sometimes even contradictory.

Blue represents introspective journeys and symbolizes wisdom and depth of understanding. But blue is also a symbol of depression and the depths of the human psyche. This color typically evoke emotions of professionalism, authority, and trust, it can be considered as neutral and timeless. The color blue is highly associated with responsibility and is therefore regarded as representing reliability. For good reason, the insurance industry has widely embraced this color to represent their brand.

**STABILITY - PEACE - CALM - RELAXING - MEDITATIVE -
AUTHORITY - WATER - TRANQUILITY -SECURITY**

1.8 Purple

Purple is the colour of ambivalence and suggestion, it can calm the mind and the nerves, as well as encourage creativity. As a combination of red and blue, it carries stimulation of red and the calmness and integrity of blue. This color has long been associated with wealth and royalty, as purple dye was precious and expensive. Purple used professionally can feel a bit unsettled and therefore uncomfortable. In the world of advertising and fashion, the color purple is seen as a soothing and vibrant color and usually symbolizes luxury as well as the expression of femininity in women. For its smoothing properties it is often used in beauty and anti-aging products.

**LUXURY - ROYALTY - ROMANCE - SPIRITUALITY - MISTERY
- SUGGESTION - MAGIC CREATIVITY - FEMININITY**

2. What is CMF design?

CMF design is a new professional discipline which focuses on designing and specifying colours, materials and finishes to enhance the attributes of products.

The CMF designer is the person who is specialized in CMF design, he or she is also called colour designer, his mission is:

- to increase product performance, aesthetic appeal, and functionality.
- to reach new consumers and new markets.

There are different approaches to the practice of CMF design according to geographical location, type of industry, level of experience and cultural background; but some fundamental definitions are in common.

3. Who is the cmf designer?

The CMF designer create a strong emotional connection with the consumer.

- 1 He increases the product's performance, aesthetic appeal, and functionality.
- 2 He helps a product to stand out from its competition.
- 3 He raises the perceived value of the product.
- 4 He reaches a new consumer, market or geography.
- 5 He provides a compelling sensory experience.
- 6 He creates a system of tiered product positioning.
- 7 He refreshes or reposition your current product without changing manufacturing processes.

4. CMF/different levels

4.1 C/Colours

The cmf designer knows colours from his consideration of hue, value and saturation to the psychological effects on the target market. He can design the perfect colour and the perfect combination of more colours.

4.2 M/Materials

CMF designer also has a great passion for material design, he is specialized in developing materials to solve problems. He works with his team of experts in several fields: textile, leather, plastic, wood, composites and metals.

4.3 F/Finish

The CMF designer is obsessed over details on a product, from the gloss level, to the texture and finish.

He ensures that the final result will not only make a strong impact, but it will be functionally and lasting too.

5. CMF design steps

5.1 Brief

This is a short summary document outlining the goal of the project, the specific task at hand, the budget and the expected timeline

5.2 Company analysis

The company has to be analysed to understand the characteristics, the values and fields in which it operates. The products taken into consideration will have one or more boards showing all their functional and chromatic properties.

5.3 Competitors analysis

It's important to research competitors interesting and competitive products to get information on cost, usage, colors and materials. The products taken into consideration will have a board that shows all its functional and chromatic properties.

5.4 Target analysis

Large and small companies classify people into groups according to a set of similar characteristics and consumption behaviours.

The target takes into account: age, gender, taste, job, level of education, etc.

5.5 Trend analysis

The trend tracking process is based on constant observation, documentation and analysis of different contexts. The color landscape is in constant evolution. Therefore, the identification of current and emerging trends is fundamental. Products which have an interesting formal, chromatic and material language are able to provide the client with different design ideas. Trends are not static but fast moving, always changing. Trends help to anticipate possible future scenarios, as well as new consumers' needs, desires and aspirations. The CMF designer delivers comprehensive briefings in forms of visuals, moodboards, lifestyle trends and inspirations, everything tailored for the brand and products.

5.7 Definition of the message

It is important to understand what is message to communicate to the customer.

To define the right message, it is important to ask yourselves these kind of questions: What features should the products have?

Resistance - Versatility - Technology - etc.

What is the message you want to communicate?

Tradition - Classicity - Innovation - Luxury - Sport - etc

5.8 Cmf palettes

Colours palette comes from moodboards just created. The colors will be codified using different color systems (Ncs; Munsell, Pantone, etc.) depending on the design area you are working on. Color systems are fundamental for the choice and control of colors in the project. In the past, color accuracy has always been a problem because often there was a discrepancy between the choice of a color and the actual realization of the project. Colours are usually organized by hue, value and chroma, but it depends on the colour system that has been used. The palette is a physical collection of samples or tangible representation of colour, material and finish. The number of color depends on the level of complexity of the product.

5.9 Color scheme

It's important to show how colours harmonies and chromatic schemes have been chosen.

The proposal can be communicated with different diagrams like bars, circles, tangram, etc.

The most used chromatic schemes are: monochromatic scheme, monochromatic with accent neutral with accent scheme, bichromatic scheme, polichromatic scheme, achromatic scheme.

5.10 Application and color variants

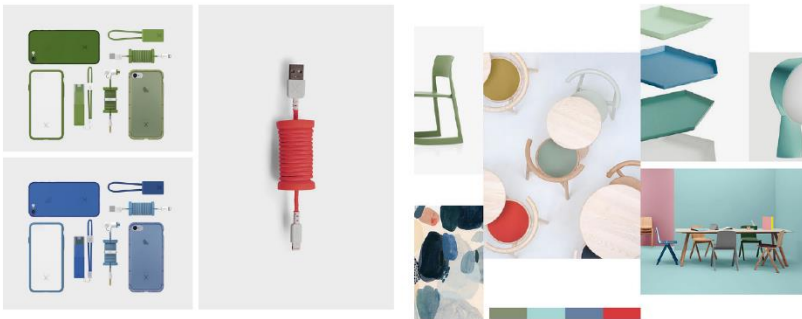
On the products variants the colour scheme can be applied in different ways depending on their amount, if a family look needs to be created. It's a complex process. Ideally, each of parts that will change colour or material should be isolated in a separate digital layer (KeyShot program is a good choice).

Product visualizations can also be physical "Appearance models", or prototypes.

6. Examples of CMF design projects



Design of color, material and nish for Boutonniere by Pininfarina Segno, the rst fancy wearable writing accessory. The adopted de ned the entire product range. *Plated metal and matte painted metal - Dusty colors - Monochromatic scheme.*



Design of colors, materials and nishes for the entire ELEMENT product range by Philo, cell phone accessories. Different colors harmonically matched with different surface nishes have been applied to the products. *Low chromatism - Monochrome scheme with accent.*

7. Conflict of interest declaration

The author declares no conflict of interest.

8. Funding source declaration

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