

TEXTILE AND FASHION DESIGN

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Directorate of Distance Education

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CREATE MOTIFS USING DIFFERENT ELEMENTS AND PRINCIPLES OF DESIGN

STRUCTURE

- 1.1 Learning Objective
- 1.2 Introduction
- 1.3 To Develop a Basic Understanding about Elements and Principles of Design
- 1.4 Student Activity
- 1.5 Able to Create Different Types of Motifs
- 1.6 Summary
- 1.7 Glossary
- 1.8 Review Questions

1.1 LEARNING OBJECTIVE

After studying this unit you should be able to:

- Explain the meaning and definition of Contrast Designer.
- Describe the **main responsibilities of an** element of a design.
- Explain the meaning and definition of Principles of Design.
- Describe the Different Types of Motifs Design.
- Explain the meaning and significance of Textile Design.

1.2 INTRODUCTION

One of the most difficult parts of talking about the principles of design is figuring out just how many principles. And once that's been figured out, which of these supposed design fundamentals should be included?

Search for "principles of design" and Google will return results for articles that include from five to more than a dozen individual principles. Even the articles that agree on the number don't necessarily agree on which ones should be *included* in that number.

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In reality, there are roughly a dozen basic principles of design that beginning and expert designers alike should keep in mind when working on their projects. In addition, there are another dozen or so “secondary” design principles that are sometimes included as basics (for example, the Gestalt Principles, typography, color, and framing).

Basic Design Principles

As already mentioned, there is no real consensus in the design community about what the main principles of design actually are. That said, the following twelve principles are those mentioned most often in articles and books on the subject.

- **Contrast:** One of the most common complaints designers have about client feedback often revolves around clients who say a design needs to “pop” more. While that sounds like a completely arbitrary term, what the client generally means is that the design needs more contrast.

Contrast refers to how different elements are in a design, particularly adjacent elements. These differences make various elements stand out. Contrast is also a very important aspect of creating accessible designs. Insufficient contrast can make text content in particular very difficult to read, especially for people with visual impairments.

- **Balance:** Every element of a design—typography, colors, images, shapes, patterns, etc.—carries a visual weight. Some elements are heavy and draw the eye, while other elements are lighter. The way these elements are laid out on a page should create a feeling of balance.
- **There are two basic types of balance:** symmetrical and asymmetrical. Symmetrical designs layout elements of equal weight on either side of an imaginary center line. Asymmetrical balance uses elements of differing weights, often laid out in relation to a line that is not centered within the overall design.
- **Emphasis:** Emphasis deals with the parts of a design that are meant to stand out. In most cases, this means the most important information the design is meant to convey.

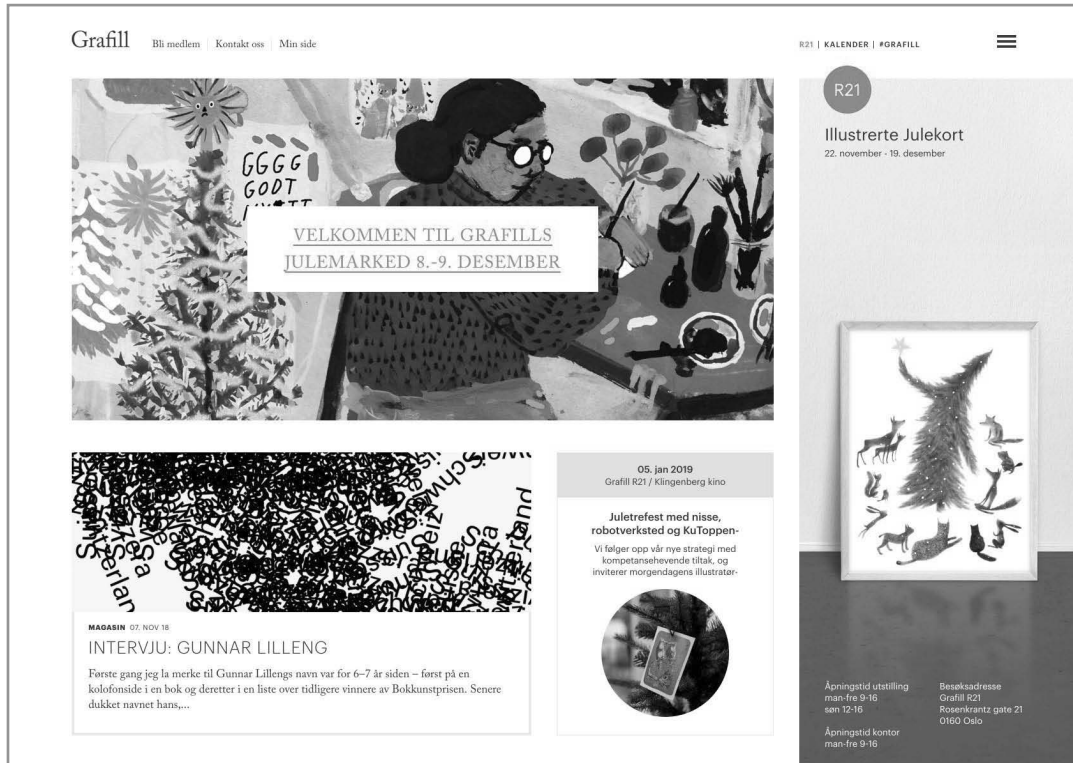
Emphasis can also be used to reduce the impact of certain information. This is most apparent in instances where “fine print” is used for ancillary information in a design. Tiny typography tucked away at the bottom of a page carries much less weight than almost anything else in a design, and is therefore deemphasized.

Proportion: Proportion is one of the easier design principles to understand. Simply put, it’s the size of elements in relation to one another. Proportion signals what’s important in a design and what isn’t. Larger elements are more important, smaller elements less.

The proportional differences between the tiny type and large images clearly demarcate which elements are the most important on Collin Hughes’ website.

- **Hierarchy:** Hierarchy is another principle of design that directly relates to how well content can be processed by people using a website. It refers to the importance of elements within a design. The most important elements (or content) should *appear* to be the most important.

Create Motifs
using Different
Elements and
Principles of
Design
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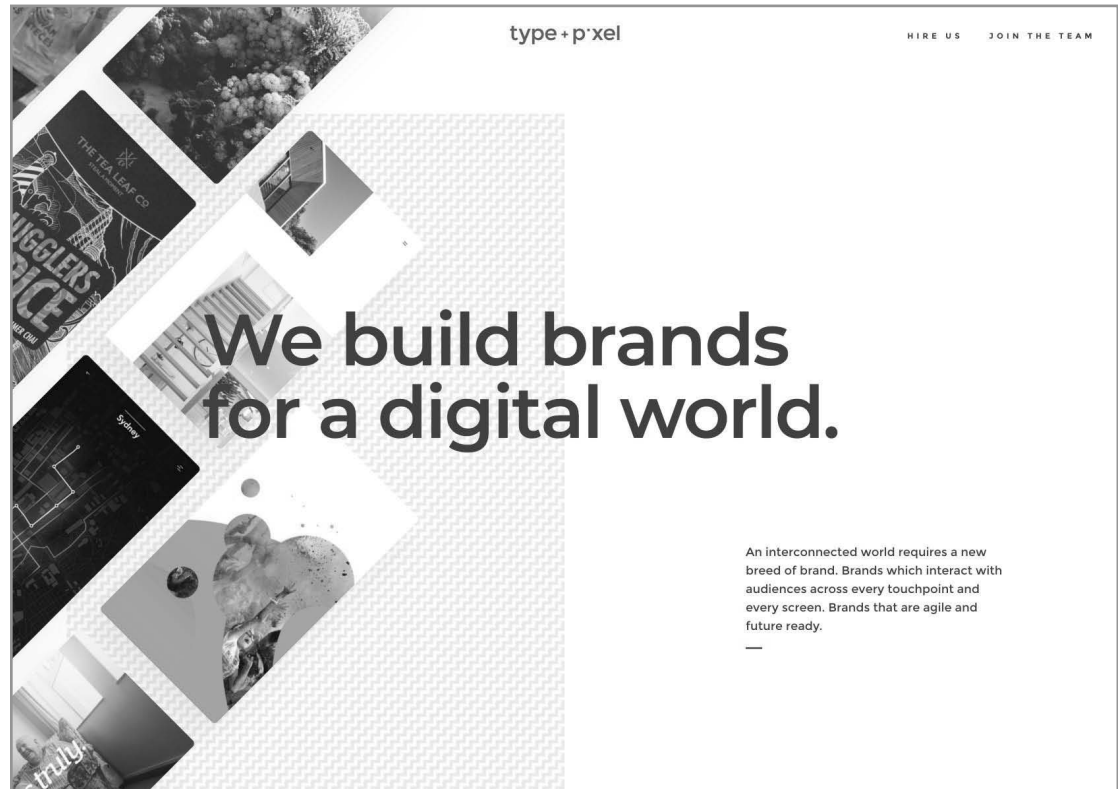
Grafill's website creates hierarchy through the use of layout (the most important part is at the top), size (more important content is larger), and typography (headlines are larger than body text).

Hierarchy is most easily illustrated through the use of titles and headings in a design. The title of a page should be given the most importance, and therefore should be immediately recognizable as the most important element on a page. Headings and subheadings should be formatted in a way that shows their importance in relation to each other as well as in relation to the title and body copy.

Repetition: Repetition is a great way to reinforce an idea. It's also a great way to unify a design that brings together a lot of different elements. Repetition can be done in a number of ways: via repeating the same colors, typefaces, shapes, or other elements of a design.

This chapter, for example, uses repetition in the format of the headings. Each design principle is formatted the same as the others in this section, signaling to readers that they're all of equal importance and that they're all related. Consistent headings unify these elements across the page.

NOTES



The image above is a great example of repetition in design.

- **Rhythm:** The spaces between repeating elements can cause a sense of rhythm to form, similar to the way the space between notes in a musical composition create a rhythm. There are five basic types of visual rhythm that designers can create: random, regular, alternating, flowing, and progressive.
Random rhythms have no discernable pattern. Regular rhythms follow the same spacing between each element with no variation. Alternating rhythms follow a set pattern that repeats, but there is variation between the actual elements (such as a 1-2-3-1-2-3 pattern). Flowing rhythms follow bends and curves, similar to the way sand dunes undulate or waves flow. Progressive rhythms change as they go along, with each change adding to the previous iterations.
Rhythms can be used to create a number of feelings. They can create excitement (particularly flowing and progressive rhythms) or create reassurance and consistency. It all depends on the way they are implemented.
- **Pattern:** Patterns are nothing more than a repetition of multiple design elements working together. Wallpaper patterns are the most ubiquitous example of patterns that virtually everyone is familiar with.
In design, however, patterns can also refer to set standards for how certain elements are designed. For example, top navigation is a design pattern that the majority of internet users have interacted with.



Top navigation is one of the most ubiquitous design patterns on the internet, illustrated here on Isabelle Fox’s website.

- **White Space:** White space—also referred to as “negative space”—is the areas of a design that does not include any design elements. The space is, effectively, empty.

Many beginning designers feel the need to pack every pixel with some type of “design” and overlook the value of white space. But white space serves many important purposes in a design, foremost being giving elements of the design room to *breathe*. Negative space can also help highlight specific content or specific parts of a design.

It can also make elements of a design easier to discern. This is why typography is more legible when upper and lowercase letters are used since negative space is more varied around lowercase letters, which allows people to interpret them more quickly.

In some cases, negative space is used to create secondary images that may not be immediately apparent to the viewer. This can be a valuable part of branding that can delight customers. Take the hidden arrow in the FedEx logo, for just one example.

- **Movement:** Movement refers to the way the eye travels over a design. The most important element should lead to the next most important and so on. This is done through positioning (the eye naturally falls on certain areas of a design first), emphasis, and other design elements already mentioned.
- **Variety:** Variety in design is used to create visual interest. Without variety, a design can very quickly become monotonous, causing the user to lose interest. Variety can be created in a variety of ways, through color, typography, images, shapes, and virtually any other design element.

NOTES

However, variety for the sake of variety is pointless. Variety should reinforce the other elements of a design and be used alongside them to create a more interesting and aesthetically pleasing outcome that improves the user's experience.

- **Unity:** Everyone has seen a website or other design out there that seemed to just throw elements on a page with no regard for how they worked together. Newspaper ads that use ten different fonts come to mind almost immediately.

Unity refers to how well the elements of a design work together. Visual elements should have clear relationships with each other in a design. Unity also helps ensure concepts are being communicated in a clear, cohesive fashion. Designs with good unity also appear to be more organized and of higher quality and authority than designs with poor unity.

1.3 TO DEVELOP A BASIC UNDERSTANDING ABOUT ELEMENTS AND PRINCIPLES OF DESIGN

Elements of Design in Textiles & Clothing

A design is an arrangement or organization of items. The elements of design are the basic components of a two- or three-dimensional arrangement. Any visual work can be dissected to identify the five elements of design. These five elements are integral to every type of design, including designs of textiles and clothing.

Line

There are several different types of lines, including vertical, horizontal and diagonal. Lines can be thick or thin, zigzag or jagged, straight, curved or wavy. In apparel design, lines can be a seam or embroidery or be used to describe how the garment fits the body. In textile design, lines can be a pattern on fabric, such as a stripe, or can be the weave of a piece of cloth. Every type of textile and clothing design starts with a line.

Shape

Shape is a very important element of design. Shapes are formed by connecting different types of lines. In apparel design, the term "shape" applies to the way the garment fits. Bell-bottom pants, a-line skirts and trapeze tops are all examples of shapes in apparel design. Shape can also be achieved by folding and stitching fabric, like a pleat or a dart. In textile design, shape applies to patterns on fabric. Polka-dot, hound's tooth and plaid are all examples of shapes in fabric.

Color

Color is another element of design. Various colors, shades and hues evoke different emotions and moods. Certain colors, such as blue and orange, are complimentary on the color wheel. Choice of color in apparel design is important to convey the mood or theme of a designer's collection. In textile design, color is one of the most

important elements, as it is one of the first decisions a textile designer makes. A textile designer, like an apparel designer, considers color and color combinations to evoke a feeling or mood from his design.

Texture

Texture is just as important in clothing design as it is in textile design. When designing fabric, a textile designer strives to create a certain weight and hand, or texture, to the fabric. Examples of fabric textures are boucle wool, corduroy, denim and satin. A clothing designer certainly takes fabric textures into consideration when designing a garment. Satin hangs differently on the body than corduroy does. The texture of fabric also determines what fabric would be a suitable match for certain garments.

Space

Space is the final element of design. A textile designer considers positive and negative space in his/her fabric pattern. The clothing designer considers how the garment occupies a space. A couture dress designer or a wedding dress designer designs a gown based on how it would look on a runway, on a red carpet or walking down an aisle.

Principles & Elements: Aspects of Design

When designing, there are several ideas or aspects of design that need to be kept in mind. These aspects of design can be categorized into two areas: Principles and Elements of Design. One way to describe this is: "The principles are the directions for a cake recipe and the elements are the ingredients. The directions (principles) are flexible and should be interpreted within a current fashion or problem the designer is trying to solve. For example, the directions (principles) would apply differently for a design of a costume than for a design of a current fashion garment. The ingredients (elements) are raw materials that must be combined. These elements change the taste of the garment, just as the ingredients can change the taste of a cake.

A dress is more eye-catching in a bright color than a dull, neutral color, even though the design is the same." - 1998 Fabric & Fashion Design Competition Guide.

There are four elements of fashion design: shape and form, line, color/value, and texture. There are five principles of fashion design: proportion and scale, balance, unity (harmony), rhythm, and emphasis.

Principles

The first principle is proportion. This creates the feeling of unity that is created when all of the parts (sizes, numbers, or amounts) relate well with each other. Also, when drawing or sketching the human form, proportion refers to the size of the head when in comparison to the rest of the body. Scale therefore refers to the overall size of any object or its parts when compared to the size of other parts or objects in the design.

NOTES

A simple concept to understand is balance. There are two kinds of balance, and in fact they relate to more than just fashion design; these two types relate to almost any type of design and art. Symmetrical and asymmetrical balances are the only two types that designers and artists use when it comes to balance of their piece. The outfit is symmetrical if you were to divide it right down the middle and both sides are exactly the same. Therefore, if you divide an outfit right down the middle and both sides aren't the same, the balance is asymmetrical. Asymmetrical balance is quite popular in dressy evening wear because it is dramatic and eye-catching.

Unity is the feeling of harmony between all parts or objects of the design. The overall design creates a sense of completeness.

Rhythm refers to the repeated use of lines, colors, trims, shapes, or details that create a pattern that the eye can follow throughout the design. Examples could be stripes, polka dots, ruffles, etc.

What your eye is drawn to on any outfit is considered to be emphasis. It could be anything that you focus on, from a horizontal stripe, a belt, jewel, or contrasting color.

So after everything is all said and done, it really isn't that difficult to understand these basic principles and elements. And once you do come to understand all of this, you won't be able to stop finding them in every outfit that you look at for now on. Just take a look in your drawers and closet...see how many principles and elements you can find!

Elements

Shape and form are among the most important in fashion and accessory design. The shape, or silhouette, is the most obvious visual element of a garment; it is probably the first thing that is seen. The silhouette can be described as the outline of the entire garment, and it is often called "form." The goal of a silhouette is to compliment the shape of the body. However, exaggeration is often used in order to create a certain type of effect or emphasize a certain part of the body; whichever is the current fashion trend.

Line is the simplest element of design. There are two types: outline and style lines. Outline is the outer edge of the design whereas style lines are the lines that divide up the space inside of the outline. For example, if you were to trace around an outfit in a magazine or catalogue, you would be following along the outline. Style lines can be created by several things: belts, ruffles, seams, a color line, or a pocket.

Next to the silhouette, one of the first things noticed about a design is the color. Color has an enormous effect on how you feel. Everyone loves wearing their favorite color, and in fact, it makes them feel good!

Texture is another important element that actually can determine a lot. The way the fabric feels is a big thing to consider. When designing, it's important to know how a fabric will drape and feel. For example, overalls are great in denim, but would you wear silk satin overalls? Probably not. The design should be paired appropriately with the right fabric.

Elements of Design

Line

Lines are the most basic element of design, and they make up pretty much everything. They can also be defined as linear marks that can describe a shape or outline something.

You'll often see that lines are also used to create perspective or evoke a certain feeling. They can be thick or thin, vertical, horizontal, or diagonal, or they can create texture. A straight line can send the feel of order and neatness, while a wavy line can create movement.

A technique that's often used with lines is directing the eye towards a particular area of a design. You can play around with this type of element and see how you can implement it in your visual materials.



The great thing about using a design tool such as Bannersnack is the fact that you don't need to create lines from scratch. In the [Elements section](#), you can now find 80 new, end-to-end scalable, flexible lines and arrows.

These elements will help you create more diverse content, such as info-graphics, mind maps, flows, or routings. You can also use them as connectors or separators.

The design possibilities are endless thanks to these elements.

Color

Color is one of the most important elements of design because they can evoke certain emotions. It's well-known that the color red is usually associated with love, passion, or anger.

There are also cultural differences that you need to take into account when using colors in design. For example, a color that's happy in a particular country can send negative emotions in another one.

Also, something as simple as changing the hue or the saturation can send a different type of feeling.

NOTES

Color has three different properties:

- **Hue**, which is the color name;
- **Saturation** refers to how intense the hue is;
- **Value** refers to the lightness and darkness of the hue.

You can use color as a background, or to support other elements in your design. Combining colors between them is the key to creating a visual that matches your brand.



Shape

I talked above how lines can create shapes, among other things. By reversing this, we can define shapes as something enclosed by lines, which are its boundaries.

Shapes can be geometric (rectangle), realistic (animals), or abstract (icons), and they have two dimensions: height and width.

If you want to suggest femininity, then you can use curvy shapes such as circles. If, on the other hand, you want to induce a more masculine feeling, then use angular shapes.

The Elements section in Bannersnack has a Shapes category as well, where you can find anything from arrows to stars, ribbons, labels, badges, frames, speech bubbles, or blobs.

Space

You'll often hear people refer to space as white space or negative space, which can be defined as the space between or around objects.

If you want to be creative with your designs, you can leverage negative space by manipulating it and forming an object, a shape, or an animal. When you use it strategically, you can genuinely create stunning designs that draw people's attention.

Symmetry

Symmetry is one of those things that we, humans, find extremely pleasing. According to science, this happens because we love familiarity and when we see something that has symmetry in it, it's easy for us to recognize it. It's also one of the shortcuts we use to make sense of the world around us.

There are plenty of brands, such as Starbucks, Target, or Chanel, that use symmetry in their logos, and not only in their designs.

However, note that there's a fine line between symmetry and making it seem like the other side of the design was copied and pasted from the other one. It's recommended not to strive for perfect symmetry but to add elements that suggest this idea.

Scale

Scale refers to the size of an element in relation to another one, and it can help bring balance, proportion, and hierarchy in any design.

Usually, scale is used in design to represent the accurate size of an object or to emphasize the difference in size between two objects. However, if you want to create something that you will make an impact on your audience, then it is best if you forget about scaling objects according to reality.

For example, you can make an elephant dramatically smaller than a cat and make the cat the size of a dinosaur.

If you want to draw attention to a particular object, then this is the way to go.

Texture

Texture refers to the surface quality of a design, which can be smooth, rough, glossy, etc. It can be physical or visual. For the purpose of this chapter, we'll talk about visual texture.

Clean designs are nice and all but adding a little bit of texture can make it pop even more. You can use it to accentuate a specific part of your visual, so you draw people's attention to the dominant part.

The use of a font or a background image that mimics a particular texture is going to help you create a memorable design.

Direction

Direction not only gives the illusion that there's movement in your design, but it also lets people know where to look and how to move their eyes across the visual.

Generally, the human eye starts with the top left of a page and then gravitates towards the bottom right corner so you can take advantage of this pattern whenever you're designing.

Principles of Design

Balance

You know how sometimes you look at a design, whether it's a poster or a banner ad, and everything feels right about it? That means the composition is balanced.

Balance is all about how your elements weigh in the visual, and it can be achieved through symmetry, asymmetry, or radial symmetry.

Shapes, colors, objects, textures, or values can create balance in a design. This is an essential principle because imbalance can cause discomfort for the viewer.

Contrast

When you want to emphasize key elements in your design and make it pop, then using this principle is one of the best things you can do. Contrast helps you grab people's attention and generate interest in your visual by making an object more distinguishable than the other objects present in the design.

A good example of contrast is negative space or the use of complementary colors, which is going to redirect someone's attention to a particular portion of the visual. Other common forms of contrast are dark vs. light, large vs. small, or thick vs. thin.

Another significant advantage of using contrast is the fact that it improves the design's readability and legibility.

Repetition

Repetition is boring and monotonous only when there's no variation. When some degree of variation is added to a design where certain elements are being repeated, it changes everything.

You can repeat colors, fonts, shapes, and other objects to create consistency and unity. Moreover, repetition is a crucial principle in branding because it's going to keep your design on the same level.

Emphasis

Emphasis is all about highlighting the most important area in your design. For example, if you want to accentuate the headline in your visual, then make sure to use a font size that will stand out and will draw people's attention. Similarly, you can utilize a bold color to make the text pop.

If you want to make a particular element more prominent, you can use scale to make it bigger or smaller than it is in real life.

Let's say that you want to use a bunny in your design. You can make it look humongous, or you can make its eyes look bigger and bolder.

Movement

You've probably heard before someone explaining a piece of art as *having a lot of movement*. Even though a visual is static, it can still give the feeling as if the design is actually moving.

NOTES

For movement, you can use shapes, lines, edges, or color, the purpose being to direct the human eye.

When designing something, you can take advantage of certain elements to control how the human eye travels over a design.

Unity

Unity is all about how the different elements of your design come together and form a relationship. You've most likely seen before designs that give you the impression that the fonts and everything else were chosen at random, so there wasn't any sense of unity.

All the visual elements you use in your design should be connected to one another. Also, unity is going to help you communicate your message in a clear, organized, and concise manner.

Rhythm

The same way spaces between musical notes create rhythm, spaces between design elements can give rhythm as well to a visual.

Visual rhythms can be regular, flowing, progressive, random, and alternating.

Regular rhythm is when the spacing between elements is the same. The flowing rhythm gives a sense of movement through curves and bends. Progressive rhythm is all about changing and iterating with each step. The random rhythm doesn't have any clear pattern. Alternating rhythm uses a set of patterns.

Design elements and principles

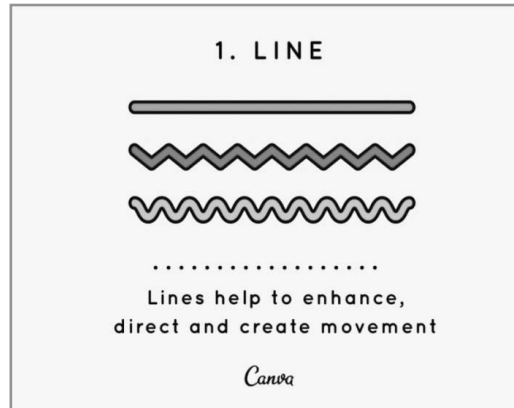


There's always a lot to learn, a lot to do, and a lot to consider when you're a beginner – not to mention the fact that technology is constantly evolving, new software is being released, and new trends are coming at you rapid-fire. Truth be told, it can get a little overwhelming.

So, let's slow things down a little bit. This chapter will take you through 20 principles of design to hopefully give you a headstart in this creative environment. So, stay tuned, get comfy, and let's discuss some principles.

Line

NOTES



We're all aware of what lines are, but just to be sure, lines can be defined as any linear marks. So, when you think about it, lines make up just about everything. Even these words and letters you're reading now are made up of thousands of curved, angled and straight lines.

Lines can channel certain ideas too. Straight ones can evoke order and neatness, wavy lines can create movement, and zig-zagged lines can imply tension or excitement.

A technique applied a lot in photography is the use of 'leading lines' which do just what they claim – they lead the eye. Finding and emphasising strong leading lines in your piece can allow you to direct the eye through the entire piece or to certain focal points.

Let's look at an example of leading lines in web design. This webpage has a cool diagonal grid with very strong leading lines that take you down the page, from section to section, in a swift zig-zag shape.

Scale

Scale is a large part of design, sometimes literally. In a very basic definition, scale is the deliberate sizing of individual elements.

Scale can help us make sense of designs and images. Think about if you were to draw a mouse next to an elephant; you'd probably draw the mouse much smaller than the elephant, which would help viewers instantly understand your drawing.

In this way, scale helps us make sense of things. But, scale doesn't always have to be based on realism. You can size your elements dramatically large or small to create stunning effects and to signal which parts of your design are more important and which are less.

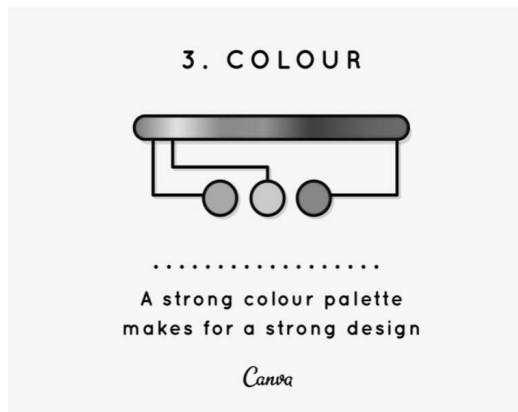
For example, check out this poster by Gabz Grzegorz Domaradzki for the movie Drive. In this poster, the lead character has been scaled up dramatically, drawing attention to him first and the other faces second.

While this scale is not technically based on realism as people's faces are generally the same size in real life, the dramatic scaling up and down of faces helps viewers to get a quick grasp on each character's level of importance in the film, as well as making for an effective design.

This scaling of elements to signal importance is often called ‘hierarchy’ which we’ll discuss more in depth later on, fear not! But, for the mean time, let’s look at an example that uses scale to signify importance.

This publication design by The Consult scales up certain statistics, information and numbers a lot to draw attention to those pieces of data over others.

Colour



I know I don’t really need to preach about how important colour is to designs, but I’m going to anyway. Colour is paramount. Colour creates specific moods, atmospheres, channels emotions and each shade has certain specific connotations associated with it. In short, colour can make or break your design.

Let’s look at two branding examples. First up, we have a design by Smack Bang Designs for women’s skin rejuvenation service ‘Lite Luxe’. This design has opted for light, soft and pastel colours. Whites, light greys, soft blush tones and a copper/gold foiling, these chosen colours complement each other gently to create a calm, elegant and feminine design.

On the other hand, we have this branding for juice brand Frooti by Sagmeister & Walsh. Unlike the previous example which chose a palette that gently complemented itself, this branding has chosen a colour palette that sharply contrasts, creating a much more vibrant, energetic and playful design.

Colour isn’t a principle simply limited to branding elements though; colour expands into everything, even photographs. Filters and image adjustors have given us the unlimited ability to adjust our photographs’ colouring and tones.

Are you designing a sleek and sophisticated poster? Why not run a sharp, noir-inspired monochromatic filter over your image, like Canva’s ‘Street’ filter. Or perhaps you’re going for a whimsical look? Consider dropping the contrast on your image a little to mute your images’ colours a bit and make it softer and calmer.

Repetition

Think about any big name brand, Coca-Cola, Google, Apple, Nike, I’m sure you can all think of their logo, their general tone of voice and their general colour schemes used. Why are these things so memorable at the drop of a hat? Yep, you guessed it – repetition.

NOTES

Repetition is a crucial element when it comes to branding design, both in terms of keeping your branding consistent and in terms of tying your items together.

Let's have a look at a branding example by Michelle Wang. As you can see, this identity uses a consistent colour palette and consistent logo application, right down to consistent margin spacing.

Repetition is a key element when it comes to branding, but it can also make for beautiful one-off designs. For example, repetition is a key ingredient when it comes to creating patterns and textures.

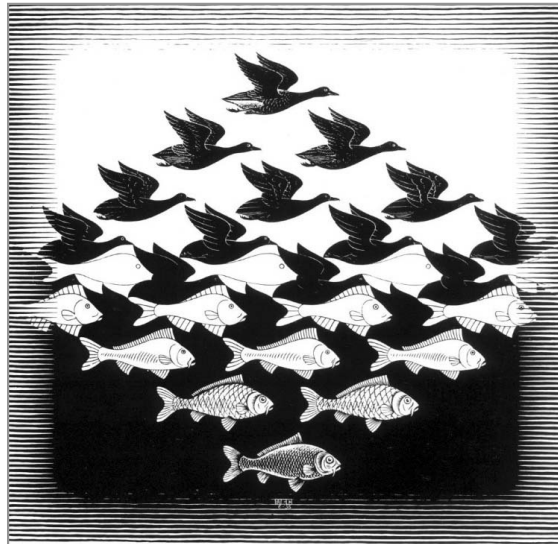
Check out this packaging design by Nastya Chamkina that uses repetition to create a beautiful pattern. Patterns don't have to be dull and floral like dusty old curtains, they can be fun and effective. So, why not implement repetitive patterns into your next design?

Want some more inspiration like the beautiful pattern-based branding below? Be sure to swing by this chapter of 50 gorgeous geometric patterns designs in graphic design!

Negative Space

To put it bluntly, negative space is the 'space-in-between', the area between or around other elements that form its own shape

The widely regarded king and path-forged of negative space was artist M.C. Escher whose work I'm sure you've seen and been baffled by before. Escher did a number of tessellations that focussed on one shape leading into the next via negative and positive space, like this woodcut print "Sky & Water I".

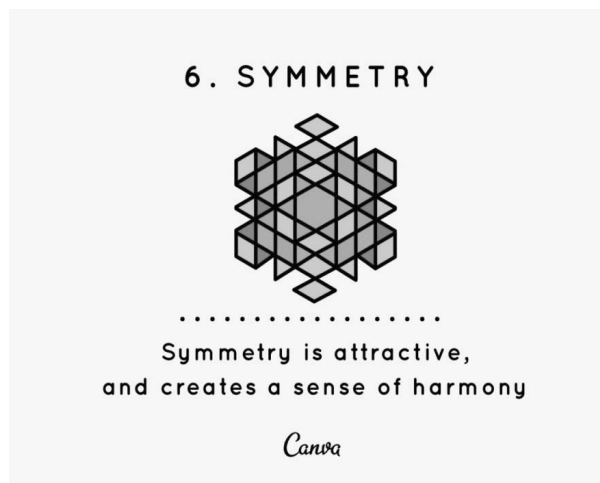


See how Escher has used the space in between the birds to create the shape of fish? This is negative space at work – considering everything around and in between your physical design, and manipulating that space to form something new.

Negative space when used strategically and cleverly can help create truly stunning and clever designs. Have a look at these simple animal icons by designer George Bokhua that use simple, clean shapes to render clear depictions of each animal.



Symmetry



As species, human beings are scientifically proven to be drawn to symmetry. We find symmetrical faces, patterns and designs generally more attractive, effective and beautiful.

Symmetry is used a lot in logos in order to create a harmonious and balanced design. Some examples of large brands with symmetrical logos are Target, McDonald's, Chanel, Starbucks, etc.

Of course, symmetry is not always an option for every design, and nor should it be. There's a fine line between a design looking balanced and symmetrical, and looking like one side was copied, flipped and pasted to the left. So instead of trying to achieve perfect symmetry, instead try to introduce subtle elements of symmetry into your design.

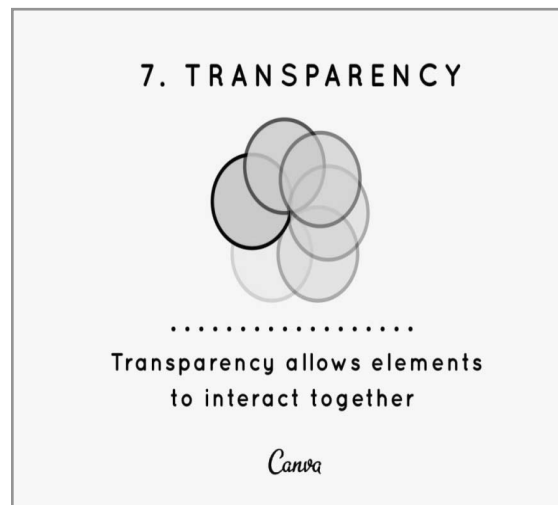
NOTES

For example, this wedding invitation uses a high degree of symmetry, but it's not perfectly mirrored. Instead, the designer has chosen to adjust the illustrations to fit the type and the message in subtle ways that keep the design symmetrically balanced and ordered, but not too blatantly mirrored, creating a delicate, romantic and balanced design.

Symmetry isn't always as obvious either, sometimes it is subtle; sometimes you may not even notice it. A prime example of invisible symmetry can be found in editorial design and more specifically text boxes. Open up any magazine you have laying around and chances are in a longer articles you'll notice that the body copy has been split up into columns of text, and these columns are often symmetrically sized to keep things legible, neat, as well as visually appealing.

By using a bit of symmetry in your layout, you can create a sense of balance and order. So, next time you're designing a publication design, or a design with a lot of type, pay attention to how much (or how little) symmetry you're using. If your design doesn't look quite right, have a go at toying with your symmetry, whether this be increasing it or decreasing it.

Transparency



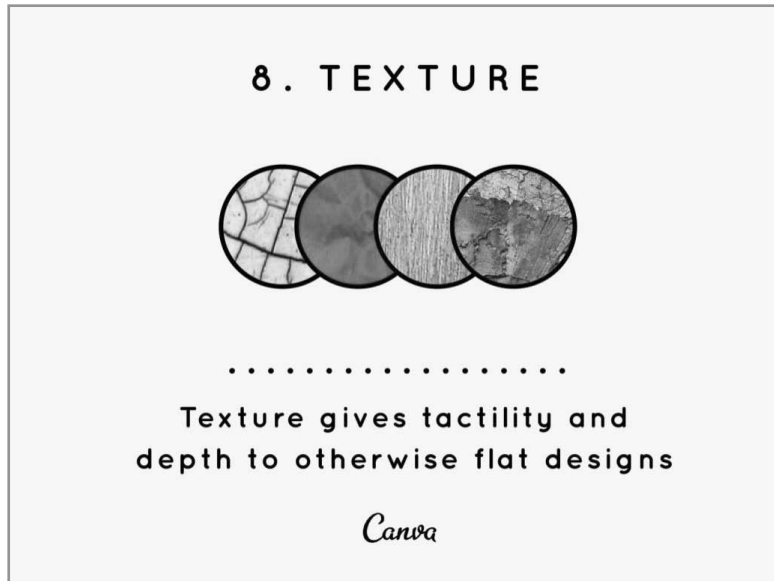
Also occasionally known as 'opacity', transparency refers to how 'see-through' an element is. The lower your opacity, the lighter and less noticeable your element is, and the higher it is, the more solid the element is.

Let's look at an example that uses transparency. This stunning example by Jack Crossing layers various shapes of different colours, sizes, and opacities to create a truly beautiful graphic. In this way, adjusting and toying with transparency and transparency effects can allow you to emphasise your layers and shapes in a unique and striking way.

Transparency is also a great technique for generating a sense of movement in static images. For example, check out this poster by Filippo Baraccani, Mikko Gärtner, and Lorenz Potthast that layers various images with different levels of transparency to create an engrossing effect and sense of movement.

Transparency isn't just limited to digital graphics either. Check out how this invitation card for the New York Museum of Glass has aptly been printed onto transparent glass, giving the design a unique and engaging effect. Consider what mediums your design will be printed on, what opacity and finish they can/will have, and don't be afraid to get creative with it.

Texture



Clean, sharp and sleek graphic designs can be wonderful, but sometimes, roughing it up a little with some texture can be even better. Texture can add tactility, depth and can add some pretty interesting effects to your design.

However, as with many things, be sure to use this technique in moderation, as too much texture can quickly overwhelm your design. Remember: there's a fine line between shabby-chic and just plain old shabby.

See how too many textures can create a muddy effect? The more textures applied, the harder type and other elements are to see without a stroke effect around each letter.

Of course, if you're going for the muddier look stylistically, then layering textures might bode well for you, but if you're looking for a way to incorporate texture in a less imposing way, stay tuned.

Let's have a look at an example that uses texture in a way that enhances the piece. This beautiful typographic design by Dan Cassaro creates a vintage-inspired effect by using texture. Notice that the use of the rough texture isn't distracting but rather nicely enhances the piece as a whole, giving it a more handcrafted, authentically-vintage feel.

Check out this business card design by Inkdot for Foremost Wine Company that takes texturing to a whole new level by embossing the topography-inspired texture directly into the business card. By considering texture and how your design literally and tangibly feels, you can create a memorable piece for your design that is sure to stand out from the crowd.

Balance

NOTES



Balance is a pretty important thing in most of life, and it's equally as important in the world of design.

One way to master balance is to think of each of your elements as having a 'weight' behind it. From text boxes, to images, to blocks of colour, consider each of their sizes, shapes, and what 'weight' they have in relation to other elements on the page.

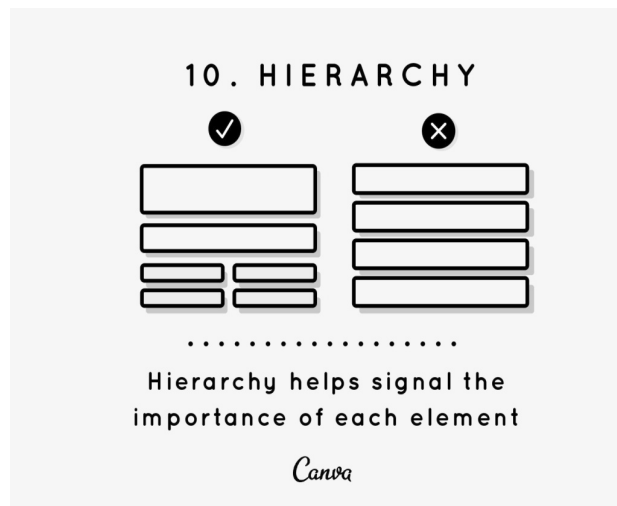
A good technique is to imagine if your design were to be printed out as a 3D model. Would it stand, or would it tip to one side?

Check out this cat logo by George Bokhua that is beautifully balanced. If it were to be printed, chances are it would sit upright.

One type of balance is 'asymmetrical balance', which is less about mirroring left and right/top and bottom, and more about distributing, sizing and aligning elements so that their 'weights' are even. Let's look at an example.

This vibrant piece uses scale and a clever distribution of elements to make for a balanced design. Note how this piece achieves balance from left to right and top to bottom through the sizing of elements. By balancing the cluster of images out with the cluster of type.

Hierarchy



Hierarchy in design is a lot like hierarchy in culture, as both are built on very similar ideas. At the top of a hierarchical scale, we have the most important things, the kings. These elements are to be ‘dressed’ the most extravagantly and command the most attention.

Check out these examples from A2 Magazine that showcase three different ways to signal your title/heading’s importance, from the more subtle examples right through to the big and bold examples. Whatever your choice of avenue, be sure that consumers can instantly point to the title without thinking.

The next tier of hierarchy we have the noblemen, the elements that are still important, but that don’t command quite as much attention as the kings. These are things like subheadings, pull quotes, additional information. Make sure to keep these eye-catching and noticeable, but not anywhere near as noticeable as your headings.

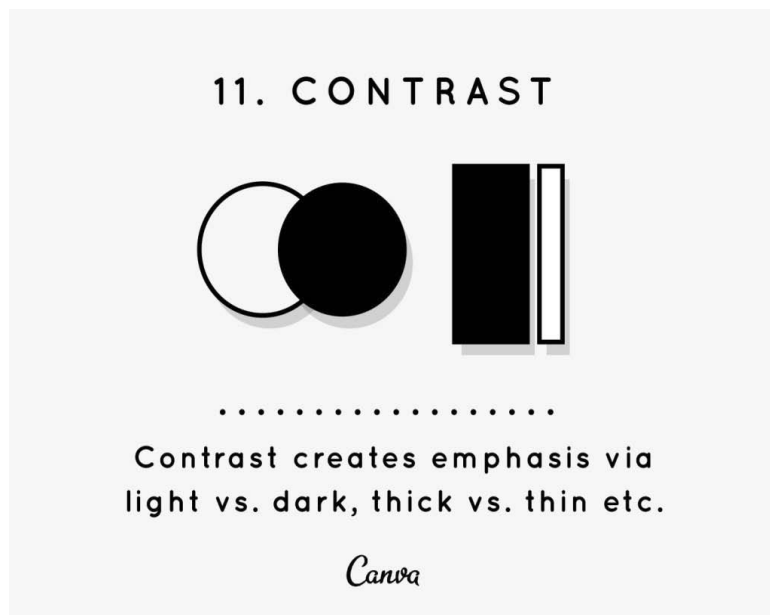
Check out this save the date card by Southern Fried Paper. Notice how the date (a very important part of a save the date card) is made larger, bolder and more noticeable than the type below it. And yet it doesn’t outshine the obvious “Audrey and Grant” title.

And on the final rung of the hierarchical scale are the peasants, the humble elements of your design that are given the least amount of visual pizzazz, usually things like body copy, less important information, links, etc.

Have a look at this poster for The Night Market by Mary Galloway. You can easily point out the title, the subheading/date, and then down the bottom, the smallest type of additional information that isn’t as crucial to the communication.

Of course, hierarchy isn’t just limited to type. Images also have hierarchy. The larger more colourful, or more central elements of your image are going to have a higher hierarchy than those smaller, duller, less detailed elements.

Contrast



NOTES

Contrast is often the magical key ingredient to making your designs ‘pop’, which is a (sometimes frustrating), demand from many design clients.

In a very basic definition, contrast is the degree of difference between two elements of your design.

Some common forms of contrast are dark vs. light, thick vs. thin, large vs. small, etc.

Contrast has a great effect on readability and legibility as well; it’s a big reason why you see novels and many other publications printing in black text on a white background. Imagine if they printed using light grey on a white background. The contrast would be very low and the type hard to read. So, if you’re using type, make sure you bump up that contrast.

For example, check out this poster by Jonathan Correia and the way it ensures there’s adequate contrast against the type and image. Since this image is split in half, one side being dominantly green and the other dark grey, the type colour has been adjusted accordingly to ensure each side is legible.

Imagine if the “New York” was executed in the same colour as “Bike Expo”, the contrast would be lowered greatly and it would be much harder to read.

Another great example of a high-contrast design is this piece by Robbie Cobb that not only contrasts dark and light, but also thick and thin to make for a striking and engaging design.

Contrast isn’t just a stylistic element or a legibility-enhancer; it can also act to draw the eye to certain elements of your design. This technique is used a lot in website design.

See how this landing page design has darkened and muted the image to allow for the bright red box to contrast sharply against the background. This deliberate contrast helps to draw instant attention to the main call of action (which links directly to a signup page).

So, use contrast to make your designs visually ‘pop’, draw attention to certain elements of your design.

Framing



Just like you do with your photographs and pieces of art, framing your designs correctly is an important aspect. We usually think of framing in terms of photography – what you include, what you don't, etc. But, framing is equally as important in design.

Physical frames such as box outlines or graphic elements can enhance or draw attention to specific elements of your design.

For example, let's check out this menu design by Trevor Finnegan that chooses to frame one of the specials as well as the business' mission statement to draw attention to these two elements that the eye may have otherwise just passed over. Such a simple way of highlighting certain elements of your design can have a big impact.

Frames don't have to be graphic either. If you're working with photographic elements, why not consider using them to frame your designs? Check out this poster that uses random objects to create a frame for the superimposed type. This way, you draw attention to the piece by the frame, and direct the eye to the really important bits.

Create Motifs
using Different
Elements and
Principles of
Design

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Elements of Garment Design

In creating a design one of the components that interact is the element of design. The element and principles of design are flexible and should be interpreted within the context of current fashion. A design can be defined as an arrangement of lines, shape, colors and texture that create a visual image. The principles of design are the rates that govern how elements are combined. The elements are therefore the raw materials that must be combined successfully.

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Colour

Colour is the first element to which consumers respond, often selecting or rejecting a garment because of its color appeal. Therefore, designers must consider their customers and provide colors that are both appealing and flattering. People connect certain colors with holidays and seasons. They expect to see earth tones in fall clothing, jewel colors for the holidays, the pastels of flowers in the early spring, and refreshing white for the summer. All manufacturers include some of these colors in their lines

Fabric

Colour is interpreted in the medium of the fabric. Fabrics are the designer's artistic medium, in that fashion design is essentially sculpture in fabric in relation to the body. Fabric selection is the selection or creation of an appropriate style for a fabric, or the reverse, the selection of the right fabric for the design. Next to understanding the needs of the customer and interpreting trends for them, choosing the fabric suitable for a particular style is one of the most important aspects of designing. The designer chooses fabrics on the basis of fashion trends, quality, performance, price, and suitability.

Fabrics themselves inspire garment design. For example, the softness and drivability of jersey might inspire gather in a dress. Other designers work the other way around, first getting an idea, perhaps developing it in a sketch, and then finding the appropriate fabric for it. However the designer works, he or she must ultimately decide which fabric will work best with a design, or vice versa. Designers must develop the ability to picture a design already made up in the fabric, this ability comes through observation and experience.

Many firms build a line or even an entire reputation on one fabric such as denim or stonewashed silk. In sportswear, a base fabric is selected for jacket and lowers. In Jeanswear, for example, the base fabric is always denim. An assortment of fabrics, solid and patterns, is chosen to go with the base fabric. The designer or merchandiser must be sure to include a Variety of weight, textures, and patterns in a line, as well as a balance of fashion and classic fabrics

Line

After selecting the fabric, the designer must consider the other elements of good design. In this section, the term line refers to the direction of visual interest in a garment created by construction details such as seams, openings, pleats, gathers, tucks, topstitching, and trims. When lines combine, space is enclosed and forms and shapes are defined.

Lines offered a path of vision for the eyes when is wearing an object/outfit. The arrangement of lines in clothing design can cause to appear heavier or thinner than what actually Lines within a garment are created by darts seams and decorative details. Each kind of line produces its own special effect. Straight lines and shapes denote force and strength and have a masculine quality; curved lines are the line of nature, they are graceful give a feminine effect. Lines are the greatest devices of fashion designers. Since line creates the illusion of height and width, they can be used to one's requirement to tone down or exaggerate a particular figure type.

Shapes

It describes the outer dimensions or contour of an object. The shape also encloses space and imparts a certain character to the object viewed. Through clothing design, the shape of the human body is often revealed in a natural way, but sometimes even distorted. The shape of clothing on a human body, communicates silently, the messages about the wearer.

Every fashion period, a shape emerges slowly or evolved suddenly, whatever it is, every period has a specific shape of garment which once determined can be modified and restyled for variation in design without changing the basic shape of the garment, it is either flare or tight, circular or straight, a line or raglan. It has been observed that an easy fitting shape of the garment is easily accepted and largely vitiating as well as has a longevity of style, whereas a tight-fitting garment is generally short-lived since it is suitable to only perfected figure types. It is therefore advisable that the designer chooses an easy silhouette to keep on creating for a longer duration.

Principles of Design in Clothing

The principles of design can help when selecting apparel designs at the point of purchase or during customization of construction. The principles can also be helpful not only when selecting separate garments but also when coordinating several garments and accessories into a complete outfit. The principles of design are useful in creating different forms of expression in our artistic manner, which are pleasing and attractive to the eye. Following are the principles of designing.

- **Balance:** In clothing, balance refers to a visual attribution of weight, from a central area. Balance refers to the restful effect achieved through grouping design details to maintain a feeling of equal weight or attraction from side to side, front to back or top to bottom. Pleasing balance brings about a satisfying relationship among all design parts to produce visual harmony.

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When the design elements of line, form, shape, space, color and texture are in balance, a pleasing harmony is established in clothing designs, three kinds of balance are observed,

- Formal balance, also called symmetrical balance or bilateral symmetry.
- Informal balance, also called asymmetrical or occult balance.
- Radial balance

- **Formal balance:** Occurs when object appears to equalize each other by repetition and arranged at equi-distance from the centre. The upper and lower portions of the design are so arranged, as to give an effect of balance. Thus there should not be the effect of too much of weight at the bottom or a heavy appearance. E.g. Dark coloured skirt over lighter shade of pant make a short person appears shorter.

Many examples of formal balance may be found in clothing. Formal balanced designs often give an impression of stability due to the equal or balanced placement of the parts that compose the design. In apparel formal balance may emphasize body irregularities.

- **Informal balance:** Occurs when objects appear to equalize each other but not through repetition and the arrangement is in a haphazard manner. Here design of different sizes and shapes and of different attractions are arranged. The larger and more attractive designs are kept as far away from the centre. If used correctly, informal designs can be effective in being attractive.

Sometimes formal and informal balances are combined in a single garment. This could happen in a dress when the bodice is informal balance and the skirt design is in informal balance. Such an arrangement often lacks harmony and relationship among the various parts. A design with this mix can appear pleasing when there is an interesting transition between the parts that unifies the two opposite effects. Formal balance is the least expensive to produce apparel in mass production. Informally balanced garment is more difficult to produce. For each section of the garment cuts will have to be probably handled differently.

- **Radial balance:** Occurs when major parts of the design radiate from the central part. Radial balance uses a central point as the focal point. Pleats, seams, gathers, darts or motifs radiate from the focal point creating a sun burst effect.
- **Emphasis:** Refers to the dominance of one part with subordination of others. A good design should have a design feature which is the centre of interest, while other features support it. Designers often create emphasis partially through the careful arrangement of line, texture and colour. It could also be called as focal point. Every design needs same note of interest that catches the eye on a specific area of the garment; contrasting colour can be used to emphasize an area.

A black dress with white collar and cuffs will direct the eye to the face and hands. Some methods of lay emphasis can be,

- Grouping of design units
 - Using contrast of hues
 - By leading lines
 - A combination of any of the above
 - Repeating details such as tucks, gathers, buttons etc.
 - Unusual shapes and textures
 - Applied design on a contrast background.
 - While enhancing the design by concentrating in a focal point the designer must bear in mind the figure and personality of the wearer.
 - The methods used to obtain emphasis are repetition or concentration. Decoration on a contrast background.
- **Harmony:** Refers to unity of design with slight contrast or variety to prevent monotony. If the principle of proportion, balance, rhythm and emphasis are applied creatively, the resultant design is said to have the harmony. First the various parts of the garment (sleeve, skirt, collar etc) should be related to the structure of the style that is every detail should harmonise with each other.
 - **Proportion or scale:** good proportion refers to pleasing relationship between the sizes of various design details in a dress and between the garment itself and the design details.

Proportion includes the relationship of height, width, depth and the surrounding space of each design. The differences in proportion make designs look different from one another. For example, study the proportions of the five rectangles. In the figure which looks the longest? The broadest? Which division of spaces would give the most slender illusion for a garment? The tallest? The shortest?

- No.1 : represents the shape of a garment having no waist line, such as a shift.
 - No. 2 : represents an empire line, with the high waist line under the bust.
 - No.3 : represents a natural waist line, a classic shirtdress, waist length jacket, and skirt.
 - No.4 : represents a waistline dropped to hip level: jacket and part of equal length.
 - No.5 : represents a long jacket with a short skirt : Length coat over skirt, long tunic.
- **Greek law of space division:** A space divided in the proportion of 2:3 is very pleasing to the eye. E.g. In a garment proportion of the bodice length to the skirt length must be 2:3 and the yoke length also bears the same proportion to the bodice length. Pockets on the bodice and the skirt must also have the same proportion.
 - **Scale:** refers to the relationship between the garment and its design details as well as between the wearer and the garment. E.g. Large appliqué motifs attached on a small dress violate the principle of scale.

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- **Rhythm:** Refers to the smooth movement of the eye from one part of a design to another. Therefore a rhythmic pattern needs to be established to give a costume unity. Rhythm can be obtained through regular repetition of shapes and decorative details like tucks, pleats, scallops, buttons etc. Gradation in size also contributes to rhythm. This type is sometimes referred to as dimensioning rhythm.

Rhythm can be achieved through the combination of lines, shape, colour and texture by the following aspects in designing.

By regular repeats of trims, texture and fabric design and prints.

Progression or radiation in sizes of trims, colours, textures and fabric designs.

Radiation or movement from the central point occurring within structural details such as gathers, folds, tucks, darts etc.

Continuous flowing lines such as those in bands of colours, textures and fabric designs.

Fabric design with widely placed motifs may lack rhythm. These designs must be evaluated critically before they are cut and constructed into a garment often the garment design will interrupt this type of fabric design and produce strange effects.

Each consumer and fashion professional becomes a designer creating an artistic composition when he or she creates a total look through the selection of garments, accessories, hairstyle, and facial adornment.

1.4 STUDENT ACTIVITY

1. What is Basic Design Principles? Explain the Repetition design?
.....
.....
.....
2. What is Pattern Design? Explain **the future and improve** Elements of Design?
.....
.....
.....

1.5 ABLE TO CREATE DIFFERENT TYPES OF MOTIFS

Design/Motif

A Motif Design called “Scatter” has been created for use with LibreOffice material.

DESIGN PROCESS

Design motif

For our purposes (it has other industry-specific meanings) a motif is a Design element that is used to bring consistency to a range of Design artifacts and sets

a “mood” or “atmosphere” visually without taking up too much attention. It is a support element and should complement the contents of every Design. As such, it usually takes the form of a background-image/vector.

- The typical (read predictable/cheesy) example is ornate flowery vectors
- Here is a decent professional motif from Landor & Associates; you might remember that OpenOffice.org had "wire gulls" as their background motif.

Preliminary schedule for Motif Design

- Brainstorm ideas: Monday 21st February - Sunday 06th March
- Design vectors: Monday 07th March - Friday 18th March
- Voting: Saturday 19th March - Sunday 20th March
- Revisions: Monday 21st March - Tuesday 22nd March
- Finalised: Wednesday 23rd March 2011.

Purpose of this task

The production of a Design Motif will address a few current concerns;

- Right now, Design elements are being borrowed on a case-by-case basis, a consistent Motif will reduce this variation
- The Project Community needs resources to be able to produce professional looking Marketing material on their own
- The Design Community needs resources which strengthen the visual communication of an identified "theme" (yet to be finalised)
- A general abstract/ambient Design element is needed to replace the metaphor-specific elements currently used

Brainstorming

As a Portuguese native speaker and English reader, the word Libre is easily recognized as Livre (Free, In freedom), and Office makes me think about programs related to the office work (not properly the “office” ambient, since in my language it’s called “escritório” - very different). Flying in these concepts, I imagine a program that allow you do everything you want for a office job, or still a program that is not limited by nothing (have no limitations).

Some concepts came from our Logo:

- Freedom
- Independence
- No limitations

Since these are some concepts achieved with the logo, we could focus the motif in other concepts we would like to express (of course, no forgiving these ones). This project has the following concepts to express:

- ***History***; This is a project with many experienced people, with a large historic of participation in StarOffice and/or OpenOffice projects. Now they are in the new LibreOffice, but his experience came from these past projects. LibreOffice is not a childish project.

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- **Revival;** Although its experience, the life led the OpenOffice people to start a new project, with new people, new face, new directions and fresh air.
- **People/Community;** The most important thing in an open source project is the people. They are actually the project. The contributions, the opinions, the hard work, the personal growth, the challenges. All these things are lived by the people, not by the software itself. And the LibreOffice is one of the best examples.

An additional concept I strongly feel, but may be just me:

- **Imagination/Creativity;** The white/empty paper in our logo gives me a huge desire to draw something in that, or writing a good text, express some crazy equations or everything else my imagination can create! It's a mysterious element which inspires me good feelings.

MOTIF, PATTERN AND DESIGN PROCESS

Key unit competence

To be able to make various prints from different motifs and patterns and apply them on various surfaces using different techniques.

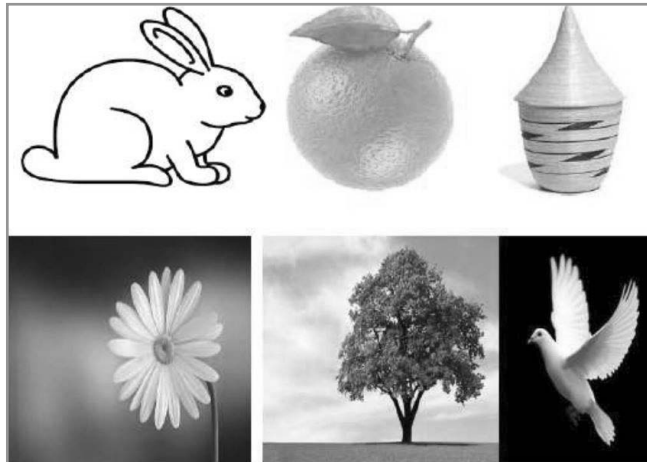
Introductory activity

In environment, you can find many objects that can be used as source of inspiration that we can use to develop motifs and patterns. Most of them can be used in different forms of beautification on objects that we use in our daily life. For example: vessel pot, pants, curtains, napkin, poncho and carpets.



1. Look at the designs on the above figures and classify the shapes that are organic and the ones which are geometric shapes.
2. Mention some natural objects from which these patterns might have been got.
3. What are the ways you can use to make the motifs?
4. Give different techniques that can be used to apply the motifs on surfaces?

Most of the best patterns are obtained from objects within our surroundings. They may be from organic or manmade objects. Some of them are so interesting in their colours, textures, values, shapes that you can use them to make your own patterns. Below are some sources of pattern from the environment.



Some of the objects and things that can be source of motifs

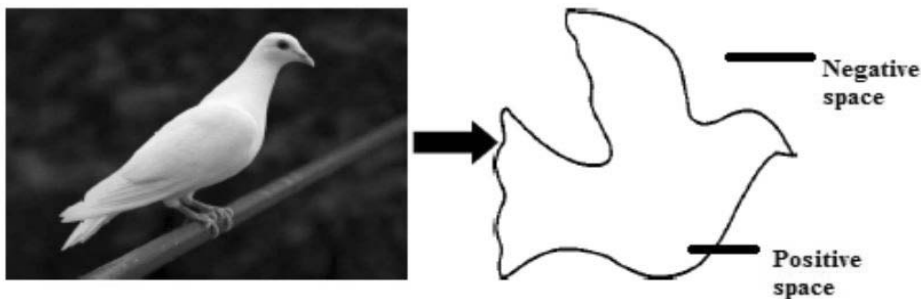
Make a motif and different repeats

Activity

Using one of the natural objects of your choice, develop your pattern

A motif is an element of a pattern, image or shape, which recurs in design. It may be repeated in a design or composition, often many times or may just occur once in a work. Design process is the activity of making a motif.

Let choose a dove to make a motif.



Motif created from shape of dove

Selecting an interesting object from your nature that can be a source of inspiration, designs or patterns are worked out from drawings of natural form or geometric shapes.

NOTES

The dove is from natural form. The made motif can produce a pattern when it is repeated.



Repeated patterns from dove

There are three basic types of repeats:

1. Full drop
2. Half-drop repeat
3. The full repeat

The organisation of shapes for pattern you make can be arranged largely depending on your creativity.

Their arrangement leads to the types described below:

Full drop repeat

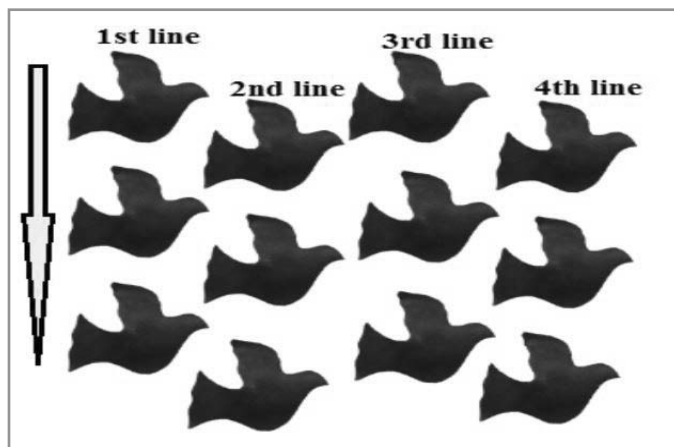
A full drop repeat is the simplest of all repeats you will do. To create a full drop repeat you simply multiply your motif along the same line horizontally and vertically.



Full drop technique for printing

Half-drop repeat

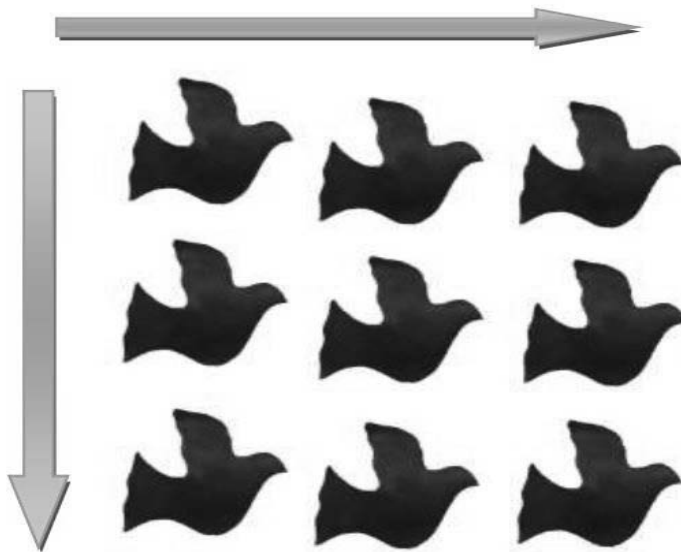
A half-drop is produced by repeating the motif at the sides as before but dropping the next row down.



Half drop technique for printing

The full repeat

A full repeat can be produced by repeating your motif at measured intervals, placing each motif directly under or alongside the previous one.



Side by side, repeat technique for printing

Application activity

1. Choose an object of your choice as a source of inspiration to develop motif to full drop and half drop repeats.
2. Discuss the works done regarding the arrangement of motifs.

Application of motifs

Motifs can be applied on surfaces in colour using different impression techniques like; stamping, stenciling and impression.

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Printing by impression

Activity:

1. Choose an object of your choice with pattern and create a motif using the impression printing technique and use different colours you want, basing to the experience of Senior two.
2. Display and discuss the works with your class.

There are times you can transfer a pattern from one source to another by impression. Patterns from hard surface as biscuits, rocks, stones, tree bark, coin, shoe sole, prepared clay, with different patterns are used in this method. Remember, printing by impression is used to create designs on a small scale and it is better when applied on paper. The patterns look better with many colours.

Printing by stamping

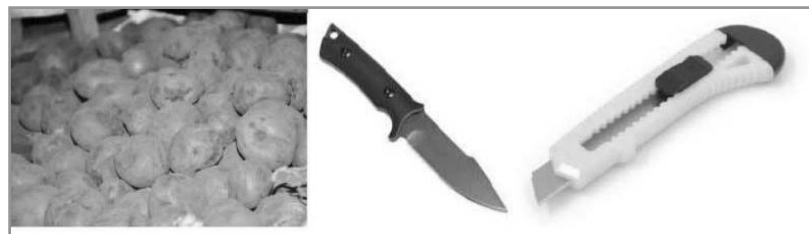
Normally, most of you have seen stamps with images, letters, numbers, that are used in your schools, offices at different works places. Stamps have different shapes, as seen in Senior 2, such as square, rectangular or circular.



Ink pad with wooden stamp

Stamping is a technique used to produce designs by beating or striking on a surface with a design using some force. Stamps may have images or letters which are stickled out, but they are inverted. A stamp is pressed on an ink pad, as you studied in senior two. It picks up ink and when it is pressed on a piece of paper or cloth, it releases the ink following the protruding images or/and words. This is the process used to create patterns through a stamping.

You can use some materials like Irish potatoes and cutter or knife to produce pattern to be printed. You are going to do practice on Irish potato now.

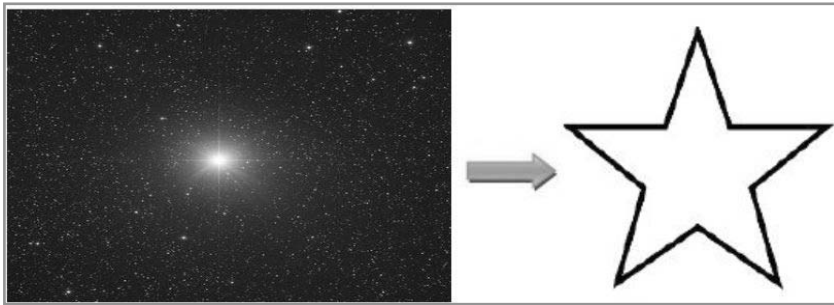


Some materials that can be used to produce stamping

Draw simple pattern on paper that can be taken as source of inspiration from the objects that are around you. During the night, you see some bright stars. They can give better motif which can be used to make pattern for printing.

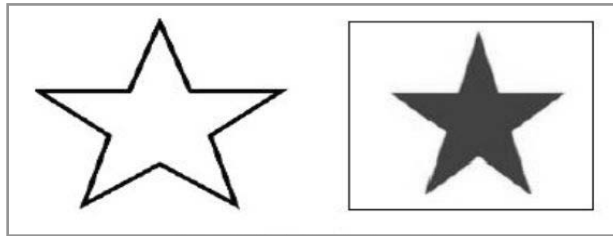
Create Motifs
using Different
Elements and
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Source of Inspiration to produce motif of star

1. Draw a simple pattern on paper.



A Simple shape of Star

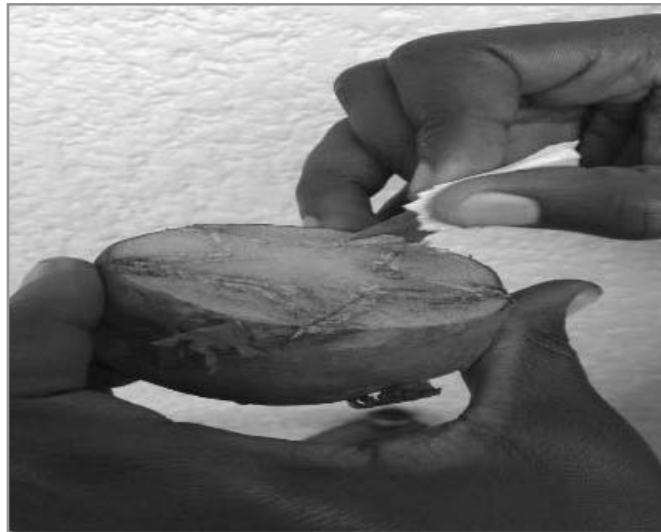
2. Divide the Irish potato into two parts as shown below:



Divided Irish Potato

3. Draw a pattern on the flat surface of the Irish potato with a pencil, then cut away drawn shape of star to retain the pattern on the surface. Your pattern should be left protruding.

NOTES



A pattern cut in an Irish potato

Put the cut pattern of a star in colour or ink, so that you can use it. Pay attention if the shape you need to stamp is full of colour or ink and the other surface is clean.



Inking or coloring the stamp on the Irish potato

Now print your pattern on another surface such as cloth or paper. The printing is repeated to form a complete design on the surface.



The printed pattern of star

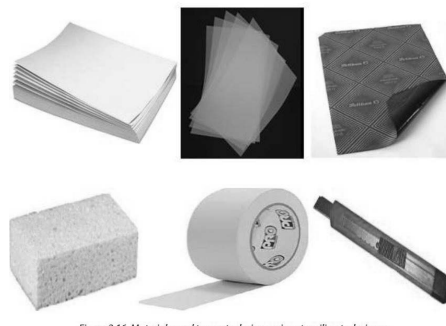
Application Activity:

1. Follow the steps above and create a design on your choice.
2. Display your work and discuss it with your classmates regarding the way stamps were made, and the final pattern applied.

Printing by stenciling

Stenciling is printing technique that produces an image or pattern by applying paint pigment to a surface over an intermediate object with designed gaps in it. To create a pattern or image is by only allowing the pigment to reach some parts of the surface.

A stencil can be made from a hard material such as Manila paper or transparencies. The materials needed are: Manilla paper, Tracing paper or carbon paper, masking tape, cutter, sponge.

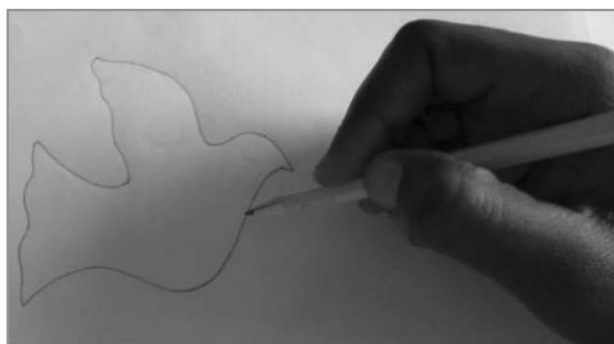


Materials used to create design using stenciling techniques

Stenciling is one of the simplest techniques of duplication. The design is cut out of paper (or any other suitable thin, strong material) and is printed by rubbing, rolling or spraying paint through the cut-out areas.

In senior two, you have learnt six steps to make stenciling technique. Let us do another work from this technique of printing using an Irish potato.

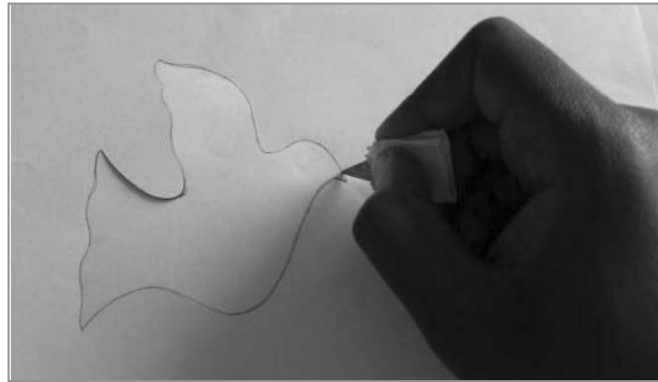
1. Draw sketches of object that you have selected from your surroundings to make it as motif. Principles of art must be taken into account especially balance to make a beautiful motif. Prepare a motif on duplicate paper; in this case. You don't need tracing paper or carbon paper because duplicate is a stencil itself.



Preparing motif

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2. Use a cutter or (razor blade but pay attention on it, so that it cannot harm you) to cut out the pattern on the stencil. When cutting the stencil, you should only cut out the positives and leave out the negatives. Take care to avoid hurting yourself.



Cutting the pattern on a stencil

3. You can stretch the cloth on the top of the table or desk using tacks to fix it in the same position. Make sure that the cloth is well prepared so that the paint may be well applied on.



A cloth on a table ready for printing

4. Place your stencil on the surface of the material you are going to print on.

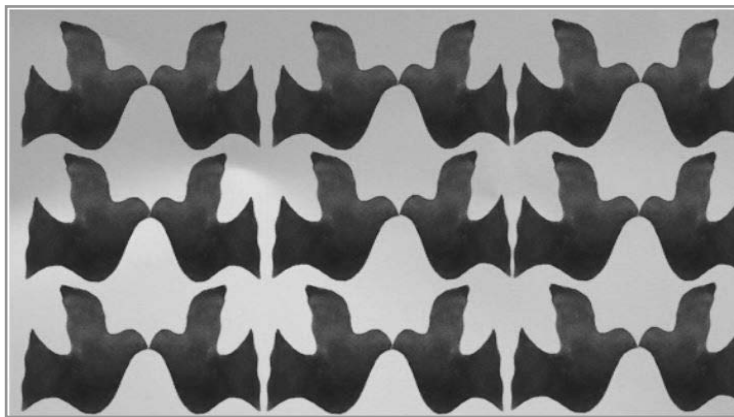


Place the motif on the cloth for printing

5. Then use a sponge to print your made motif. Repeat the process until the whole cloth is full of patterns.



Printing the pattern on a cloth with a sponge



Finished Work

Magic of Natural Motif



Motifs are required for designing any art; whether it is jewellery, fashion, furniture, textile or visual arts. What are these motifs, the motif can be an idea, an object or

Create Motifs
using Different
Elements and
Principles of
Design

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creativity, or we can say a motif differs from a theme. So, Motif means a design that consists of recurring shapes or colors, a theme that is elaborated on in a piece of music & unifying idea that is a recurrent element in a literary or artistic work. Motif is a unit of design; a particular motif is used in every design that is selected by designer, so a good designer should always be well informed about art, and current events. It is the designer's responsibility to translate the stylist concept, with the help of reference material.

Motifs have played an important role in the designing of Jewellery. Designer has always found a way to usually express his abstract ideas. Motif has always been a driving force in jewellery design. Natural motifs are widely used in entire world. An expertly crafted piece of jewellery can capture forever the life-like qualities of an animal on the run, a bird in flight, blooming flowers, butterflies, insects or fish. Such jewellery remains a perennial favourite, never seeming to go out of style.

Indian Jewellery reveals an amazing variety of motif and designs which depict the unceasing process of evolution in Indian jewellery/ornaments. Most of jewellery have floral and figurative motifs. These motifs have been taken from nature and surrounding environment.

Nothing can out do the simplicity of traditional Indian motifs. When it comes to jewellery designing, the 'aam' or paisley, the floral patterns, the peacock and the curvaceous creeper, top the list as they can easily and beautifully blend in with. "Traditional designs are popular with women. The Indian culture is very relative to the Indian women; even a woman who dresses up in western wear holds the Indian traditions quite close to her heart, which is why even contemporary designs do have traditional motifs. Traditional designs add character to the entire Indian ensemble and they are a statement by themselves."

Jewelry designers are reinterpreting paisleys found in embroidery fabrics and lace motifs of this time period. They are spinning these looks, which range from richly ornate and colorful to embellished yet subtle, into gold with diamond and gemstone accents.

- **Floral Motifs:** *Floral* motifs have been the most common and best selling pieces for past several years. A design with floral or other plants can be more realistic and stylized in compare of other forms. The Floral design is among the popular motifs in Indian jewellery. The ear ornament, Kanphool, is in the shape of a blooming Motia flower and is a symbol of happiness and prosperity. The Pipal patra (leaf), of Northern India and Gujarat, has a central motif of leaf from which bunches of finely shaped Pipal leaves cascade. It is a symbol of auspicious occasions and abundance.

The Champa, Jasmine flower, is symbolic of fertility. The Champakali motif is a jasmine bud shaped necklace. Each pendant in the shape of a bud is strung together on a thread.

Gajra and Paunchi are worn on the wrist and these too are floral motifs. The Gajra is made in gold and pearls. From a distance they appear as if the base of intertwined gold wire is of golden grass. Paunchi is made of a number of pieces in the shape of a flower. These are strung together and made into a bracelet.

- **Animal Motifs:** Animal motifs are “hot” in the US, with butterflies the best seller. Jewellers try to make animal designs as realistic as possible. “Black, pink, yellow and blue are currently the most popular colours for this type of motif.”



Animal and bird motifs have been a favorite with the Indian craftsmen through centuries. It has been a distinct feature of Indian jewellery and has not been seen anywhere else in the world.

The bracelets which have heads of lion and elephants too have their own significance. Lions stand for strength, courage and sovereignty, while the Elephants stand for strength, visibility, calmness and gentleness. Makar (crocodile) Signifies life force of the water and parrot signifies love because lord



Peacock motif too is eye catching as the royal bird is intertwined in the form of a gorgeous diamond studded necklace, earrings and finger ring that is contemporary in its appeal yet has flashes of the eternally traditional motif.

Motifs of Fish make beautiful ornaments of the Head, Neck ear ornaments. It represents the incarnation of Lord Vishnu, and is also one of the eight auspicious symbols, signifying abundance since fish breeds fast. Serpent is the most favorite motif adopted by jewellers all over India. It symbolizes the eternity of cyclic time because of its capacity to discard its skin and its apparent immortality. It also stands symbolic of courage, quick and violent potency.



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- **Galaxy Motifs:** Sun motif is very popular in ornaments. The sun represents infinite knowledge and is a personification of cosmic order. It also signifies majestic & royal personality.

Moon, stars and crescents have also been widely used in ornaments meant for head and ear. Moon is symbols of gladness and coolness. Crescents is preferable to the full orb as the crescent represents the noblest sacrificer who offers himself day by day to be beaten up by the celestial gods to sustain themselves by him ambrosial digito.



Mughal Motifs: The Mughal patronage of the jewellery brought distinct changes to the art of jewellery making. The Hindu designs were gently modified to incorporate various geometrical and floral designs.

Hindu jewellery depicts scenes from the ancient scriptures and gods and goddesses formed the main themes. But since the depiction of human figures is prohibited in Islam, the existing art of engraving figures took a back seat. These gave way to floral and animal designs.

The combination of crescent and stem dominated the Muslim jewellery. Earrings had a small stem at the top of a crescent from which was suspended a fish, which further led to a bunch of pearls. These became a regular feature of the Mughal jewellery.

Besides the above stated symbols and motifs, there have been various other objects to be used such as the Zodiac signs, organizational signs & Geometrical symbols, occupational symbols, monograms & logos, fraternal good motifs and source of design, If a designer thinks with an open mind he can realize a deep concept or theme in every art form and the same way he can incorporate & express a variety of themes & motifs in jewellery designs. Magazines, Catalogues, Books, Photographs, visits to jewellery stores, exhibitions & museums are some other useful sources to generate new motifs, but Flowers, Sun, Moon, Stars, birds & animals are frequently used in Indian Jewellery. The heavenly bodies have been source of awe and inspiration for human since time immemorial and no wonder these found a way into jewellery too.

Types of motif

A motif may be an element in the iconography of a particular subject or type of subject that is seen in other works, or may form the main subject, as the Master of Animals motif in ancient art typically does. The related motif of confronted animals is often seen alone, but may also be repeated, for example in Byzantine silk and other ancient textiles. Where the main subject of an artistic work such

as a painting is a specific person, group, or moment in a narrative, that should be referred to as the “subject” of the work, not a motif, though the same thing may be a “motif” when part of another subject, or part of a work of decorative art such as a painting on a vase.

Ornamental or decorative art can usually be analysed into a number of different elements, which can be called motifs. These may often, as in textile art, be repeated many times in a pattern. Important examples in Western art include acanthus, egg and dart, and various types of scrollwork.

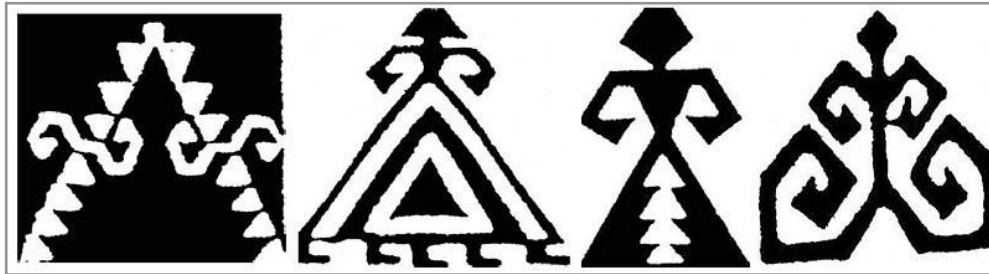


Fig. Elibelinde kilim motifs, symbolising fertility

Many designs in Islamic culture are motifs, including those of the sun, moon, animals such as horses and lions, flowers, and landscapes. Motifs can have emotional effects and be used for propaganda. In kilim flatwoven carpets, motifs such as the hands-on-hips elibelinde are woven in to the design to express the hopes and concerns of the weavers: the elibelinde symbolises the female principle and fertility, including the desire for children.



Pennsylvania Dutch motif known as a hex sign

Pennsylvania Dutch hex signs are a familiar type of motif in the eastern portions of the United States. Their circular and symmetric design and their use of brightly colored patterns from nature, such as stars, compass roses, doves, hearts, tulips, leaves, and feathers have made them quite popular. In some parts of Pennsylvania Dutch country, it is common to see these designs decorating barns and covered bridges.

The idea of a motif has become used more broadly in discussing literature and other narrative arts for an element in the story that represents a theme.

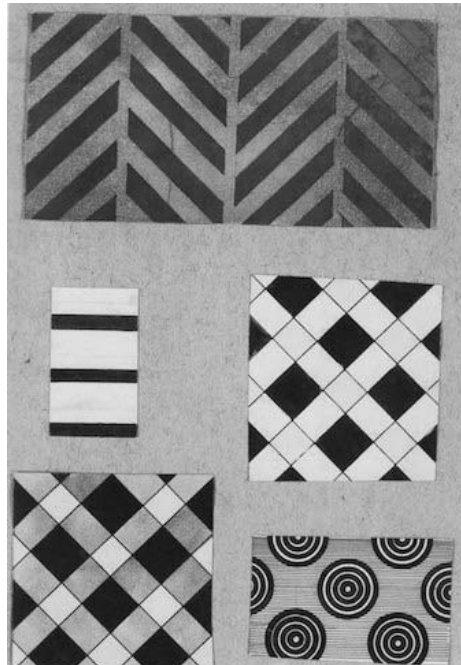
Types of Textile Design

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Textile designers create fabric for many uses.

A **textile designer** creates patterns and designs for printed, knitted and woven fabrics made of natural and man-made fibers. They choose which textile fibers to use and what patterns to weave into a textile. They might design the structure and look of fabric. Some textile designers work with manufacturers to create specific fabric textures.



Examples of fabric designs from Russia, ca. 1924

Textile designers are artists who create ideas for textile surfaces. It's an interesting job. Textile designers have to be creative, collaborative and aware of constantly changing trends in color and style. They also have to be able to work within deadlines.

Textile designers can be found in many different industries, including fashion, art and technology. Two common types of textile design are for **home goods** and the **apparel** or clothing industry. If you think about it, it's obvious that these textile areas are very different. You might love a large bold patterned floral print on your sheets or curtains, but you probably wouldn't want to wear that same pattern on your clothes! So, some textile designers specialize in designs used in the home, while others create textiles and print patterns for clothing fabric. In this work, textile designers work with other kinds of designers, especially clothing designers and interior designers.

Some textile designers collaborate with fashion designers in creating textiles and printed patterns for high fashions or for more affordable ready-to-wear styles. They might design a whole array of options, like floral or geometric patterns, or retro prints that recall past popular styles. Some designs might involve creating **repeats** or patterns with identical motifs that cover the entire fabric.



Some textile designers create fabric patterns for clothing.

In interior design, textile designers might create drawings for patterns used in kitchens, bathrooms, or other living areas. They might be aiming for specific color palettes, or for cohesive atmospheres that are bold, relaxing or nature-influenced.

1.6 SUMMARY

Other principles of design are also touched upon in various articles on the subject. These include typography, color, Gestalt Principles, grid and alignment, framing,

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and shape. Some definitely fit the definition of “principles” while others are more like elements of design.

Typography refers to the way text is arranged in a design. That includes the fonts used, their spacing, size, and weight, and the way different text elements relate to each other. Good typographic design is heavily influenced by all of the other design principles mentioned earlier in this chapter.

The use of color in design is one of the most psychologically important parts of a design and has a huge influence on user experience. Color psychology and theory heavily influences some of the other principles mentioned earlier.

Gestalt Principles include similarity, continuation, closure, proximity, figure/ground, and symmetry & order (also called prägnanz). Some of those principles are closely related to the principles mentioned above.

Grid and alignment are closely related to balance and refer to the way elements are arranged in relation to an invisible grid on the page.

Framing refers to how the primary subject of a design is placed in relation to other elements on the page. It is most often heard referred to in cinematography or photography, with how the main focus of an image is placed within the overall image. But the principle carries over into design.

Shape is also a major part of any design, both in terms of specific shapes used as elements within the design, and the overall shape of the design itself. Different shapes can evoke different feelings, i.e circles are organic and fluid, while squares are more rigid and formal, and triangles give a sense of energy or movement.

These design “principles” or elements are important aspects of good design and should be considered alongside the other basic principles to create the best user experiences.

What constitutes the “basic” principles of design is certainly up for debate. But understanding and implementing the principles covered above is vital to the success of any design project.

Designers should aim to understand how each of these design principles actually impacts their work. Studying how other designers have implemented these ideas to structure their own designs is also an incredibly valuable tool in learning to create better designs.

It’s entirely possible to create a good design without a thorough understanding of these elements and principles of design. However, it’s typically done by “designer’s intuition” and may take a lot of trial and error in order to create something that actually looks good and creates an optimal user experience. Designers could save a lot of time and energy by practicing the principles we have discussed until they become second-nature.

1.7 GLOSSARY

- **Adaptation:** A design based on another design but significantly modified and altered to be considered new and different.

- **Airbrush**” Imitating effects produced with a painter’s spray air gun. Often creates patterns with a light, soft, and modern look.
- **Alleyways:** Unintentional lines formed by negative spaces (spaces vacant of motifs) in a design.
- **Allover:** A layout in which motifs are fairly close and evenly distributed as opposed to stripes, borders, plaids, and engineered designs. Another term is overall.
- **Animal Print:** A pattern resembling the skin or fur of an animal.
- **Anthemion:** A classical motif based on a stylized honeysuckle plant or a radiating, fan-shaped palm leaf (palmette) commonly found in Greek, Egyptian, Assyrian, and other ancient art.
- **Arabesque:** An elaborate ornamental design of intertwined curvilinear floral or geometric motifs. Commonly comes from (or inspired by) Islamic art or architecture.
- **Argyle:** A pattern of diamond-shaped rectangles in a diagonal alternating (checkerboard) arrangement. Typically uses a small number (two or three) colors. Mostly used in knitted fabrics. An alternative spelling is Argyll.
- **Alternating rhythm:** a principle of design; alternating rhythm is created by repeating two or more of the elements of visual arts to produce an alternating pattern, such as red-blue, red-blue, red-blue.
- **Additive color:** The color mixing system of light. When the primary hues, red, green, and blue are added together, the result is white light. Yellow is seen when red and green lights are mixed; cyan is a combination of green and blue light; magenta, of red and blue.
- **Brightness:** An ambiguous term sometimes used to mean “purity,” sometimes “luminance”; more often used to refer to a combination of these two dimensions of color.
- **Bilateral symmetry:** A form of design in which elements repeat themselves as perfect mirror images along a vertical (or horizontal) axis or bisector.
- **Collage :** An artistic composition or materials and objects pasted over a surface, often with unifying lines and color. Originating with the French word *coller*, to glue, a composition of materials and objects pasted on a surface, or portions thereof. Collage is frequently used as a verb, referring to the process of arranging and overlapping various parts to create a more powerful effect than these elements have as separate units.
- **Compression :** The actual or implied sense of forces pressing inward. The engine cycle during which gas or vapors are compressed. In the visual arts, compression can be used to pack energy into a composition. Like a jack in the box, loaded and ready to spring, a picture plane or sculptural space can be “loaded” with ingredients that press against each other to create an exciting energy.
- **Design :** To conceive, invent, contrive; to form a plan for; to draw a sketch; to have as a goal or purpose, to intend; a visual composition, pattern; a reasoned

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purpose, intention, creation of pattern, Human-made order, structure, and form. This word is both noun and verb. When we attempt to arrange parts in a way that is most efficient, attractive and/or meaningful, we are engaged in the process of design. The result of the activity, which may be an intellectual property as well as a sketch or model, is also called a design.

- **Focal point** : The dominant point or area in any visual or pictorial field wherever the eye is directed or impelled to look.
- **Op art**: A contraction of optical art. An art movement of the 1950s and 1960s that employed optical illusions, optical dazzle, simultaneous contrast, and other perceptual phenomena as a basis for their works.
- **Principles of Design**: The means by which artists organize and integrate the visual elements into a unified arrangement, including unity and variety, contrast, emphasis, balance, movement, repetition, rhythm, and economy.

1.8 REVIEW QUESTIONS

1. Discuss the Careers in the Repetition design.
2. What kind of Rhythm Design?
3. What is Line Design?
4. Explain the Color element design.
5. Is the design balanced?
6. Does the design have logical hierarchy?
7. Does the eye follow over the page/s easily and logically?

2

CONVERT MOTIFS INTO DESIGNS

STRUCTURE

- | | |
|-----|--|
| 2.1 | Learning Objective |
| 2.2 | Introduction |
| 2.3 | To Understand the Application of Converting Motifs into Design |
| 2.4 | Student Activity |
| 2.5 | Able to Create Designs for Fabrics |
| 2.6 | Summary |
| 2.7 | Glossary |
| 2.8 | Review Questions |

2.1 LEARNING OBJECTIVE

After studying this unit you should be able to:

- Explain the meaning and definition of **Motifs on Indian textiles**.
- Describe the **main responsibilities of a Making Motifs**.
- Explain the meaning and definition of **Textile Designing**.
- Describe the Different Types of **Paisley (design)**.
- Explain the meaning and significance of **Parrot motif**.
- Explain the procedure of **Lotus motif**.
- Describe the technology for modify **Fabric making & Fashion designing**.

2.2 INTRODUCTION

Making Motifs will show you several ways to turn sketches and design ideas into motifs using Illustrator. After covering the fundamentals of vector-based design, I'll take you through the key tools in the software with lots of tips and examples. By the end of the class you'll be able to create vector motifs that can be used to decorate a greeting card, journal cover, screen background or indeed any surface.

A motif is a recurring narrative element with symbolic significance. If you spot a symbol, concept, or plot structure that surface repeatedly in the text, you're probably dealing with a motif. They must be related to the central idea of the work, and they always end up reinforcing the author's overall message.

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But how can you tell which ones are motifs? Remember that you must be able to connect a motif to the “big ideas” in a book. Just because the narrator mentions a particular pair of shoes a few times, doesn’t *necessarily* mean that it’s a motif — unless the author makes a point of tying it to a bigger question of, let’s say, escape and freedom. (Don’t worry — we’ll provide more concrete motif examples in a bit!)

Since they’re repeated throughout a text, motifs are also very traceable. As you’re trying to figure out the motifs of a given work, it might be useful to think of them as having a trail of purposeful clues. The author plants these breadcrumbs so that the reader can better work out the ideas behind the work — and its overarching point.

That brings up our next question: how do motifs relate to themes? Luckily, we’ve got the answer for you right here! Read on to learn more about the subtle distinctions between motif and theme, as well as motif and symbol.

With fast-growing fashion consumption, fabric waste created in the production processes is creating adverse impacts on the environment. At the same time, due to the fast fashion cycle, age-old crafts which have passed down through generations, sustaining artisans for centuries, are declining rapidly. The lack of knowledge in artisans to address the competitive market conditions and lack of design knowledge to address the customer need to get the right value can be identified as the major issue leading to the declining of crafts. The process eliminates fabric waste, promoting responsible fashion practices. It is also an attempt by the designer to show artisans new feasible opportunities involving the integration of craft and design.

2.3 TO UNDERSTAND THE APPLICATION OF CONVERTING MOTIFS INTO DESIGN

Textile Designing



Textile designing is all about making patterns for cloth which can be used in various applications. It is generally used in clothing, household textiles and decorative textiles such as carpets. The field encompasses the actual pattern making as well as supervising part or all of the production process. In other words, textile design is a process from the raw material into finished product. Fiber, yarn and finishes are the key elements to be considered during the textile design procedure.

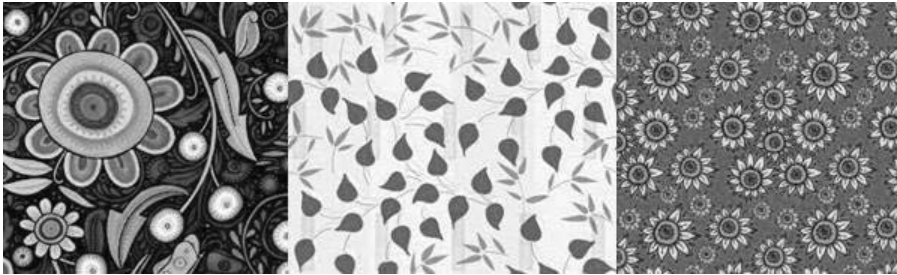
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FLORAL DESIGNS

This section basically consists of all types of floral prints as its name. Motifs of different flowers found in nature are used and reproduced as prints; most common ones are roses, sunflowers, tulips, jasmines, shoe flowers etc.

Leaves, thorns are also used; another type of design in this section is the Bamboo print. Floral designs are most loved by the textile designers and are reproduced since ages. The end uses of these printed fabrics are endless.

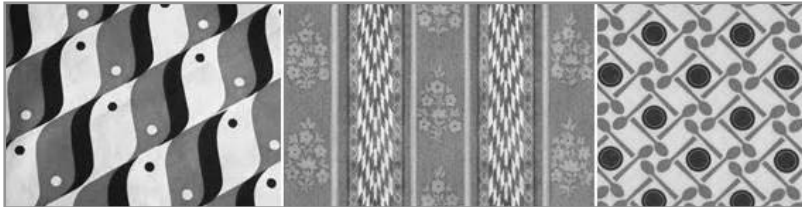
Hot favorites with the designers it is used for apparel wears, home furnishing, interiors and decorative textiles. The layouts can be anything from tossed, one directional, 2 directional, packed and border.



GEOMETRIC DESIGNS

These include all types of shapes, lines, circles etc. The designs created from lines give an interesting look of stripes and checks are more used for shirting purposes. Polka dot prints are one of the most common prints which fall in this category.

Another common print is the abstract print created with combination of different shapes mainly finds its use in casual wears. Plaids are great geometric designs and are created in monotonous or neutral colors to give it a subtle look.



CONVERSATIONAL DESIGNS

These include the nursery prints, landscapes, cityscapes, animal skin prints, mythological print, newspaper print etc. Basically whatever found in nature and manmade is converted in design form, e.g.: A space ship made by man can be used as a print on a fabric or the beautiful sunset scene can be used as a print.

A nursery print is a print which is very popularly used for kids wear and nowadays it is a craze on casual wears too. These prints include motifs of alphabets, numbers, toys, cartoon creatures anything and everything loved by children.

A mythological print is a print which is created by designers using their imaginations like angel motifs, mermaids; dragons etc are used to create these prints, something from the fantasy world.

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Animal skin prints are replacements of the real animal skins which people used and now is banned as per the PETA and environment Act for endangered species. This print gives a sexy and exotic look and makes wonders when used in the right way on home furnishings, apparel wears and even accessories like shoes, belts and name it.

ETHNIC DESIGNS



These are one of the most favorite categories of Textile Designers and very much in vogue nowadays. They include the traditional prints of that particular region. Paisley a common motif finds its place in this category of designs, very commonly seen on Kashmiri shawls, Turkish fabrics indeed giving the textile a Persian look. Similarly the Ikat print is also considered as an ethnic print.

Textile manufacturing process

Today the textile industry encompasses a significant number and variety of processes that are adding value in fiber. These processes may range over the yarn making through the garment stitching, fabric embossing, and composite production. However, considering the textile fiber as the basic building unit of any textile product, the textile manufacturing may clearly be identified as the conventional and technical textiles.

The conventional textile manufacturing process has a long history of converting the natural fiber into useful products including fabric, home textiles, and apparel and more recently into a technical textile through the utilization of special finishing effects.

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The synthetic and semi-synthetic fiber manufacturing is diversified with the utilization of monomer, chemical agent, precursor, catalyst, and a variety of auxiliary chemicals resulting in the formation of fiber or yarn.

The innovation in textile manufacturing introduced variety in raw materials and manufacturing processes. Therefore, process control to ensure product quality is desired. Monitoring and controlling of process parameters may introduce reduction in waste, costs, and environmental impact.

All the processing stages in textile manufacturing from fiber production to finished fabric are experiencing enhancement in process control and evaluation. It includes textile fiber production and processing through blow room, carding, drawing, and combing; and fabric production including knitted, woven, nonwoven, and subsequent coloration and finishing and apparel manufacturing.

The global textile industry, in yarn and fabric production, has strong presence and experiencing growth. In 2016, the yarn and fabric market was valued at USD 748.1 billion, where the fabric product was more in consumption and contributed 83.7% and the yarn product was at 16.3%. The market consumption is forecasted for growth at CAGR of 5.1% between 2016 and 2021, reaching to a market value of USD 961.0 billion in 2021.

Apparel production is another important area in textile manufacturing around the textile industry chain. Probably the apparel is what an individual wear for the purpose of body coverage, beautification, or comfort. Apparel and garment terms are used interchangeably. However, the two terms may be differentiated as apparel is outerwear clothing and garment is any piece of clothing.

The study of apparel manufacturing market includes all the clothing articles except leather, footwear, knitted product, and technical, household, and made-up items. The worldwide apparel manufacturing market was valued at USD 785.0 billion in 2016 and estimated to reach the level of USD 992 billion in 2021. The market enhancement is forecasted to move from 2016 to 2021 at CAGR of 4.8%.

Types of textile manufacturing process

Yarn manufacturing

Traditionally, yarn manufacturing comprises a series of processes involved in converting the fiber into yarn. It was rooted in natural fibers obtained from natural plant or animal sources. Natural fibers are produced with natural impurities that were removed from the yarn in subsequent pretreatment processes.

Possibly, cotton is the fiber that has rooted the yarn manufacturing from fiber bale opening, followed by the series of continuous operations of blending, mixing, cleaning, carding, drawing, roving, and spinning. Yarn manufacturing using cotton fibers through a sequence of processing stages may be shown by process flow diagram. All these operations are mechanical and do not require chemical application.

Each processing stage in yarn manufacturing utilized the machine of specialized nature and provided quality effects in yarn production.

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The advancement in fiber processing and machine technology for yarn manufacturing is continuous. The manual picking of cotton fiber is now replaced with machine picking. However, conventional systems of blending, carding, drawing, roving, and spinning are indicated important in the future.

Yarn diameter, hairiness, linear density, permeability, strength properties, etc. depend upon the end-use requirement of fabric to be produced for woven or knitted end products (e.g., apparel or industrial fabrics), sewing thread, or cordage.

Several interesting works on the production of yarn are available that provide details of the material processing and technological control. Introductory spinning technology is described by Lawrence. It covers the rudiments of staple-yarn technology, the manufacturing process, the raw materials, and the production processes for short-staple, worsted, semi-worsted, woolen spinning, doubling, and specialty yarn. Some of the useful advanced topics discussed are staple-yarn technology, including new development in fiber preparation technology, carding technology, roller drafting, ring spinning, open-end rotor spinning, and air-jet spinning.

Peter described the yarn production technology in combination with the economics. The study is useful for yarn manufacturing and its development in the textile industry. Important topics covered include review of yarn production, filament yarn production, carding and prior processes for short-staple fibers, sliver preparation, short-staple spinning, long-staple spinning, post-spinning processes, quality control, and economics of staple-yarn production.

Fabric manufacturing

Textile fabric is at least a two-dimensional structure produced by fiber/yarn interlacing. The interlaced fibrous structure mainly used is woven, nonwoven, and knitted. Traditionally, the weaving technology was the principal source for fabric production.

The important types of woven fabric produced are the basic weaves, such as plain or tabby, twill, and satin, and the fancy weaves, including pile, jacquard, dobby, and gauze.

Knitted fabric is the second major type of fabric used following the woven. It has a characteristic of accommodating the body contour and provided the ease of movement. It is particularly a comfortable form of fabric structure for sports, casual wear, and undergarment. Knitted fabrics include weft types and the warp types, raschel, and tricot.

Net, lace, and braid are other useful interlaced fabric structures. Nonwoven fabrics are rapidly increasing in market consumption. These fabrics are finding interesting uses in industrial and home applications. Nonwoven fabrics include materials produced by felting and bonding.

Laminating processes are also increasing in importance, and fairly recent developments include needle weaving and the sewing-knitting process.

Garment manufacturing

Garment is known as a piece of clothing. Garment design and manufacturing is the combination of art and technology.

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Garment manufacturing has seen several advancements in design development, computer-aided manufacturing (CAD), and automation. However, the older version of garment manufacturing process is still the main theme today—that is, the cutting and joining of at least two pieces of fabric. The sewing machine has the function of joining woven or cut-knitted fabrics. Garments are mostly produced by sewing the pieces of fabric using a sewing machine. These machines are still based on the primary format used.

Today the important topics in the current garment manufacturing industry range over product development, production planning, and material selection. The selection of garment design, including computer-aided design, spreading, cutting, and sewing; joining techniques; and seamless garment construction are beneficial in meeting the consumer needs. The development in finishing, quality control, and care-labeling of garment are meeting the point-of-sale requirements.

Technical textile

Technical textile is an established domain of interdisciplinary application of textile products. Most of the major industrial sectors are benefiting the function of fiber material.

Any technical textile is a fibrous structure or a textile product that is produced for technical performance rather than fashion or aesthetic requirements.

Currently, technical textiles occupy strong market consumption. It is significantly an important sector for industrial development in industrialized and developing countries.

There are 12 types of technical textile with example product application which may be outlined as under:

- Meditech—sanitary diapers, bandages, sutures, mosquito nets, heart valves, ligaments, etc.
- AgroTech—crop protection net, bird protection, water tank, etc.
- BuildTech—ropes, tarpaulin, concrete reinforcement, window blind, wall covering, etc.
- MobileTech—car airbags, aircraft seats, boat, seat belt, etc.
- ProTech—protective gloves, knife and bulletproof vest, flame-retardant and chemical-resistant clothing, etc.
- InduTech—conveyor belts, cordage, filtration media, etc.
- HomeTech—sofa and furniture fabric, floor covering, mattresses, pillow, etc.
- ClothTech—sun shade, parachute fabric, sewing threads, interlinings, etc.
- SportTech—sports shoe, swimsuit, sports nets, sleeping bags, sail cloths, etc.
- PackTech—tea bags, wrapping fabrics, jute sacks, etc.
- OekoTech or EcoTech (textiles in environment protection)—erosion protection, air cleaning, prevention of water pollution, waste treatment/recycling, etc.
- Geotech—nets for seashore and geo structures, mats, grids, composites, etc.

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The emergence of technical textile products was realized in the 1990s, in addition to the conventional woven and knitted textile articles. However, since then technical textiles showed phenomenal growth.

More recently, the global technical textile market has shown significant growth in consumption, and it is estimated to continue in the future. Technical textile market was estimated at USD 165.51 billion in 2017 and is projected to reach USD 203.7 billion by 2022. The CAGR of from 2017 to 2022 is indicated 5.89%.

Value addition in textile manufacturing

Pretreatment process

Any of fiber substrate including fiber/yarn, fabric, garment, technical textile, etc. may require a series of chemical processing to reduce the undesired content from the fiber. The selection of any pretreatment process, its composition, and methodology depends upon the end-use requirement of the textile product.

A pretreatment process is generally required to introduce two important value additions in textile substrate including:

1. Removing the undesired content from the fiber mass including dust, coloring matters, undesired oils, lint, trash, etc.
2. Imparting the required level of fiber property for subsequent processing of textile substrate. The required fiber property may include fabric whiteness, absorbency, softness, strength, weight, width, etc.

The pretreatment processes performed in conventional textile industry are sizing, desizing, scouring, bleaching, mercerization, washing, and heat setting. One or more of any of these processes are required for the textile substrate depending upon the end use of the textile.

Traditionally, the pretreatment process is performed on cotton, cellulose fibers, wool, and the blend of these fibers with synthetics and semi-synthetics. Natural fibers including cotton and wool have natural impurities, and the purpose of pretreatment is primarily to remove undesired natural fiber content.

Coloration process

Dyeing, printing, and coating are the coloration processes to produce beautiful motif and color effect on textile. Printing and coating are limited to surface coloration and may be applied to most of the fiber types, natural fabrics, and synthetics. Approximately 10,000 different dyes and pigments are used industrially around the world.

Dyeing is the coloring effect throughout the cross section of fiber, and this effect can be produced on any form of textile substrate including fiber/yarn, fabric, garment, and clothing articles. However, any dyestuff is suitable for a particular type of fiber for dyeing.

Dyeing of textile substrate is performed using any of the dyestuff including reactive, direct, sulfur, vat, pigment, acid, and disperse, depending upon the dye-fiber system compatibility. The dyeing method used can be continuous, semi-continuous,

and batching. Continuous dyeing technique is performed for large-scale production in the industry.

Fixation of dyestuff in fabric or garment should be significantly fast during the service life to provide resistance and durability against washing, heat, chemicals, soaping, rubbing, sunlight, etc.

Washing of the dyed fabric and the discharge of dye effluent may release 10–50% of dyestuff to the environment, and that is the environmental concern associated with the dyeing process. Globally, the inefficient dyeing and finishing process may result in the release of 200,000 tons of used dyestuff to the environment.

Paisley (design)

Paisley or **paisley pattern** is an ornamental textile design using the *boteh* or *buta*, a teardrop-shaped motif with a curved upper end. Of Persian origin, paisley designs became very popular in the West in the 18th and 19th centuries, following imports of post-Mughal Empire versions of the design from India, especially in the form of Kashmir shawls, and were then replicated locally.

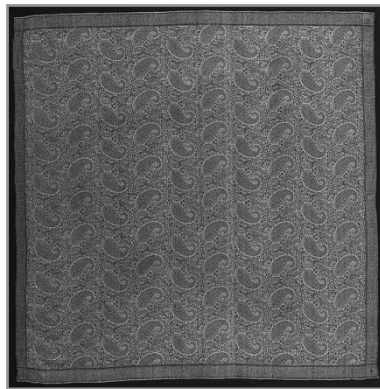


Fig. Shawl made in Paisley, Scotland, in imitation of Kashmir shawls, c. 1830

Although the pine cone or almond-like form is of Persian origin, and the textile designs cramming many of them into a rich pattern are originally Indian, the English name for the patterns derives from the town of Paisley, in the west of Scotland, a centre for textiles where paisley designs were produced. The pattern is sometimes called “Persian pickles” by American traditionalists, especially quilt-makers, or “Welsh pears” in Wales.

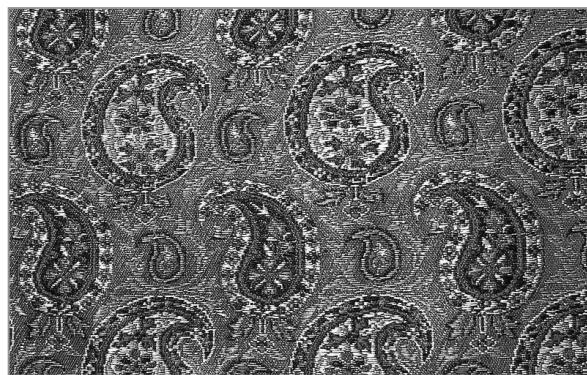


Fig. Persian silk brocade with gold and silver thread (*golabetoon*), woven in 1963.

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The pattern is still commonly seen in Britain and other English-speaking countries on men's ties, waistcoats, and scarfs, and remains popular in other items of clothing and textiles in Iran and South and Central Asian countries.

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Origins



Shawl fragment, India, 19th century

Some design scholars believe the buta is the convergence of a stylized floral spray and a cypress tree: a Zoroastrian symbol of life and eternity. The “bent” cedar is also a sign of strength and resistance but modesty. The floral motif was originated in the Sassanid dynasty and later in the Safavid dynasty of Persia (1501–1736), and was a major textile pattern in Iran during the Qajar and Pahlavi dynasties. In these periods, the pattern was used to decorate royal regalia, crowns, and court garments, as well as textiles used by the general population. Persian and Central Asian designs usually range the motifs in orderly rows, with a plain background.

Ancient Indo-Iranian origins

Boteh Jehgeh, or “ancient motif”, more commonly known as paisley, has a mysterious origin with much speculation on its early meaning and mythology surrounding its symbolism. With experts contesting different time periods for its emergence, to understand the proliferation in the popularity of Boteh Jehgeh design and eventually Paisley, it is important to understand South Asian history. The early Indo-Iranian people flourished in South Asia, where, they eventually exchanged linguistic, cultural, and even religious similarities. The ancient Indo-Iranian people shared a religion called Zoroastrianism. Zoroastrianism, some experts argue, served as one of the earliest influences for Boteh Jehgeh's design with the shape representing the cypress tree, an ancient zoroastrian religious symbol. Others contest that the earliest representation of the patterns shape

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comes from the Sassanid Dynasty, who lived in modern-day Iran, dating to more than 2,200 years BC and remained in power until the 3rd century AD. The design was representative of a tear drop. Some will argue that Boteh Jehgeh's origins stem from old religious beliefs and its meaning could symbolize the sun, a phoenix, or even an ancient Iranian religious sign for an eagle. Around the same time, a pattern called Boteh was gaining popularity in Iran, the pattern was a floral design, and was used as a high class decoration, mostly serving to decorate royal items that belonged to those of high status. It was said to have been a pattern worn to represent elite social status, such as that of nobility. The pattern was traditionally woven onto silk clothing using silver and gold material. The earliest evidence of the design being traded with other cultures was found at the red sea, where it is predicted that the earliest trades took place as far back as the 15th century, with both Egyptian and Greek peoples.

Introduction of Boteh Jehgeh to Western culture

In the 18th and 19th centuries, the British East India Company was using old Silk Road routes to trade goods between India and Great Britain, Kashmir shawls from India eventually made their way to England and Scotland where they were extremely fashionable and soon duplicated. The first place in the western world to imitate the design was the town of Paisley in Scotland, Europe's top producer of textiles at this time. Before being produced in Paisley, thus gaining its name in western culture, the paisley design was originally referred to by westerners simply as just pine and cone design. Technological innovation in textile manufacturing around this time made it so that western imitations of Kashmir shawls became competitive with Indian made shawls from Kashmir. With the industrial revolution taking place in Europe, paisley shawls were manufactured at an industrial rate, and while the shawls from India could be quite expensive at the time, factory manufactured shawls made it so that the fashion became common place amongst middle-class people, thus boosting the designs popularity even more. While the western world appropriated much of eastern culture and design, the Boteh design was by far the most popular. Records indicate that William Moorcroft, an English businessman and explorer visited the Himalayan mountains in the mid 19th century, upon his arrival he was enthralled by Boteh designed Kashmir shawls and tried to arrange for entire families of Indian textile workers to move their lives to the United Kingdom. The earliest paisley shawls made in the United Kingdom, in Paisley Scotland were made out of fleece, a material that is put together in such a way that one side can be described as containing a soft, fluffy texture. When introduced into western culture, the paisley shawls were primarily worn by males and were worn for ceremonial purposes. As time went on and the paisley shawls began to integrate more into western culture, the design was worn less for ceremonial purposes and came to be seen by society more as a fashionable style of clothing. With the shift in how western cultures wore paisley, it eventually became a style primarily worn by women instead of men. While still holding an accurate resemblance to its original influence, the paisley design would begin to change once it began to be produced in western culture, with different towns in the United Kingdom applying their own spin to the design. Strangely, in what baffles some

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historians and experts, paisley fell out of fashion in the 1870s and did not come back into style for years to come. Some believe that especially in the beginning of the early 20th century, widespread “orientalism” led to many seeing the paisley shawls as that of uncivilized. The 1960s proved to be a massive revival for the paisley design in western culture, in the 1960s, popular culture in the United States developed a sort of fixation on eastern cultures in which many traditionally Indian styles became popularized. Paisley served as one of the styles to be revived; being worn by the likes of The Beatles, even the guitar company Fender used the design to decorate one of their most famous guitars, the Fender Telecaster. Today, the design can be found in all aspects of our culture, for example the design appears on jewelry, wedding gloves, suit ties, pocket books, cake decorations, tattoos, mouse pads for computers, scarfs, and dresses just to name a few things, the list goes on and on. The pattern also influences furniture design internationally, with many countries using the paisley design for things such as wallpaper, pillows, curtains, and bed spreads to name a few.

From the East India Company in the first half of the 17th century made paisley and other Indian patterns popular, and the Company was unable to import enough to meet the demand. It was popular in the Baltic States between 1700 and 1800 and was thought to be used as a protective charm to ward away demons.

Local manufacturers in Marseille began to mass-produce the patterns via early textile printing processes at 1640. England, circa 1670, and Holland, in 1678, soon followed. This, in turn, provided Europe’s weavers with more competition than they could bear, and the production and import of printed paisley was forbidden in France by royal decree from 1686 to 1759. However, enforcement near the end of that period was lax, and France had its own printed textile manufacturing industry in place as early as 1746 in some locales. Paisley was not the only design produced by French textile printers; the demand for paisley which created the industry there also made possible production of native patterns such as *toile de Jouy*.

In the 19th century, European production of paisley increased, particularly in the Scottish town from which the pattern takes its modern name. Soldiers returning from the colonies brought home cashmere wool shawls from India, and the East India Company imported more. The design was copied from the costly silk and wool Kashmir shawls and adapted first for use on handlooms, and, after 1820, on Jacquard looms.

From roughly 1800 to 1850, the weavers of the town of Paisley in Renfrewshire, Scotland, became the foremost producers of Paisley shawls. Unique additions to their hand-looms and Jacquard looms allowed them to work in five colours when most weavers were producing paisley using only two. The design became known as the *Paisley pattern*. By 1860, Paisley could produce shawls with 15 colours, which was still only a quarter of the colors in the multi-colour paisleys then still being imported from Kashmir. In addition to the loom-woven fabric, the town of Paisley became a major site for the manufacture of printed cotton and wool in the 19th century, according to the Paisley Museum and Art Galleries. The paisley pattern was being printed, rather than woven, onto other textiles, including cotton squares which were the precursors of the modern bandanna. Printed paisley was cheaper

than the costly woven paisley and this added to its popularity. The key places of printing paisley were Britain and the Alsace region of France.

At the 2010 Winter Olympics, Azerbaijan's team sported colorful paisley trousers. It was the emblem of the 2012 FIFA U-17 Women's World Cup, held in Azerbaijan.

Islamic control in South Asia and spread of the pattern

In Persian language, Boteh can be translated to shrub or bush, while in Kashmir (India) it carried the same meaning but was referred to as Buta, or Bu. One of the earliest evidence of the pattern as it relates to Islamic culture has been found at Noh Gumba mosque, in the city of Blakh in Afghanistan, where it is predicted that the pattern was included in the design as early as the 800s when the mosque was built. In early Iranian culture, the design was woven onto Termeh, one of the most valuable materials in early Iran where the design served to make clothing for the nobility. At this time, the Iranian nobility wore distinct uniforms called Khalaat, historically, the design was commonly found on the Khalaat uniforms. It is stated that at some point in the 15th century, Boteh was transported from Persia to Kashmir. In the same century, in the 1400s, some of the earliest recorded Kashmir shawls were produced in India, records from the 1500s, during Emperor Akbar's reign over the Mughal people in this area indicate that shawl making was already fashionable in India prior to Mughal conquest which took place in the early 1400s. It has been stated that during Emperor Akbar's reign over the Mughal Empire, Boteh Jehgeh shawls were extremely popular and fashionable. While one shawl was traditionally worn previously, it was during the rule of Emperor Akbar that the emperor decided to wear two shawls at a time to serve as a status symbol. Along with wearing the shawls frequently, Emperor Akbar also used the shawls as gifts to other rulers and high officials. It is believed that by the 18th century, Kashmir shawls were produced in the image that someone today would associate with modern paisley.

Paisley bandanas



A red bandana with a paisley pattern

Convert Motifs
into Designs

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While today, some people associate bandanas with cowboys, paisley bandanas served an integral item in American fashion history. The modern paisley bandana was made popular during the late 1700s and their popularity in the United States coincides with the American Revolution. George Washington is said to have worn a paisley bandana as a scarf, the popular way of wearing bandanas at that time. Eventually in the late 18th and early 19th centuries, paisley bandanas were being printed containing political and military advertisements on them. Bandanas became an increasingly utilized tool in the spread of pro war propaganda during the early and mid 20th century when World War 1 and World War 2 were being fought. It was thought that by purchasing and sporting a pro-war paisley bandana, the person was helping to support their country in winning the war. The Paisley bandana started to feature in countless numbers of western movies and thus took on the symbol of the American west. Previous to the 1970s, paisley bandanas were worn by many blue collar and labor workers in an effort to keep dust away from their mouths and noses, the bandana's symbolism once again shifted in American minds, being associated with hard work. In the 1960s, famous country singer Willie Nelson adopted the paisley bandana style, and the trend soon became popular with men who rode Harley Davidson motorcycles. It was not until the 1970s that the paisley bandana would be associated with United States gang culture. It was around this time that paisley bandanas were starting to become popular amongst gangs in California, predominantly with two opposing gangs, the bloods who would wear red bandanas and the crips who would wear blue bandanas.



Modern men's tie, before 1996

Paisley became identified with psychedelic style due to resurgence in the pattern's mainstream popularity leading up the mid- and late 1960s, partly due to The Beatles. Consequently, the style was particularly popular during the Summer of

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Love in 1967. The company Fender made a pink paisley version of their Telecaster guitar, by sticking paisley wallpaper onto the guitar bodies. Prince paid tribute to the rock and roll history of paisley when he created the Paisley Park Records recording label and established Paisley Park Studios, both named after his 1985 song “Paisley Park”. The Paisley Underground was a music scene active around the same time.

Paisley was a favorite design element of British-Indian architect Laurie Baker. He has made numerous drawings and collages of what he called “mango designs”. He used to include the shape in the buildings he designed also.

Motifs on Indian textiles

Traditionally designed Indian textiles boast of motifs representative of the Indian culture. Flowers, fruits, birds or animals: here are some of the popular motifs and the idea or belief that they signify.

The most basic unit of a design or the smallest unit of a pattern is a motif. Often inspired by nature and also socioeconomic, cultural or religious factors, the motifs on traditional Indian apparel are all distinct and mostly very colourfully represented. Part of the Indian fashion regime since ancient time when kings ruled the country, these motifs are often also a representation of the different styles from an era gone by. Also derived from architectures and religious philosophies, birds, flowers, fruits and even animals have stories to tell, beliefs to share and this list below shares the most common of these motifs.

Peacock motif



\Found in paintings from the Indus Valley Civilisation, Buddhist sculptures, artefacts from the Gupta period and Mughal miniatures, peacock inspired designs have been found in art from different ages. Although the fact that it represented the same idea is not certainly known, the national bird is now a symbol of immortality, courtship and fertility. Motifs of the peacock are found commonly on traditionally designed fabrics with more embellished designs on bridal wear as in some cultures; the peacock signifies the completeness of being a woman. It is also believed to carry a sense of energy that comes from its renewal of feathers every year.

Parrot motif



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Symbolising passion and courtship, a motif of a parrot is commonly found in artwork telling the story of Lord Krishna and his lover, Radha, a tale well recited in Hindu epics and sagas. Generally found on textiles from West Bengal, Gujarat and Rajasthan, the bird also represents lovers' associations and is often used in couture designed for both brides and grooms.

Goose or Hansa motif



A representation of spiritual purity, the artwork of a goose has been found in pottery from the Indus Valley and on wall depictions at the popular Ajanta caves in Maharashtra. Commonly found in paintings from pre-Mughal times, this motif is now mostly found on textiles from the south of India in form of *Kasuti* embroidery and *kalamkari* prints.

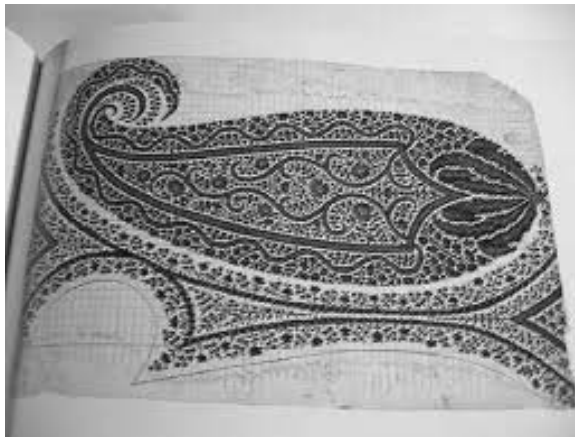
Lotus motif



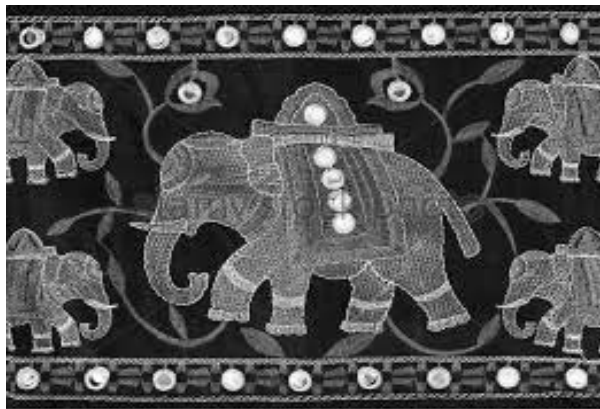
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The motif of the *kamal* or the lotus flower is one of the most popular motifs used in Indian art and textiles. A symbol of the eternal order of the union of earth, water and sky, it represents the power of life. The flower is represented with both its opening and closing petals indicating the ups and downs of life and the revamping of one's characteristics. Its petals also represent the multiplicity of the universe. There are various forms of lotus motifs like *astadal padma* – eight petal motifs – to the *satadal* – hundred petal motifs. It also symbolises prosperity and material wealth, associated closely with the Indian goddess Lakshmi. All these spiritual aspects are often emphasised on Indian *saris*, notably with *kantha* embroidery.

Mango motif



The motif of a mango, commonly called paisley or *mankolam* in Sanskrit and *ambi* in Punjabi, is found on a wide variety of Indian textiles. Considered as a symbol of fertility, it is done in various textile arts such as *chikankari* embroidery from Lucknow or *kantha* embroidery from Bengal.



A tree laden with flowers and fruits with birds in its branches and animals sheltering under it indicates that all is well with life on Earth. A *shankh* or a shell symbolises the sounds of the cosmic space, an elephant denotes power and the *rudraksh*, a bead associated with Indian deity Shiva, denotes an ascetic charm. The motifs surfaced on Indian textiles are many with each representative of a meaning, which many believe to emanate a vibe on the person who adorns it.

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How to Create Patterns

There are a number of different methods that professionals use to make commercial patterns, and despite the conception created by pop culture, not all of these methods include three-dimensional dress forms. In fact, it's increasingly popular for pattern makers to use computers or even high-end tablets to make patterns that can be used to cut and assemble real-world men's and women's clothes.

No matter which pattern making tools are employed, the process of pattern development begins when a designer makes a sketch of a garment that they'd like to make. While this basic sketch is made with the human form in mind, there are quite a few more steps that need to take place to transform this initial idea into a garment that will fit a human body.

Pattern Making Basics

Essentially, pattern making is the art of translating a designer's basic idea for a garment into a real piece of apparel that fits the human body in a flattering way. A few simple techniques have been used in pattern making for centuries, and some pattern makers prefer to keep things old school.

However, generations of experience in making design patterns have produced adapted techniques in the art of pattern making. Any technique that turns a design sketch into a real garment is valid in the world of pattern making, and many designers have moved on from flat patterns to making three-dimensional patterns on mannequins or in the digital world.

As you take a look throughout the apparel industry, it's clear to see that pattern design takes many different forms just as design elements vary from firm to firm. However, the basics of pattern making remain the same: This process is all about bringing a designer's dreams to life in the real world.

People Make Patterns

Most large apparel producers have one or more pattern makers on staff to take care of sewing construction and other pattern-related tasks. These professionals generally work in the same building as the company's design staff, but they usually work in individual offices or offices that are shared with other pattern makers.

Freelance pattern makers, however, may work from home or have private offices. With modern technology, it's often possible for pattern makers, designers, and clothing manufacturers to work together in sync without ever meeting each other in person. That said, it's often preferable to physically meet with your pattern maker even if they operate out of their own premises; doing so makes it easier to share patterns, and face-to-face conversations are often better for establishing shared goals and sharing important information.

A pattern maker's office is often strewn with various bolts of fabric. These professionals may have high-end computing equipment, or they may have tablets placed on various surfaces. In addition, these offices generally have at least one or two big tables, and it's common to see pattern makers working with dress forms and mannequins.

Start and Where to Start

There's no set way to become a successful pattern maker. The only factor that's necessary to have at the beginning of a pattern maker's career is drive; this vocation is only suited for people who love fabric so much that they're willing to work with it every day for years on end.

Some background in sewing is usually a plus if you want to be a pattern maker, and you should have a good grasp of the different types of fabrics that are on the market. When you're ready to try your hand at this profession, there are plenty of easy ways to get started online; for instance, there are a number of comprehensive guides that cover the basics to pattern making and make it easy to try out this skill in your own living room or bedroom.

Some of the best pattern makers are self-taught, and you may not find it necessary to undergo traditional schooling to be great at this career. Some people, however, decide to jump into pattern making with hardly any sewing experience, and other professionals who are already active in the fashion industry get formal educations in this vocation to further their skills.

Study Pattern Making

Many aspiring designers choose to learn pattern making as part of their studies in fashion design; almost all fashion schools offer courses in pattern making, and some examples of the top fashion institutes around the world include:

- **Central Saint Martins:** Consistently considered to be one of the best fashion schools in the world, London's Central Saint Martins has produced notable alumni such as David Koma, Jimmy Choo, Alexander McQueen, and John Galiano. This school's Fashion Design program features courses on pattern making.
- **Parsons School of Design:** With locations in New York City and Paris, Parsons School of Design is one of the most notable (and most expensive) fashion institutes. Marc Jacobs, Tom Ford, Alexander Wang, and Donna Karan all graduated from Parsons, and this school's Fashion Design undergraduate program offers one of the best educations in pattern making to be found anywhere.
- **London College of Fashion:** This fashion school offers tons of different undergraduate programs, and London College of Fashion even offers a Fashion Pattern Cutting Degree, which might make this institute the perfect place to get started as a pattern maker.

Going to school for pattern making, however, might not be the right idea for a number of reasons. Fashion school is expensive, and it's mainly tailored toward helping designers receive well-rounded educations.

However, pattern making isn't all that hard to learn on your own, and there are tons of online resources that can help you get started. In the end, your own personal drive and determination are what will determine your success as a pattern maker, and it's possible to set out on this career choice with a few hundred dollars and a laptop if need be.

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The Role of Pattern Makers in Fashion

Pattern makers are the practical creatives of the fashion industry. While designers tend to get their heads stuck in the clouds with whimsical ideas and plans that will never pan out, pattern makers are tasked with the responsibility of making these dreams into products that can be mass produced or worn down the runway.

While clothing manufacturers are mere workhorses, pattern makers have to be imaginative even though they fulfill pragmatic roles. Designing a garment is one thing, but making sure that these designs can actually see the light of day is a pattern maker's unique responsibility. Pattern makers are to fashions as directors are to films; in the production of a film, it's the screenwriter's job to come up with amazing ideas and the director's job to make sure that all of the actors work together, and in the world of fashion, it's a pattern maker's job to make sure that designs on paper communicate properly tangible fabrics in the real world.

Influence of Iconic Designers

Many people envisage fashion designers as people who sit in studios drawing whimsical sketches for new fashion lines. However, there is so much more skill involved than this stereotypical outlook indicates. Designers not only have an eye for fashionable style, but they often possess a range of skills that can make a drawing come to life.

These skills translate ideas on paper into real-world designs, and they capture how the wearer will think and feel when they choose the garment. These types of designers have gone on to become the greats of the fashion industry who we know and love today.



So, what do these fashion designers possess that many do not? In short, they have specialized, skills such as pattern creation that support the initial design work. Iconic examples of talented designers include Christian Dior. His creativity led him into a career in architecture during his early years. After his service in the war, he founded The House of Dior in 1946.

One of Dior's most notable accomplishments was the creation of the "New Look." This infamous dress and skirt pattern was crafted to enhance the curvaceous

silhouette of a woman. It attracted attention from all corners of the globe and still provides the foundations for many styles in modern fashion.

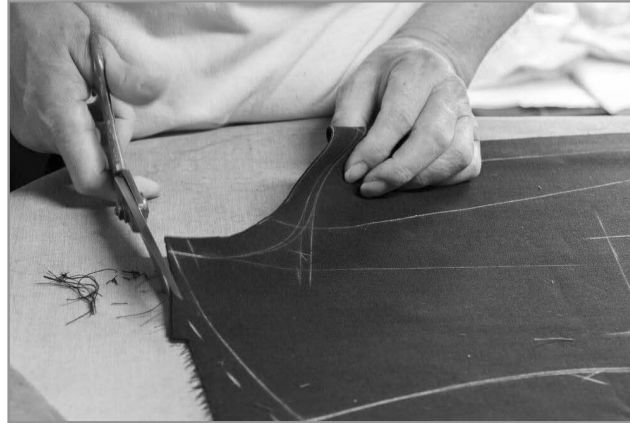
There are a host of designers who also showcase impressive pattern making skills such as Gianni Versace and Yves Saint Laurent.

Convert Motifs into Designs

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Patterns Are Essential in Clothing Manufacturing

Essentially, an accurate profile of your clothing will produce the first fit sample of your collection. This sample has to be as close as possible to the final garment. Otherwise, significant changes will have to be made, which will cause costly setbacks.



What Information Do You Need Before You Produce Patterns?

A valuable resource to assist pattern creation is a Tech Pack. These specifications will provide everything from fabrications to construction methods that support your basic pattern.

Mistakes can be made if you don't provide your pattern maker with enough information. A pattern can only be produced with accurate and detailed specs, so ensuring you do sufficient researches beforehand will prevent errors.

The screenshot displays the Sewport website interface. At the top, there are navigation links: BROWSE QUOTE REQUESTS, HOW IT WORKS, and FAQ. Below that, a secondary navigation bar includes BROWSE ENQUIRIES, CONTACTS, PROFILE, INBOX, WALLET, TECHPACK, PARCELS, and ACCOUNT. The main content area is divided into several sections:

- Specification:** A table with columns for #, Name, SMALL (B), and Tolerance (+/-). The data is as follows:

#	Name	SMALL (B)	Tolerance (+/-)
1	Waist	50cm	1
2	Length	120cm	1
3	Shoulder width	10cm	0.5
4	Neck Drop	15cm	0.5
5	Hem Width	180cm	2
- Attachments:** A section with a "DRAG & DROP TO UPLOAD" prompt and a table listing attachments. One attachment is visible:

#	File Name	Description	Size
1	screenshot_20190104_at_134721.png	reference image	2.2 MB
- History:** A list of recent updates, including changes to tolerances and the addition of attachments.
- New Tech Pack:** A form to create a new tech pack with fields for Brand, Collection, and Description. The current values are "My New Brand", "Summer-Spring 2020", and "Capsule collection".

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Types of Patterns in Clothing Manufacturing

The starting point in design consists of a flat drawing to get the basic outline and measurements for the fit. However, at this stage, this 2D illustration doesn't accommodate the curves and attributes of body shape. To tailor the clothing to the wearer, darts (or folds) in the clothing are created to give it shape. This concept also provides a basis for the ultimate fit including how the garment will feel and move with the body.

There are three techniques at this stage of production, which include:

Flat Pattern Drawing

This method takes a basic pattern and translates it into a 3D shape with muslin fabric, which is then transferred to paper. Flat pattern making helps to highlight the areas for movement and improves comfort for the wearer.

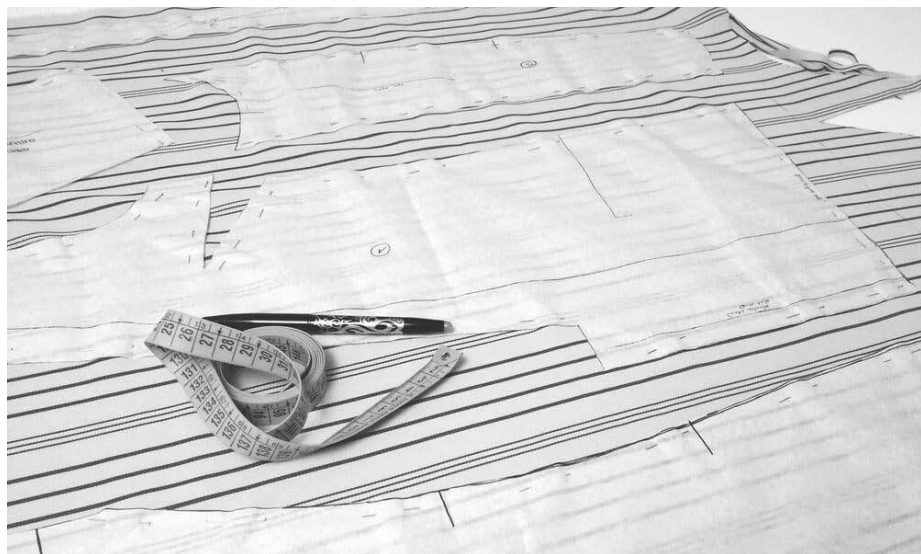
Five main garment components create the base pattern in women's wear:

- Front bodice
- Back bodice
- Neckline
- Sleeve
- Fitted skirt

Each element above is complemented by darts to get the right shape. As fashions change each season, these basic outlines can be manipulated to fit new trends.

Drafting

Drafting is often used to create initial designs. These designs are produced using standard sizing presets from factories or have been measured accurately using a fit model. This method is traditionally drawn on paper and has markings for ease allowance to complete the formation of the garment.



Fashion Draping

This style of pattern creation involves draping the muslin over a form (or mannequin) to create a 3D shape. After a designer has reached the desired look, this fabric is then transferred to paper for the final pattern. This method can be more expensive than other techniques. However, it gives a fashion designer an overview of how a garment will look before making the final decisions before production.

Seam Allowance

Seam allowance is another crucial aspect of the pattern creation process. Simply put, a seam joins two pieces of fabric just enough to cover the raw edges of the material. The measurement is vital for crafting a smooth finish. However, there are variances in the seam allowances for different styles of clothing.

The seam allowance in clothing manufacturing can differ. In commercial garment production, a seam allowance of 16mm ($\frac{5}{8}$ "") is commonly used. This measurement allows for alteration to the fabric to get the desired fit. It is also often suitable for a range of fabrics including loose weave materials.

Challenges in Pattern Creation

The production of clothing can be a complex and time-consuming process especially when changes are made during production. This may be caused by availability or a change in fabric, in which case the pattern will have to be altered.

It may appear that you can just use the same patterns as per the original design. However, even a slight difference in the material will lead to varying degrees of drape, shrinkage and give in the final product. By ignoring this alteration, you run the risk of producing ill-fitting and unsellable garments, which in turn will affect the bottom line.

Pattern Grading

Once you have the initial pattern for your garments, the next step is to create alternative sizing. This process is called pattern grading and involves making other sizes using your basic blueprint. Some manufacturers have standard guidelines for grading, and this is where you see common retailer measurements. For example, size 8 and beyond, sizes S, M, L, and so on.

Pattern grading doesn't have to be complicated once you have the basic outlines. However, there are two systems to determine the grading.

- Draft technique: This system applies increments to the pattern draft as a whole.
- Track technique: This grading applies increments to the individual pattern pieces and essentially alters section by section.

To make this process easier, you can use computer-aided design (CAD) software to grade your patterns.

Technology and Resources

Alongside traditional pattern drafting methods, technology is making it easier to produce accurate designs that speed up the production process. This type of

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software can be used in both small and large-scale textile design for pattern making and grading. Otherwise known as computer-aided design (CAD), this system can work in harmony with several elements across the manufacturing industry.

For design work, brands can transform basic illustrations and sketches into digitized images, which are then printed via garment plotters. The use of innovative software enables businesses to keep up with trends and garment development through intelligent platforms. The changing aspects of the industry make digital pattern creation an invaluable tool for increasing efficiency and productivity.

There are many resources available dependent on your requirements. Some of the most well-known software solutions include:

- Lectra
- Gerber Accumark
- Optitex
- Autodesk
- Assist

Digital Design Challenges

Alongside the benefits that digital technology brings to clothing production, there can be some challenges in the pattern creation process. As mentioned above, the number of industry-recognized applications available can sometimes lead to compatibility issues with your chosen manufacturing partner.

Before committing to a software package, it is advisable to check its benefits and potential pitfalls for your clothing brand. Some of the main areas to consider include:

- Pattern conversion capabilities
- Compatibility with plotters and printers
- Shareable file types
- Scalable features dependent on the needs of your project

Digital fashion design software can be expensive, so assessing your business needs will help you decide on the best resources for your future projects.



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Using Templates

Templates can be excellent places to start if you have little or no experience in pattern making. There are a host of options online to get you started, and many include simple guides for crafting the perfect design.

Templates are otherwise known as block patterns in industrial production. A block pattern is a custom-fitted, basic pattern from which patterns for many different styles of garments can be reproduced.

Using these types of resources can demystify the pattern cutting process and give you confidence in translating your designs to final outlines. However, for custom fitted clothing and unique styles, it may take some professional input to tweak your ideas.

Ensuring the perfect styling, fit and functionality is something that is mastered over many years. So finding the right creator to adapt and tweak your template and ideas is a worthwhile investment.

Learning How to Create Patterns

As mentioned above, producing a finished garment requires the right balance and expertise from start to finish. A great way to expand your knowledge of the production process is to learn how to create your own patterns. There are many resources including external courses, online study, and local workshops. However, learning this skill does require time and commitment.

If you are running a new business, it may not be viable to commit resources to this area if you have everything else to manage. In this instance, short courses can give you an overview. These practical taster sessions will help you understand the complexities of the skill and assist you in developing a good relationship with a pattern making professional.

For fashion students considering career paths in the industry, this skill is highly sought-after. It may not be as glamorous on the outset as becoming a fashion designer, but it will give you diverse insights into the whole clothing production process including design. This skill is taught in several universities, plus there are establishments that also offer apprenticeships.

For growing brands, an in-house pattern maker could be beneficial for responsive design and trend ideas. By hiring a specialist, you will have access to a wealth of knowledge for accurate pattern creation.



Hire a Pattern Cutter

As mentioned above, pattern creation is a highly skilled technique that supports the work of designers. Without this technical skill, fashion wouldn't be where it is today. Hiring a pattern cutter can help you bring your designs to life, and not only that, this vital part of design turns sketches into wearable products.

One of the main issues that professionals face is a lack of understanding when it comes to this line of work. As it is a specialised area, designers often find it challenging that a pattern maker cannot completely translate a design into the prototype.

Of course, there will always be tweaks and compromises as some styles will require adjustment to fit the needs of the consumer. Building a good relationship with skilled cutting professionals ensures a smooth transition in the design and production process.

There are several benefits of hiring a pattern creator:

- Experience of different pattern cutting methods
- Knowledge of the production chain
- Improve designs and wearability of garments
- Use the latest technology to produce accurate specifications
- Support the design process from start to finish
- Review samples and make adjustments as required
- Troubleshoot and resolve design issues

These individuals have a wide range of skills that they can bring to your company. You can also utilize freelancers for one-off projects.

2.4 STUDENT ACTIVITY

1. What is Motifs? Explain the Textile Designing?

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.....

2. What is Paisley (design)? Explain **the future and improve** spread of the pattern?

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2.5 ABLE TO CREATE DESIGNS FOR FABRICS

Clothing industry is important as one of representations of human civilization for long and always seeks to compete with other industries, using modern technologies.

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The dressing type of people in a society is directly related with their social culture. Research indicates that the dressing type of individuals is highly effective to create self-confidence and personality credibility. Individuals in a society use clothing as a tool of confirming or displaying their social situation. At the present, with respect to the importance of clothing in communities and increased competition in market, application of perfect methods in fashion design, clothing production and sales is very vital. Since fashion design is affected by fabric design industry, fabric pattern sets can be used to design homogenous, and also various, clothes to attract customers of different groups. These fabric patterns produced by different combinations of forms, colors, pictures and other visual elements can satisfy different needs of different groups of customers including the fulfilling of personal taste, the creating of psychological influence on individual personality, the covering of physical defects, the strengthening of representation of specific body characteristics, the creating of aesthetic representations in clothes etc. Without the use of different cuttings and or expensive and time-consuming decorations. To emphasize a beautiful part of the body, for example, large pattern fabrics or bright colors can be used. While relatively dark colors or those in harmony with the environment should be used to cover physical defects. In general, the use of different visual elements for producing patterns of a fabric set allows you to create different visual effects to communicate customer-friendly concepts; there is no need for extreme cuttings and decorations. So, it takes less time and costs less to design and sew clothes. Due to the fact that the clothes set designed and produced has a variety of sizes, colors, densities and pattern forms, customers can have more free choices. In addition, the use of different representations of a fabric set, instead various cuttings and decorations, results in decreased production costs and increased product sales; before producing a design, mass producers and purchasers can survey the clothes design and color from their customers using digital technologies and employ their opinions in the design process. Today, the use of computer aided design software in clothing, especially in fashion design, has attracted much attention. The genetic algorithm is among algorithms used in fashion design, which many people have used it in computer aided design systems to promote design.

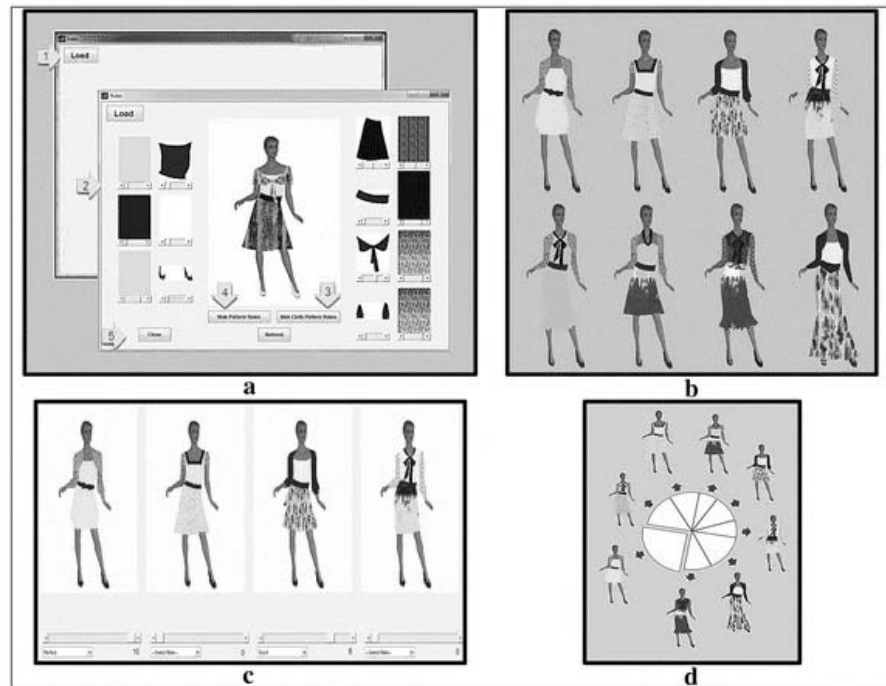
Formulating laws based on principles of fashion design

First, the fitness degree of each pattern of the fabric pattern set is examined to use in designing clothes components (based on pattern fineness and largeness and the prevention of their breakage when cutting fabrics in final production step) and, then, a chromosome consisted of clothes components and patterns proportionate to each clothes component are given to the software as coded ones.

In the genetic algorithm, the initial population is randomly selected from a combination of the parts in Table 1, column II and 80 designs. Considering that the number of the initial population is restricted to eight designs, it is more likely that there will be designs considered as being defective based on the initial principles, resulting in its decreased efficiency. In order to prevent the production of defective designs, laws are applied. For example, if the fabric pattern of the blouse is fine, the fabric pattern of the sleeve should not be fine. To be visual, a visual system

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was prepared when formulating the laws, where the software designer creates different compositions of clothes components and fabric designs, and records proper compositions as a law. In the genetic algorithm all designs created are adapted to the laws at all stages of design production. If they comply with 80 % of the design laws, designs will be chosen. In fact, genes forming each chromosome are crossed over, based on these laws, to produce initial generation. So, eight clothes designs are produced as initial generation. Figure below shows steps of formulating laws based on principles of fashion design for designing a set.



a Steps of formulating laws based on principles of fashion design for designing a fashion set. b First generation. c Presentation of some designs to the user for evaluation. d Selection of parents by the Roulette wheel

The procedure is that in step 1, fabric patterns and clothes components along with a model are called. In step 2, clothes components and desired fabrics for each of them are chosen by sliding controls. In step 3 and 4, laws related to clothes component compositions and fabric pattern compositions are formulated, respectively. Step 5 is to store and exit the program.

First generation

In the present research, according to laws based on the investigator's principles of fashion design accounted for the purpose of fashion set design using a fabric set, genes in the problem (clothes components and fabric patterns) are crossed over. The said laws are formulated by professional experiences in the field selected from university professors. Considering that these professionals have adequate experience in and knowledge of fabric pattern compositions in fashion design, they

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can present default laws to the fashion design system and guide the interactive genetic algorithm to reach proportionate clothes designs. Because applying these laws in fashion design makes it easy to be used by non-professional users (no having knowledge of fashion design). An example of first generation designs. Given that one of main aims of a fashion design system to reduce time in design, it worth to note that production and representation of every eight designs in the system are less than one second, which is less in comparison with manual design. Because time required for design evaluation in each generation by users varies, the final use of the system is extremely varied. In the research, four generations are created to prevent user fatigue, which are constant in algorithm iterations. Generation evolution in the algorithm is made by evaluating clothes designs by the user and by applying her opinions as fitness function to select parents in order to produce future generations.

Presentation of designs to the user for evaluation

After having produced the first generation based on principles of fashion design, clothes designs are presented by a page called graphical interface to the user for survey. Figure [above.c](#) shows graphical interface related to the user's evaluation. The interactive genetic algorithm used in the paper has two dimensions. The first dimension is to technically discuss gene compositions within chromosome framework, performed by laws of fashion design art and by a software designer (using the genetic algorithm); the second is to use the customer's opinions to increase the productivity of clothes designed before producing and supplying them to market, using the interactive genetic algorithm. To show designs to the user for evaluating means that designs produced by the genetic algorithm in the initial population are shown by graphical interface pages to seek customer opinions, and the customer rates designs from 1 to 10. These points are stored as design value in the system. Each design obtained a higher point by the customer has a higher chance of being chosen. The customer survey is performed several times, which makes the IGA-based fashion design system process and customer opinions consistent.

Selection of parents

In the present research, selection of a clothes design (chromosome) is made by a rotating wheel called Roulette wheel and based on maximum fitness. The Roulette wheel functions as following. It produces a random number between 0 and 1 to select a clothes design; a clothes design corresponding to the number within an interval is selected. Of course, it is implemented as following. A circle is considered and divided into parts equal to clothes designs such that each part is related to the fitness degree of a clothes design. The wheel is rotated and everywhere is stopped, on looks at the wheel index and selects a clothes design related to the part. Therefore, every member having more fitness will have more chance. With each rotation of the wheel, a design is selected and is affected by the crossover and or mutation operators to produce next generation as parents.

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Defining Fashion as Inside-Out and Outside-In

Fashion involves an active interplay between an expressive intent and all that goes into making clothes. This interplay is not always apparent. People often think of fashion pieces as inert, manufactured objects made of individual parts. While each component affects the world, people think of these parts as inactive. Fashion's value is often assessed only in relation to the market, while its contents, relationships, and costs and benefits spread far beyond. In terms of the sustainable or unsustainable aspects of the fashion system, it is more accurate to think of the system as a network of related elements that have systematic impact as they work together. Fashion's social, economic, environmental, and cultural materials and actions are worn on the body as both *inside-out* and *outside-in*.

Our clothing is part of a reciprocal process in our search for meaning, belonging, and recognition. It is a way to tell others how we feel about ourselves, relative to a time and place. It is about fitting in, or standing out, or both. Richard Sennett describes clothes, when worn and seen, as “guides to the authentic self of the wearer.” This powerful form of self-expression affords fashion designers a role beyond the creation of clothes with market value as the creators of these guides. Such is the inside-out of fashion.

At the same time, fashion plays a role in prevailing customs, acceptable socio-economic practice, and production and consumption methods. It is endorsed by influencers, and can be a visible descriptor of place and time. All of these instances are examples of the outside-in of design. The fashion industry, a huge intercontinental system, draws directly and significantly on nature's materials and human labor to materialize its elements. Its designers are tastemakers and spotters; they capture opportunities to present the zeitgeist. They are skilled in all that goes into the physical matter-making that brings the outside in.

All that goes into the meaning-making of the inside-out is not always as apparent or recognized in the designer's role. In recognizing this reciprocal process, we might detect a dichotomy between a representation of our cares, needs, hopes, and aspirations (inside-out) and the commoditization of style (outside-in) that contributes to the fragility of our social and ecological systems. When viewed as an expression of intent—meaning-making—plus all that goes into the making of clothes to wear—matter-making—the scope of fashion design extends and its remit expands.

In order to advance any subject in design, one has to “engage in the activity of designing.” The research I describe here takes place in what Ezio Manzini calls “design mode” and thus combines “three human gifts: critical sense, ... creativity, ... and practical sense.” The application of design mode to fashion-related methods and activities, with a range of participants, and with the intention of creating a connection between nature, community and self, is an exploration of how fashion design for sustainability activities can recognize communities of place.

When engaging critical senses by reflecting on fashion as a means to express intention and to absorb the world, making is useful as a tool to experiment with one's ideas. For design to be engaging, however, “it must be cultivated” and this

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is where the interplay between critical thinking, creativity, and practical making come into play. John Ehrenfeld extends the role of design beyond its recognized aesthetic and functional product specification into “a conscious, deliberate effort to change the systemic presuppositions—[the] beliefs and normal practices...—underlying action so that the desired end may be attained.” Thus, fashion design can be considered in terms of its interactions with nature, the social relationships it enables that foster a sense of community, and the stuff of personal reflection enabling a search for and communication of the self. This is exciting and daunting for fashion designers; it opens a Pandora’s box and a wealth of responsibilities and opportunities. This expanded role provides fashion designers with opportunities for creative possibilities that respond to humanity’s most critical environmental, social, and cultural sustainability challenges.

A Threefold Crisis

There is a profound dislocation between flourishing through living in concert with each other and nature and our current ways of living. Félix Guattari describes our actions on the world as creating an irreversible loss of nature leading to changes in the conditions for life. Our actions towards each other may lead to inexcusable losses of dignity, increases in social inequality, and crises in employment and livelihoods—all exacerbated by technology. An increasing gap between our outside (public) activities and our inside (personal) sources of creativity and presence points to a sense of personal disconnection. It has become increasingly evident that fashion’s industrial-scale practices are contributing to what Guattari describes as a crisis in the three ecologies—the environmental, social, and mental, all of which are interrelated. Specific symptoms include water stress caused by the growing, dyeing, and finishing processes; modern-day slavery endemic to fashion supply chains; and feelings of isolation and disenfranchisement that are exacerbated by fashion imagery and consumption levels. How we shape and respond to these three ecologies depends on our intentions, knowledge, creative capabilities, and the scope of our agency.

There is an increasing level of both scholarly and industry interest in fashion in the context of changes to natural ecologies. Outputs include material innovation, manufacturing efficiencies, recycling and reuse initiatives, closed loop fashion systems, and new business models such as clothing hire and leasing. These contributions to alleviating the symptoms of the fashion industry’s environmental and social issues, while often collaborative and uniting in their approach, rarely evidence a deliberate effort to change the systemic presuppositions of design. This fact is hampering sustainability efforts that seek to move beyond instrumental adjustments to the existing unsustainable system. Reducing the fashion industry’s impact is, by implication, often viewed as reducing fashion’s scope. Unsurprisingly, this has not been well received by the majority of designers in education or in industry practice. New sustainability-related departments are appearing in fashion businesses, but positions are rarely held by designers or by those working directly with design teams. “Sustainable fashion” is often seen as the destination—an end goal that, once achieved, will solve our current unsustainability problems. One size

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does not fit all. Guattari suggests that it is essential to form “new micro political and micro social practices ... together with new aesthetic and new analytic practices,” which suggests an opportunity for fashion designers to show united and distinctive approaches that fit in and stand out from commonly agreed assumptions.

Through fashion design practices that extend interactions with nature, stimulate social relationships and thereby a sense of community, and create space for personal reflection, this research seeks to fill the gap between research that is instrumental in its approach to fashion sustainability and design for sustainability research that takes place outside of fashion’s creative, critical, and practical activities.

Fashion designers must re-design themselves and their ways of operating. This involves a revision of fashion design practices, techniques and—critically—outcomes, while drawing on fashion’s creative, practical, and communicative elements. This re-framing of intentions, capabilities and endeavors Stuart Walker and Jacques Girard describe as a “call upon human creativity to imagine, conceptualize, visualize, and effectively communicate alternative pathways for living meaningful lives whilst consuming far less in terms of energy and materials.”

People beyond as well as within its professional naming are capable of design. Nigel Cross identifies design ability as possessed by everyone and Ezio Manzini refers to professional and citizen designers as proponents of design activities. Fashion design practices also extend beyond the activities that professional designers undertake. Fletcher discusses everyday and extraordinary sustainable fashion practices undertaken by citizens in the craft of use. By engaging professional designer researchers, student designers, and citizens, my research takes a participatory approach to activities of designing. Through exploring fashion as a means to express the inside-out and the outside-in, this research seeks ways to potentially render the generalized narrative of social division and man-made climate change more poignant and meaningful on a professional, community, and personal level.

Towards a New Role for the Fashion Designer

This chapter describes the fashion designer in terms of three broad archetypes: designer as determiner, designer as co-creator, and designer as host. They are neither definitive nor mutually exclusive, but rather offer approaches that are suited to a range of circumstances in which fashion design activities are undertaken.

Designer as determiner is the role most often seen in traditional industrial hierarchies, where infrastructures allow designers to make choices based on knowledge and values that can permeate industry activities and actions. This role involves acquiring knowledge in order to make better decisions, for example through materials indexes, labeling, and lifecycle analysis—practices that are increasingly common in education and industry contexts. The determiner’s focus is on efficiency relating to diminishing returns and scarcity. However, this is not enough to prevent us from crossing ecological boundaries from which we cannot bounce back. As David Owens asserts in describing the Jevons paradox, “Efforts

to improve energy efficiency can exacerbate the problems they are meant to solve, more than negating any environmental gains.”

Designer as co-creator connects a wider frame of engagement in situations where roles are less strictly defined and direct interaction takes place between elements in the production and consumption process. This role applies knowledge to an intention towards sustainability-led actions and practices, and considers implications for and interactions with makers, users, and others. Co-creation is increasingly part of the fashion industry through face-to-face and digital interactions and across a range of business sizes, and is most often realized as user-centered design. It is also being developed through education. The co-creative origins and mode of application in the professional and education spheres tends towards adding value to business practice. While co-creation has application in fashion as social innovation, that value is often limited by its proximity to fashion’s current systems.

Designer as host inverts the traditional model of fashion design. The host foregrounds public agency by creating conditions where a series of autonomous, authentic progressions of garment wearing and making might take place over time with a range of participants. This less usual role can be seen in self-organizing, horizontal networks, or in hierarchies with less conventional or predictable activities. The host seeks to evolve fashion design as a consideration of inside-out and outside-in by integrating sustainability skills and capabilities. It extends the co-creation process through a wider engagement of design skills relating to values, culture, aesthetics, knowledge, and exhibition.

The long-term objective of my research exploring the archetype of designer as host is to contribute to the field of fashion design for sustainability through an understanding of the capabilities and practices that can be used to strengthen community ties, deepen the connections people have to nature, and the ways people can use fashion to articulate their senses of selves. A more immediate objective is to develop participatory practices, conditions, and design methods that can create opportunities for meaningful encounters in communities. In the first instance, a four-part designer as host research process can help us to recognize communities in place. The designer as host process, discussed in detail below, uses a recognizable fashion garment to create opportunities for collaborative encounters.

Fabric making & Fashion designing



Convert Motifs
into Designs

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A processan art in itself, a creative field bridging fabric making and fashion designing.

Creating appealing designs on fabrics is one of the most enduring and functional aspect of decorative arts. Fabrics with alluring designs have become an integral part of life. Textile designing is an art of creating designs for knitted, woven, and non-woven fabrics. It also involves embellishments in fabrics. This process consists of making patterns for cloth with house hold applications like towels, carpets etc.

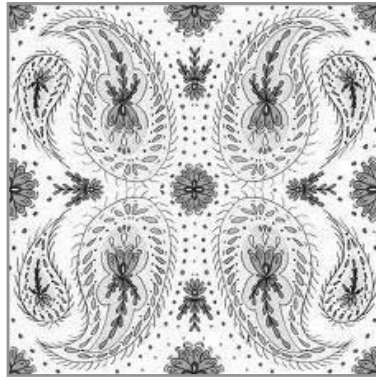
Fabrics are made by weaving or knitting, and are decorated through printing. Textile designing involves both surface design, and structural design of a fabric. A sound knowledge of yarns, weaving, knitting, dyeing and other finishing processes is required. The world of textile designing is incredible with beautiful hues, prints, and patterns. But the task of creating a striking design is a complex, and more demanding process. A profound knowledge of the various facets of textile making, market demands, and current trends is necessary. Three skills are basically essential for textile designing; creative designing, working with a right blend of colors, and doing repeats. It is both challenging, as well as profitable.

Core aspects

The process of textile designing initiates on paper as a simple idea, continues its journey, and completes its cycle in a printed cloth. It includes various styles such as stripes, floral, geometric, checks, paisley, tropical and many more. The process involves four steps:

- Conceptualization of new designs.
- Creating design samples.
- Experimenting with various hues, to select shades complimenting with each other.
- Designing the fabric, going in par with the current fashion trends.

The core aspect of textile designing involves designing the fabric by using different techniques such as printing, weaving, tracing embroidery, and color detailing. Once the process is conceptualized, virtual samples are created, and later on prototypes are executed.



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Forbesindia.com reports textile entrepreneur Dinesh Himatsingka saying “design matters, for that’s what creates added value and the differentiation in the eyes of the customer. Design can be appreciated only when we are aware of the idea of beauty. But of course, beauty is the biggest force!

CAD software for Textile Designing:

The design is initially envisioned by the textile designer and is later on developed into woven or printed textiles. The deep understanding of the designer regarding the technical aspects of fibres, dyes, and yarns help in developing the designing process. Initially patterns were made on a special graph paper. However, currently with the advent of technology CAD software is used for the same. All types of fabric weaves, and designs are virtually made, and a virtual fabric is created.

Once the designer is satisfied, the required parameters are collected as per requirements to create the virtual design into actual form. CAD technology is now being adopted into every power loom industry. The software has potential applications in numerous areas such as carpets, blankets, and knitting industry. Textile designing can be used for creating interiors for home furnishings, clothing fabrics, and other textile products.

Career as a Textile designer:

Textile designing was unheard of vocation, until a few years ago. Growing need for textile and textile products motivate career options in this field. A successful career in textile designing requires creativity, technical knowledge, research, data handling capacity, and commercial awareness about the textile industry. The job needs a right blend of creative mind, and technical skills.



Many big corporates such as Raymond, Indian Terrian, Grasim, Lifestyles, Shingora International and Third World Exports offer opportunities for creative textile designers.

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Textile designing Vs Fashion designing:



With all the requirements such as creativity, ability to play with the right blend of colors, keeping abreast of current trends, and being fashion savvy; closely related to the vital aspects of fashion industry, how does textile designing differ from fashion designing?

Both are closely related, dependent of each other, and fiercely competitive by nature. Textile designing does not have a glamorous appeal compared when with fashion designing. So, despite all benefits, the field still remains little unpopular. Each segment has its own niche.

Fashion is a main medium of self expression. With much scope of textiles, textile designing is gaining immense popularity. One of the main characteristic of textile is its design aspect, and textile designing is the main center of functioning.

Presentation of Designs

When a designer puts together a portfolio of work to show for job interviews, individual designs, sales, or any presentation, certain formats are customarily used.

Designs for apparel, which are usually small-sized croquis, are mounted on white Bristol board or similar stock. The designs will probably vary in size, but all the mounts should be of the same size for uniformity. Two or more very small designs that were designed to go together or simply look good together may be shown on one board. With a long-reach stapler, designs are stapled to the board with one staple at each of the two upper corners of the design. On the back of the mount board, the staples are covered with masking tape so that they will not scratch other designs in the portfolio. When mount boards become tired and worn looking, they should be replaced.

Designs may instead be spliced into sheets of board. This makes an attractive presentation and is much lighter when many designs are carried in a portfolio.

Color tabs may or may not be shown with croquis but usually are shown with color combinations. Color combinations are usually shown together on one board. So that each board is loose and may be easily pulled out from the group when

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necessary, all of the mount boards with designs are usually carried and shown in a large, black, zippered portfolio.

Because decorative designs, being much larger than apparel designs, may not fit into a portfolio when laid flat, they are not usually mounted, but are reinforced on the back of the design around the edges with a continuous strip of masking tape. The designs may be cropped to the exact boundaries of the painted design or may show the entire sheet of paper with boundaries and margins around the design. Color chips are usually shown, and designs that are in repeat are *always* shown, not only as one repeat unit but also with the beginning of the next repeat units on the right and bottom sides of the main unit. These large designs are rolled and carried in a large mailing tube, or the roll is simply covered with brown wrapping paper for hand transport.

Woven-cloth designers may either mount individual swatches on small boards or place the fabrics in a portfolio with a ring binder and vinyl-covered pages.

Once a designer has some work experience, actual fabric samples will almost always be included in the portfolio along with the artwork. The fabric is neatly folded and placed in the large portfolio or in another bag to be shown when necessary. Publicity, advertising, and other printed material showing photographs or fabric, either alone or in use, may make up a part of a portfolio. To illustrate his way of thinking during the design process, the designer may also show sketches to show ideas about the end product with swatches or croquis.

Many artists develop original, attractive, and innovative ways of showing textile designs. Any presentation that not only clearly exhibits the work but also demonstrates the designer's overall personality and sense of style will only be more interesting to potential employers or customers.

Artwork intended to be sold or shown to a customer should have a clean, neat, and precise appearance. This has been one focus of this text, but it should also be understood that a lot of textile artwork developed in studios goes directly to the engraver who prepares the screens or rollers, the artwork being purely a working record of the design. In real life, artwork does not always look perfect; on the contrary, it is done in the quickest, simplest way to accomplish the necessary results. If this artwork is later shown, any observer will appreciate the accomplished result while understanding that it was not developed to be a presentation piece.

Although it is difficult to define exactly what should be shown in a portfolio, a general guideline is that it should show both the artist's breadth of ability and his ability to develop a focused approach to one design area. To show both capabilities, the portfolio should include different types of layouts, designs (florals, geometrics, etc.), and rendering techniques as well as one or two series of designs that work together and make a "story." A variety of color looks is also important, and at least one color group that weighs in should be shown. Each artist has a particular *hand* (that is, style of drawing and rendering), but it is most desirable that an artist show designs with both a *tight* and *loose* hand (realistic, controlled and free, stylized rendering, respectively). Versatility and an ability to compose a cohesive package of designs are the traits most sought in a textile designer.

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Before designs are shown to a prospective buyer, the designer should thoroughly research the company so he can show appropriate designs. Portfolios are often adjusted according to the types of customers to whom they will be shown.

Although a portfolio may contain artwork that is several years old, it should contain nothing that looks dated or in any way problematic. A portfolio is much better with fewer pieces of the highest possible quality than with a large number that include a single piece requiring explanation and apology.

On the back of all designs should be written not only color recipes but also the repeat size, if the design is in repeat. Finally, and most important of all, for the designer's own protection the artist's name and the copyright date should be lettered prominently on the back of each piece of artwork.

Whenever possible, original artwork should be shown rather than a Photostat, photograph, or color photocopy, since much of the character of the original work is lost through reproduction.

Professional Practices

The textile industry is an exciting and rewarding field for designers. However, business practices are somewhat weighted in favor of management, often to the unfair disadvantage of the design professional.

Compared with artists in other disciplines such as graphic design, illustration, and photography, textile designers traditionally receive less pay, receive credit for their work less frequently, very seldom receive royalties, pay their agents a larger percentage, and must often relinquish copyrights on their work. Most of these practices have become commonplace because of the designer's ignorance, and the almost universal acceptance of low standards makes it even more difficult for individual designers to demand what they are due.

Nowadays, however, designers are becoming much more aware of professional standards, largely through improved and increased communication among themselves. Flow of information among practicing artists of all disciplines allows standardization of pricing and of business practices.

To begin a discussion of how specific business practices should be handled is, indeed, to open Pandora's Box. Although many common practices are unfair, it is difficult for any designer to stand up for principles and simultaneously maintain and develop cooperative relationships with the management of textile companies. As a designer becomes more experienced, healthy work relationships-and not rebellious, non-trusting behavior on the part of a designer-are what promote ethical standards in the industry. While the designer constantly considers his professional reputation, he must also help to establish industry-wide professional standards. The issues differ for free-lance and staff artists; but because staff artists often hire or buy from free-lancers (who are actually self-employed), the ethical questions confronted in this profession need to be understood by everyone.

The most important concern of an artist is his right to control the use of his work. As soon as a designer creates an original textile design, he has federal copyright, which lasts for the artist's life plus fifty years. Copyright is a bundle of rights,

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allowing artists to control separately and with specific limitations the usage of the artwork. For the artist's protection, copyright notice should be placed on all work. This notice must include copyright, corp., or ©; the artist's name or an abbreviation by which the artist is known; and the year of first publication. Furthermore, for the artist's protection, all artwork should be registered with the U.S. Copyright Office. Because unpublished work can be registered in groups, the \$10 registration fee can cover, for example, all designs created by one artist during one year. All copyright registration forms and a Copyright Information Kit can be obtained at no charge from the Copyright Office, Library of Congress, and Washington, D.C. 20559.

If artwork is created in the course of a designer's full-time employment, the employer has copyright of the work unless a statement has been signed to the contrary. When, however, a textile work created by a free-lance artist is printed or manufactured, the law presumes that the right to use the design for only that one designated purpose has been transferred. The copyright, which is all other rights, belongs to the creator of the work. Permission to use a design for any specific purpose should be a written and signed authorization. Written authorization is *necessary* to transfer the copyright (*all* rights to use the design).

When a client pays a fee for the rights to reproduce a textile design, he is in no way purchasing the artwork itself; nor does the purchase of the artwork (for an additional fee, for example) constitute a transfer of copyright.

Dealings between textile designers and their agents or clients have long been handled verbally and without specific stipulations. However, for the protection of all artists, every designer should maintain written records. These include agreements with agents, permission for artwork to be held by a potential buyer for a specified time, and confirmation and invoice (billing) of every design project. When a design project is accepted, all items requested by the client should be written out, and this agreement should be signed by both the artist and the client. The transfer of any right to reproduce a design should be made in writing, and a written invoice (bill) should be sent to the client. These are simple procedures that all business people need in order to avoid misunderstandings, and to maintain permanent records.

Design fees depend on many factors, including the type and complexity of the work, the artist's reputation, and the value of the intended use of the artwork. If a buyer intends to use the work for more than one purpose, especially for more than one area of the market, he should pay more for the additional rights because the artist might otherwise have sold the design to a buyer for a different market. An artist may, for example, sell the rights to a design to one manufacturer for wallpaper and to another for sheets and pillowcases. If one buyer wants to use the work for both of these purposes, he should compensate the artist accordingly.

All of these principles are more easily stated than accomplished. Most textile design buyers are accustomed to buying artwork for a flat fee, then either using the work as they please or keeping it on file, perhaps not using it at all and never returning it to the artist. This problem is compounded by studios, both European and American that sell artwork and all rights to buyers for relatively low prices. Additionally, a buyer often purchases a croquis or design simply to use the motifs in another design, use the technique with other motifs, or otherwise change the

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design so completely that it would be unrecognizable as a version of the specific artwork. In this manner, buyers are accustomed to purchasing groups of croquis as studies—that is, springboards to work from—and consider any name recognition of the creator of the work to be blowing a small issue out of proportion. There are, however, laws in some states protecting an artist from having his work changed so that it is presented to the public in a distorted way.

Many buyers do not even bother purchasing designs; they simply buy a yard of fabric to adapt the pattern in one way or another. Unfortunately, the business of fabric design is often viewed, not as creation of original work, but as redoing patterns already on the market, varying the pattern only slightly to avoid copyright infringement. Designers are often asked to do knock-offs; to oblige, the artist may become liable. The converter requesting the knock-off should sign a statement accepting responsibility.

Many buyers of artwork want exclusive rights to a particular work and also want the artist to hold and not sell similar designs to any other buyers in the same market. All of these issues must be dealt with individually, depending on the artist's relationship with the client and the price involved. Artists today, however, successfully request and obtain equitable treatment from most clients.

Royalties and artist's credit (with the designer's name on the fabric's selvedge) are particularly difficult to obtain in the textile industry; but, as designers' reputations are established, these compensations are becoming more frequent.

Although simultaneous work by an artist for different, noncompetitive companies is reasonable, it is frowned upon by many companies. When beginning a new project, artists are probably best off discussing openly with those involved the areas that are potentially sensitive. When everyone has been informed, uncertainties that arise later can be dealt with more smoothly.

If the artist is expected to relinquish certain income-producing projects, he should, of course, be paid accordingly by the employer making the demands. Because textile designers are often required to travel to mills and to work there long hours consecutively during strike-offs, these demands on the designer may become abusive. When it is requested, most designers receive compensatory time, and in some cases overtime, for mill work. Although these hours at the mill may be long, most of the time is spent waiting for fabric to be ready; and designers are usually comfortably accommodated during their wait. It should also be noted that mill work is rarely done by rank beginners; and the more experienced designer may also be required to travel not only to mills, but also to trade shows, and numerous other events. Although at times the job requirements disrupt the designer's personal life, they are no more unreasonable than travel requirements of most other professions.

Textile designers may be salaried employees of a firm, or they may be free-lance designers. Free-lance designers may be paid on an hourly basis (usually for technical work, such as hand-weaving or fabric analysis), on a project basis, or at a per diem rate. Rate estimates for projects are usually based on both the artist's expected per diem rate and the time the project will require. Even experienced designers find it difficult to predict the time and work requirements of a project. Estimates are made with every aspect being carefully considered; however, allowances must be

agreed upon by both parties so that the designer will be compensated for changes that are required during the course of a project.

Convert Motifs
into Designs

2.6 SUMMARY

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While motifs often do consist of literary symbols like the ones we describe above—the raven that stands for death, or the path that represents a way of life—the elements that make up motifs are not always *things*. In the examples below, you'll see cases in which the symbolic elements of a motif are sometimes things, sometimes actions, and sometimes events and places.

Textile design is the creation of designs or patterns that appear on knitted, woven and printed fabrics. It might sound simple, but textile design is a complex combination of artistic skill and modern technology. It includes creating textile structure: deciding what kinds of fibers a textile should be made of or what kinds of threads to weave together for a desired effect. Have you ever noticed how some fabrics feel especially soft and luxurious when you wear them? That's not an accident. It's textile design!

People who work in textile design develop new ideas for fabrics, which may involve coming up with several design samples for clients. Textile designers experiment with color, fabric and texture, and they follow style trends with an eye on what's coming next. Then they create ideas for fabrics accordingly. Designers tend to focus on one of two primary areas of textile design: textiles used in interiors, for home decorating purposes like upholstery on furniture, curtains, rugs and carpets; and fabrics for clothing and other products. The basic process of designing these textiles is similar. So now let's see how it's done.

2.7 GLOSSARY

- **Acetate:** A manufactured fiber formed by compound of cellulose, refined from cotton linters and/or wood pulp, and acidic acid that has been extruded through a spinneret and then hardened.
- **Acrylic:** A manufactured fiber, its major properties include a soft, wool-like hand, machine washable and dry able and excellent color retention.
- **Alpaca:** A natural hair fiber obtained from the Alpaca sheep, a domesticated member of the llama family.
- **Angora:** The hair of the Angora goat; also known as Angora mohair. Angora may also apply to the fur of the Angora rabbit.
- **Antique Satin:** A reversible satin-weave fabric with satin floats on the technical face and surface slabs on the technical back created by using slug-filling harms. It is usually used with the technical back as the right side for drapery fabrics and often made of a blend of fibers.
- **Argyle:** A pattern designed with different color diamond shapes knit into a fabric.

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- **Art Nouveau:** A design style of the late 19th century characterized by dynamic, flowing curves suggesting foliate motifs.
- **Asymmetrical Pattern:** A pattern lacking visible signs of symmetry, such as rotation or reflection.
- **Asymmetry:** The absence of symmetry in a motif or pattern.
- **Awning Stripes:** A pattern of relatively wide, even, usually vertical stripes of solid color on a lighter ground. Resembles the pattern on awning fabrics.
- **Balanced Design:** A design with no line-ups, alleyways, or holes.
- **Balanced Stripes:** A symmetrical layout, in which colored bands are arranged around a “center.”
- **Bandanna:** A square piece of usually colorfully patterned cloth worn on the head (kerchief) or used as a handkerchief, neckerchief, or a costume accessory. Also bandana.
- **Barcode:** A stripe pattern consisting of lines of varying width as in a barcode.
- **Basketweave:** An all-over pattern resembling the structure of a basket or a woven fabric.
- **Batik:** A design with a tie-dyed appearance created by coating the parts of cloth not to be dyed with removable wax. Colors often include indigo, dark brown, and white. Certain patterns have historic meanings and can only be worn by nobility.
- **Bayadere Stripes:** Brightly colored stripes of various widths laid out horizontally (from side to side on the fabrics). The color effects usually range from lively to startling to bizarre. Often made with black warps and crosswise ribs (plain or twill weave), mostly produced in India. The name is derived from the Bayadere dancing girl of India, dedicated to a dancing life from birth.
- **Bead and Reel:** A decorative motif consisting of oval or round shapes (“beads”) alternating with elongated or cylindrical shapes (“reels”).
- **Bengal Stripes:** Stripes of apparently the same width and alternating light and dark colors. Bengal stripes are usually wider than candy stripes, but narrower than awning stripes. Commonly used in wallpaper, upholstery, and shirtings. Originated in India and became popular during the Regency era in the United Kingdom. Also called Regency stripes and tiger stripes.
- **Bird’s Eye:** A weave forming small-scale diamond shapes (diaper) each with a dot in the center, suggestive of the eye of a bird; also a small-scale (typically geometric) design of a similar shape. A somewhat bigger weave is sometimes referred to as pheasant’s eye.
- **Blending:** A technique of producing seamless patterns by smoothing away boundaries between neighboring units of repeat.
- **Block Printing:** A type of relief printing where motifs are printed with wooden blocks. It is one of the earliest methods of textile printing.

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- **Block Repeat:** A layout in which the repeating unit appears directly on a horizontal line to the left or right of the original design unit. Also called square repeat, straight-across repeat, and straight repeat.
- **Blotch:** An irregular area of foreground or background color around the motif.
- **Border Design:** A pattern designed to run lengthwise along the edge of the fabric or wallpaper.
- **Boteh:** A stylized teardrop-shaped design originally on shawls from Kashmir and mass-produced in Paisley, Scotland; same as paisley.
- **Brick Layout:** In this layout every second row is shifted halfway in the horizontal direction.
- **Brocatelle:** A variant of damask that incorporates a satin or twill figuring that is contrasted with a plain or satin-weave ground.
- **Bull's Eye:** A pattern of concentric circles, often creating optical effects, such as movement or pulsation.
- **Chiaroscuro:** the technique of creating a picture by using several shades of the same color.
- **Contour-line drawing:** a line drawing that follows the visible edges of a shape or form, both exterior and interior.
- **Expressionism:** a style of painting of the 20th century, expressionism uses simplified designs and brilliant colors to express a definite or strong mood or feeling.
- **Flowing rhythm:** A principle of design; the repetition of wavy lines or curved shapes to suggest movement or motion.
- **Homage:** an artwork that reflects intentional imitation and acknowledgement of or respect for a particular artist, artwork, body of work, or style; originally, such works were created by artists to honor the “masters” who trained them.
- **Leather-hard:** the condition of a clay body when much of the moisture has evaporated and shrinkage has just ended, but the clay is not totally dry. Joining slabs, carving, or burnishing is done at this stage.
- **Motif:** a repeated shape or design in a work of art; a design unit that may be repeated in a visual rhythm.
- **Overlap:** to position things in such a way that the edge of one thing appears to be or is on top of and extending past the edge of another; used as a spatial device or perspective technique in perspective drawing.
- **Principles of design of visual arts:** a means of organizing the elements in a work of art: balance, contrast, emphasis/dominance, harmony, movement, pattern, proportion, repetition, rhythm, unity, and variety.
- **Regular rhythm:** a visual rhythm that is created by repeating the same elements again and again.

2.8 REVIEW QUESTIONS

NOTES

1. Discuss the Careers in the Textile Designing.
2. What kind of floral designs?
3. What is Geometric Designs?
4. Explain the Conversational Designs.
5. What is Ethnic Designs?
6. Explain the Formulating laws based on principles of fashion design.
7. Discuss the Presentation of designs to the user for evaluation.
8. Defining Fashion as Inside-Out and Outside-In
9. What is Towards a New Role for the Fashion Designer?

3

COLOUR WHEEL AND COLOUR
SCHEMES

NOTES

STRUCTURE

- | | |
|-----|---|
| 3.1 | Learning Objective |
| 3.2 | Introduction |
| 3.3 | To Understand the Application of Colour in the Design |
| 3.4 | Student Activity |
| 3.5 | Use of Colour Combination in Different Designs |
| 3.6 | Summary |
| 3.7 | Glossary |
| 3.8 | Review Questions |

3.1 LEARNING OBJECTIVE

After studying this unit you should be able to:

- Explain the meaning and definition of **Color Wheel**.
- Describe the **main responsibilities of a Mixing Colors in a Man's Outfit**.
- **How To Mix and Match Colors in Your Clothes**.
- Describe the Different Types of Perfect Colour Combination For Dresses.
- Explain the meaning and significance of **Color Properties**.

3.2 INTRODUCTION

Color coordination should never be overlooked by the man building a wardrobe.

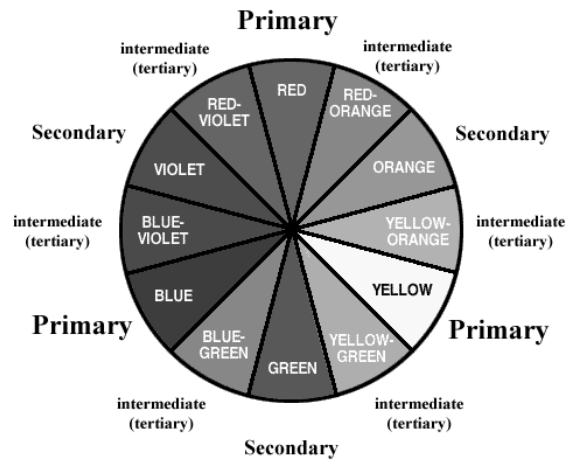
Well-chosen colors are like a proper fit — a detail that can entirely make or break an outfit.

Very nice clothing in the wrong color combinations will still make you look bland and boring, or loud and foolish.

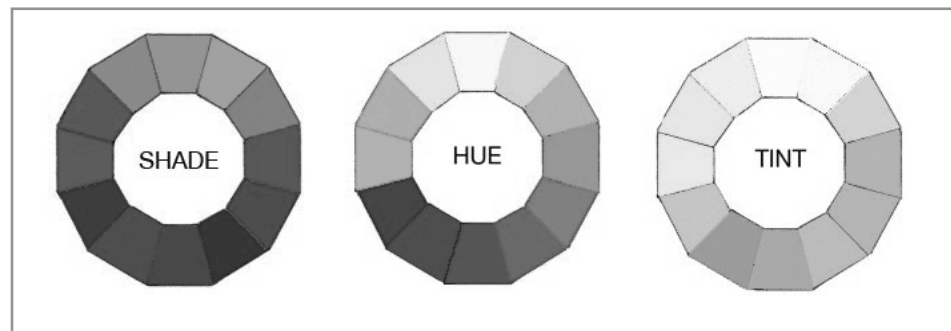
Finding a happy medium is essential to developing the look men strive for.

The Color Wheel, which was developed by Sir Isaac Newton in 1666, is the basis for all color theory. The 12 basic colors are called '*hues*'.

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Most clothing comes in a more muted form of the true hues — either they are lightened by adding white (called a *tint*) or darkened by adding black (a *shade*).



Any outfit will be a combination of these colors and the *'neutrals'* — white, black, and the two combined to make grays of varying darkness. Brown is sometimes described as a *'neutral'* base for an outfit as well, but it is still a combination of color wheel hues, and usually reads closest to orange or red-orange in outfits.

Understanding which relationships on the color wheel look “good” to human eyes and which seem bland or garish is the key to using the color wheel in coordinating your outfits.

The 3 Primary Colors

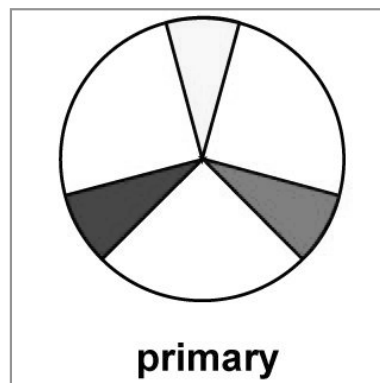


Figure : Red, yellow, blue.

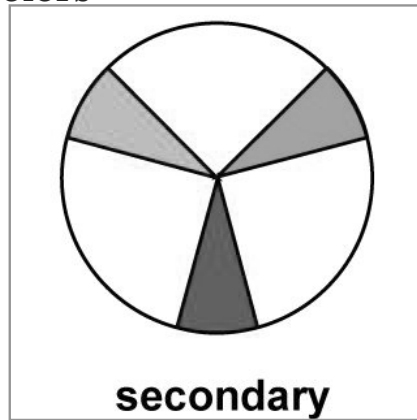
These are the only colors that can't be made by adding or mixing other colors together. All the other hues can be created by combining primary colors.

In their natural hue (without shading or tinting), they read as very bright, vivid colors to the human eye.

You use them when you want to grab the viewer's eye. As a result, you'll usually only see small accents in unaltered primary colors — a red tie or a yellow pocket square, but never a suit in that pure, bright blue.

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The 3 Secondary Colors



Green, orange and violet

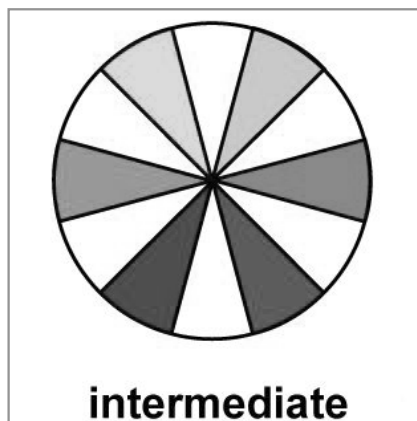
These are each created by combining two primary colors — red and blue to make violet, yellow and blue to make green, and red and yellow to make orange.

Each secondary color is directly opposite a primary color on the wheel. That relationship — opposite on the wheel — is called “complementary.”

Human eyes notice the contrast between complementary colors more than other combinations. A complementing outfit will always read as bright and attention-getting.

As a result, many outfits combine a primary color (usually a shade or a tint of one) and a secondary color for the basic contrast.

The 6 Tertiary (Or Intermediate) Colors



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These are found between the primary and secondary colors. It's important to remember that they are distinct hues and not just shades or tints of the primaries and secondaries — a violet shirt isn't the same thing as a the deeper blue-violet.

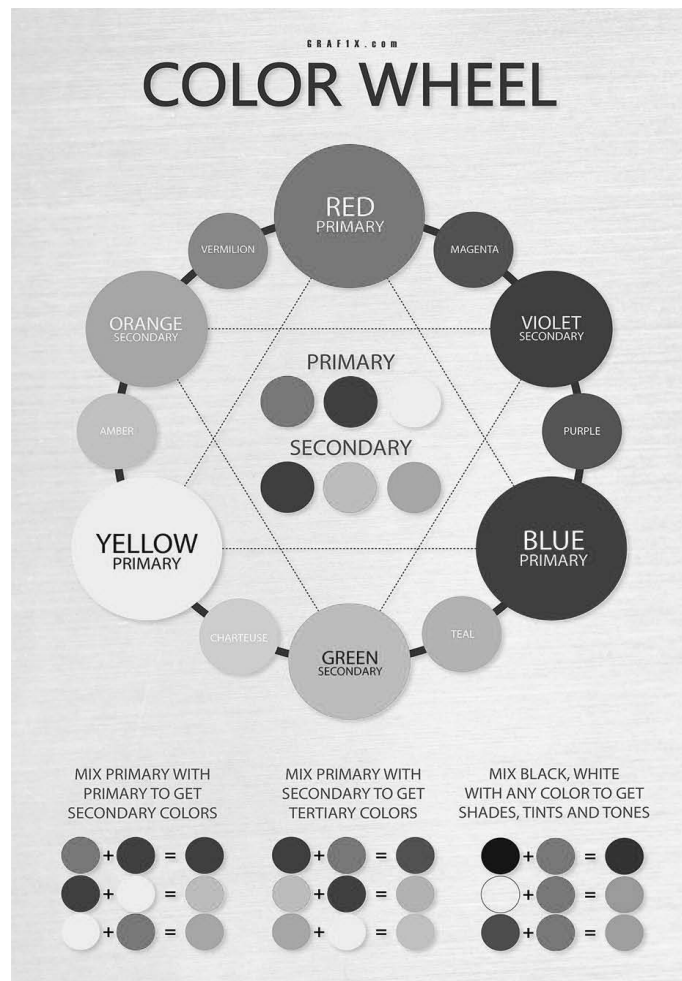
It's a different color rather than a darker form of the same color, with a different complementary color on the other side of the wheel and so on.

Treating the intermediate colors as their own distinct hues will make a serious improvement in your understanding of your wardrobe colors.

Mixing Colors in a Man's Outfit

Mixing colors is an essential skill for any man who hopes to dress well. Mixing colors can create two effects — harmony or disorganization. When we mix colors in an outfit, we want to use colors that work with each other to create an appearance that's pleasant to look at, not a mash of color that looks chaotic.

If we don't mix colors or use any variety, the end result is most likely going to be bland or boring, which people don't want to look at. If we mix too many colors or mix colors in a non-harmonious way, it leads to a chaotic and disorganized appearance.



Color Mixing

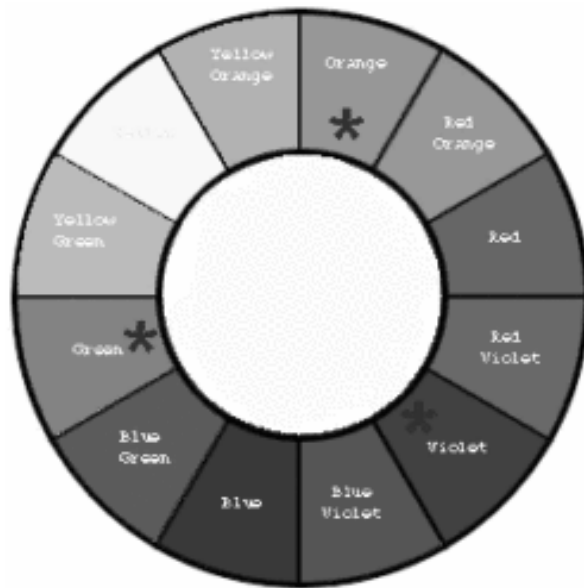
This is why it is essential to know how to properly coordinate the colors of an outfit. There are three color schemes that register as the most organized with human eyes — complementary colors, triad colors, and analogous colors.

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Complementary colors, as discussed above, are directly opposite one another on the color wheel. This creates the most vivid contrast in an outfit.

It's most common to see a complementing color scheme on someone who needs strong contrast to stand out.

TV commentators like complementing colors since television has a hard time projecting closely-related colors without turning washed-out.



A small accent in a complementary color is a great touch on a suit or sport coat — pocket squares and boutonnieres in complementary colors always make an attention-getting splash of color.

Triad Colors are equidistant from one another on the color wheel. This creates the most balanced form of contrast.

Triad colors are a good scheme for an outfit with lots of pieces. A man trying to balance a suit, shirt, tie, belt, shoes, cufflinks, etc. might want to be thinking in terms of triads.

Some accents in neutral colors, such as black shoes and a black belt, will of course work with any color scheme.

Analogous Colors are directly adjacent on the color wheel. This creates a minimized contrast, giving a very consistent look. Analogous color schemes are great for looking a little more restrained.

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They make good office outfits. Some fancy occasions also call for analogous color schemes, such as a wedding party with a unified color scheme, but be aware that fancy isn't the same as formal. For that you'll still need a standard black tie ensemble, which uses very little color at all.

3.3 TO UNDERSTAND THE APPLICATION OF COLOUR IN THE DESIGN

To Mix and Match Colors In Your Clothes – The Ultimate Color Wheel Guide

Mapping colors to your clothes is as much science as it is an art. You can have all the money in the world and flaunt the most expensive wardrobe possible, but if you do not marry the colors in your outfit well, it's a lost cause. You either need to have an eye for detail or understand the sensibilities of how colors work. Strike a balance, stay safe or go all out, whatever you choose to do, know the rules before you break them. Take your favorite designers and carefully observe their work; all of them have their signature shades that they tastefully play around with. Read on to know how to match your clothes in an admirable fashion.



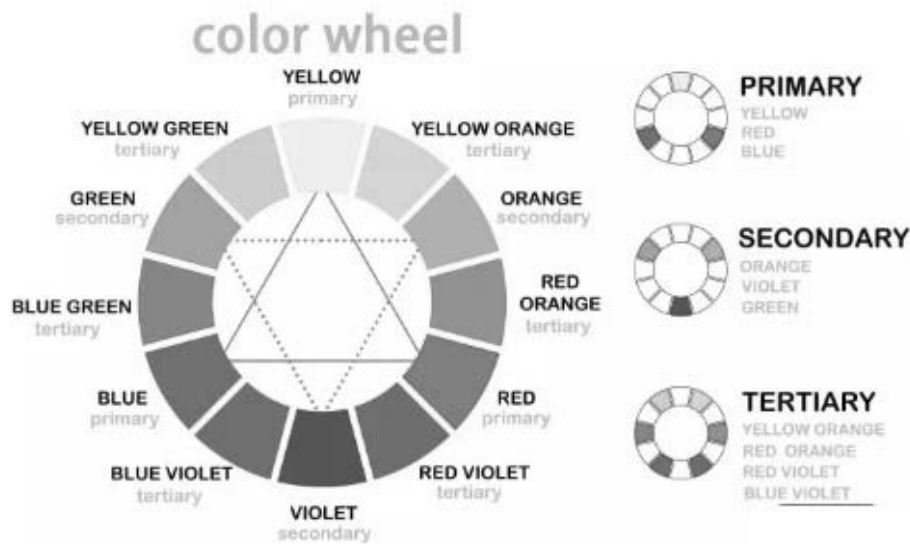
Even if you just scratch the surface of this one interesting aspect of styling, you will see a whole world of knowledge, and that's what I'm going to help you with. Stay with me and read on.

Colors to Match

Using the right colors and matching them perfectly can be a deal maker. Choosing the perfect color for an outfit is what sets you apart. And, that's why color and its theories continue to be the pivot for not just clothes, but everything else like interiors, hair, makeup, and much more.

To explain this further, let's first understand the basis of this whole color theory.

The Color Wheel



The color wheel was first invented by Sir Isaac Newton in the 18th century when he tried to condense the color spectrum into a wheel and visually represent the relationship between them. The wheel has been segregated into the following categories. While we will focus on using it for clothing and outfits, this theory is universal and applies to just about anything that deals with colors.

Primary Colors

These comprise red, yellow, and blue. No two colors can be mixed to achieve these shades. Everything else is derived from these colors.

Secondary Colors

Secondary colors are a combination of the primary colors. So, red+yellow = orange, red +blue = purple, and blue+yellow = green.

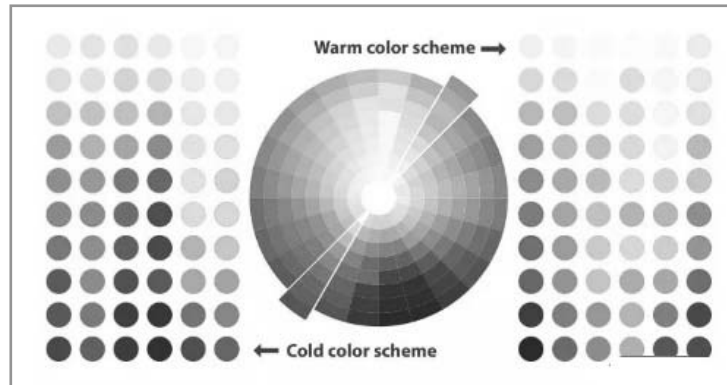
Tertiary Colors

These colors are a combination of primary and secondary colors. By mixing these colors, you get shades like mint, aqua colors, corals, etc.

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Warm And Cool Colors

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Hues of colors like red, orange, yellow, brown, etc. are warm colors – they make things look smaller in size, and that’s why most of us prefer wearing warmer colors when we want to look slimmer. Cool colors, like hues of blue, purple, green, etc., are soothing colors.

Neutral Colors

Neutral colors are self-explanatory. They are just muted, plain, and subdued. Black, grey, whites, off-whites, taupe, etc., fall into the neutral category.

The Principles for Matching Colors

One fundamental principle for matching your clothes, or for that matter anything, is combining colors that work in harmony. And, that’s what we need to remember while designing or putting our outfits together.

Here’s how you can match them.

Complementary



Red and green, violet and yellow, blue and orange – complementary colors, as the name goes, work best when put together. These are exactly opposite to each other on the color wheel. They might seem bold to look at, but the outputs will be perfect. If you observe carefully, your spring and summer clothing is mostly designed using

complementary colors. While some might argue against this concept, it is actually a matter of choice as some like making bold statements.

Analogous



Matching two or three continuous shades on the color wheel that blend well with each other is called analogous color matching. When you put an entire outfit together based on this, it looks both striking and stylish. If you are wondering how to style that orange or camel trench coat of yours, pick a shade on either side of the color in the color wheel and work with that.

Triadic

The combination of colors that are equidistant from each other on the color wheel is called 'triadic.' They look great together, but some might argue that they can be OTT. However, you can choose the muted shades of these colors to make your outfit. A pair of green cargos with a pastel pink top and powder blue accessories or shoes will look sophisticated and tasteful.

Perfect Colour Combination for Dresses

Keeping it in the Family



Keeping it in the family is a mantra you need to remember. The safest way to do this is by blending different shades of the same color. However, that will inevitably get monotonous and boring very soon. Remember how we discussed complementary

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colors? (Red and green, violet and yellow, blue and orange) Play around with a combination of these colors; they will look great when put together.

The Ombre Test

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Ombre is taking over everything from hairstyles and cakes to nail art and decor, and not to forget, outfits. Party-wear outfits, bridesmaid dresses or just a simple jeans and top in ombre can turn heads. Diminishing shades of the same color either in ascending or descending order works great. If you are sporting separates, you need to bring it all together with the top, bottom, shoes, and accessories being in sync. Wear ombre outfits for your Christmas or winter parties, goes perfectly with the theme, and the weather too.

Monochrome Look

It seems like a no-brainer because it's just one color in the same shade for the entire outfit. However, it is the hardest to pull off, for obvious reasons. The good news is monochrome looks have caught up and are not considered weird anymore. Start with comfortable and neutral colors like grays, blues, whites, and blacks, then progress to pastel undertones. Monochrome looks can be customized depending on the season or occasion. If it's a formal set up, stick to neutrals, blues or whites, otherwise explore the pastels, yellows or even brighter shades if you please.

One Thing at a Time



If it's a printed or patterned outfit, let the print take over. Prints and patterns are usually a combination of one or more colors, so you must leave it at that. Keep the accessories in the neighborhood; more colors only make it clumsier and unruly.

Colour Wheel and
Colour Schemes

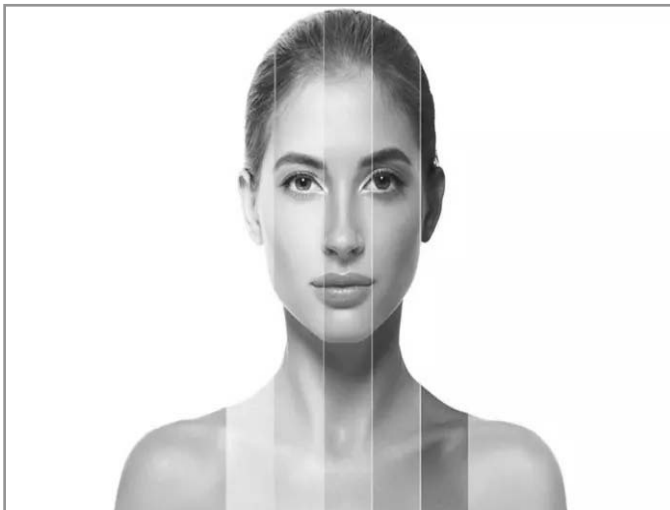
The Balancing Act



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Another trick of the trade is to balance out any colors you choose to mix carefully. Anything done proportionately is a foolproof way of coordinating your outfit. Like they say, too much of anything is good for nothing.

Match it with Your Skin Tone



If you are pale or yellow toned, opt for colors from the colder side of the palette, such as grey, navy blue, varying shades of green, aqua, emerald, burgundy, etc. If you have a deeper skin tone, you can pull off brighter or warmer shades of brown, coral, honey, gold, amber, taupe, etc., as they look amazing on this skin tone. All

said and done, an ideal way to do this is to always to strike a balance between warm and cold colors. The same applies to your eye makeup too.

When In Doubt – Err On the Neutral Side

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Some people just prefer being muted and subdued with their choice of colors, and end up opting for just the neutral shades. If this is you and you do not want to change drastically, go with one cool or warm color, and leave everything else neutral. It's always best to keep it this way!

How to Match Clothes Using the Color Wheel

Color Wheel

A color wheel is a circle diagram that illustrates the relationships between different colors. Sir Isaac Newton developed the first color wheel in his 1704 book *Opticks*. Newton created an asymmetrical color wheel with seven colors—red, orange, yellow, green, blue, indigo, and violet. In 1810, Johann Wolfgang von Goethe developed a symmetrical color wheel with just six colors (eliminating indigo) that is similar to the one we commonly use today. Artists and fashion designers use color wheels to create color schemes that produce a desired artistic effect.

Primary, Secondary, and Tertiary Colors

The color wheel is anchored by three primary colors that form a triadic color scheme. In the traditional RYB color model, these primary colors are red, yellow, and blue. You can mix the primary colors to form secondary colors: green, orange, and purple. Mixing a primary color with a secondary color results in a tertiary color: magenta (red-purple), vermillion (red-orange), amber (yellow-orange), chartreuse (yellow-green), teal (blue-green), and violet (blue-purple).

Color Theory

Color theory is a set of guidelines for mixing, combining, and manipulating colors. Color theory includes ideas like:

1. **Color harmony:** Color harmony describes color pairings that are visually pleasing and provide a sense of visual order. Color schemes based on complementary and analogous colors are generally perceived as harmonious. But, since humans respond to colors differently depending on personal preferences and life experiences, there are no universally “right” colors for achieving harmony.
2. **Color temperature:** Color temperature deals with breaking colors down into warm colors (associated with sunset and daylight) and cool colors (associated with overcast light). Experimenting with combinations of warm and cool colors can help you mix colors to achieve a particular effect.
3. **Color context:** Colors appear to behave differently when viewed in different contexts. For instance, a rusty orange may seem dull and subdued when placed beside a vivid yellow, but when paired with a dark purple, the orange suddenly seems much brighter.

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Match Clothes Using the Color Wheel

Apply an understanding of basic color theory to mix and match outfits from your wardrobe.

1. Start with analogous colors. Analogous colors are next to each other on the color wheel and share a common hue. When incorporating new colors into your wardrobe, find a color that feels safe to you—for example, light blue. On the color wheel, blue falls between teal and blue-violet. If you feel comfortable with light blue, add on a teal or blue-violet for a subtle, two-color palette.
2. Embrace complementary colors. Complementary colors are opposite each other on the color wheel and can make for a beautiful power clash: Think fuchsia and chartreuse, or burgundy and forest green. When you make bold color choices, both colors stand out.
3. Wear accessories that don’t “match.” Unless you’re going for a full monochrome look, don’t worry about matching your belt to your handbag and shoes. These smaller accessories are actually a great place to experiment with bright colors.
4. Mix neutral colors. Neutral colors are a great base for working with brighter colors, but they can also work together. Color mixing isn’t just about bold colors—neutrals like brown, black, navy blue, and white almost always pair well, so don’t be afraid to wear black pants with brown shoes.
5. Wear denim as a neutral color. Consider denim a neutral color, meaning you can mix it with any other color (including blue) and it will probably look great. This also means you can mix denims. The easiest way to do it is with shades of denim that are similar to each other but different enough that your look won’t be too matchy. Try pairing mid-wash jeans with a light-wash denim shirt, or dark-wash jeans with a mid-wash denim jacket.

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6. Organize your closet according to the color wheel. Simplify the process of choosing an outfit by organizing your closet by color. Color-coordinating your closet will make it easier to find exactly what you're looking for, and it will also help you create new color combinations. Grab the piece that you want to wear and hold it up next to the other items in your closet; you'll be able to see which color families work best with your main color.

Color Properties

Hue

The term hue is often mistaken for the color so it needs to be cleared out. First, we should understand that "color" is a general term that people use to name all the hues, tints, and tones. On the other hand, a hue is exactly the thing we mean asking "what color is it?" Basically, it is a family of twelve pure and bold colors presented on the color wheel.

A hue serves as a basic material that can be transformed in three different ways – tinting, shading, and toning. Depending on the applied technique, a hue is modified into tint, shade, or tone.

They are easy to distinguish. A tint is created by mixing a hue with white, while a shade is a mix of a hue and black. Toning is a more delicate process because it requires adding both black and white the reason why the results may seem more natural than shades and tints.

Value

As we said above colors have certain characteristics by which they can be recognized. Value is a property telling how light or dark a color is. The characteristic is defined by the level of whiteness. The whiter has been added to a hue, the higher value it receives.

Chromaticity

Chroma, or chromaticity, shows the purity of a hue. The characteristic is measured by the presence of white, grey, or black in a color. Twelve basic hues described above have the highest level of chromaticity since they don't contain any additional elements. Colors with high chroma usually look bold and vivid.

Saturation

This characteristic has much in common with value and chroma, so sometimes they may be mistaken. Still, it's vital to understand the differences. Unlike two previous properties, saturation doesn't apply mixing hues with any other colors. It is about how a color looks under different lighting conditions. Saturation describes how bold or pale color is according to its look in the daylight and weak light. The property is also known as the intensity of a color.

Color Wheel

If you had any lessons related to painting, you must have seen the circle consisting of different colors. It is called the color wheel and helps to understand how different colors relate to each other and how they can be combined. The color circle is usually built of primary, secondary and tertiary colors which are also known as hues.

The color circle was created in 1666 by Isaac Newton in a schematic way and since then it has gone through many transformations but still remains the main tool for color combination. The idea is that the color wheel must be made that way so colors would be mixed appropriately.

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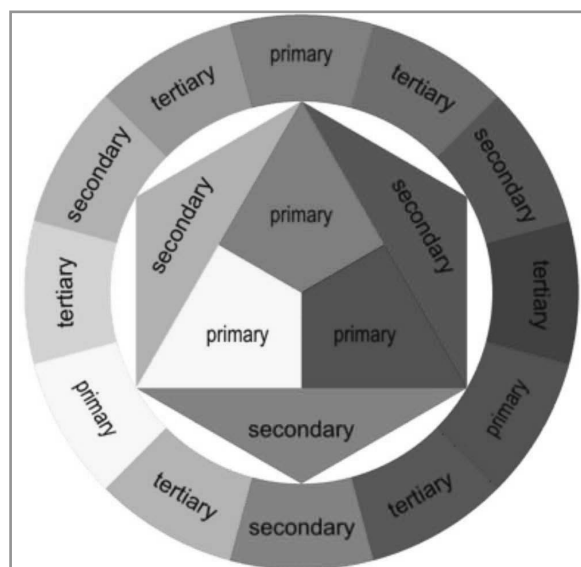


Figure: Basic colour wheels

Color Types

Primary colors

They are three pigment colors that cannot be formed by any combination of other colors. The primary colors serve as the basis of a whole system. The primary colors vary depending on the type of color system. A subtractive system is based on cyan, magenta, and yellow, while red, green and blue colors form the additive system. And the painting system RYB includes red, yellow and blue.

Secondary colors

These colors appear by the combination of two primary colors. Since each system has different basic colors, the secondary colors vary too. Here is a schematic explanation of secondary colors appearing in each system.

RGB:

- green+red=yellow
- red+blue=magenta
- blue+green=cyan

CMYK:

- yellow +magenta=red
- magenta+cyan=blue
- cyan+yellow=green

RYB:

- yellow+red=orange
- red+blue=purple
- blue+yellow= green

Tertiary colors

The mix of the primary and secondary colors gives us the tertiary colors which usually have two-word names such as red-violet or yellow-orange.

Cool, warm and neutral colors

All the colors we described above can also be divided into three types: cool, warm and neutral.

Cool colors are the ones on the green-blue side of the color wheel. They are called cool since they bring the feeling of cold. Warm colors are opposite to the previous due to the warm associations which they possess. Yellow, orange, and red are the hues relating to the warm type. Last but not least, neutral colors are absent on the color wheel including gray, brown and beige.

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Color Systems

RGB

RGB color system considers red, blue, and green as primary colors. The system is the basis of all colors used on the screen. The combination of primary colors in equal proportions of this system produces secondary colors which are cyan, magenta and yellow, but you need to remember that the more light you add the brighter and lighter the color becomes. Results obtained by mixing additive colors are often counterintuitive for people accustomed to the subtractive color system of paints, dyes, inks and other tangible objects.

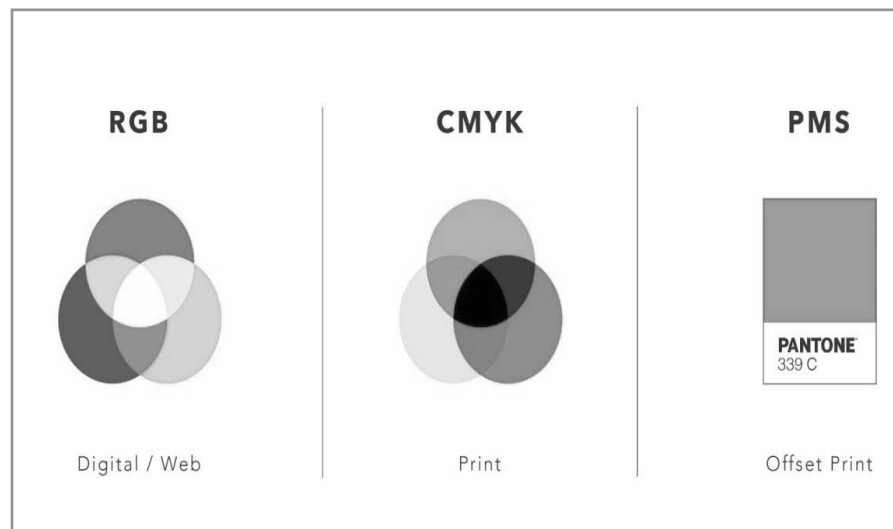
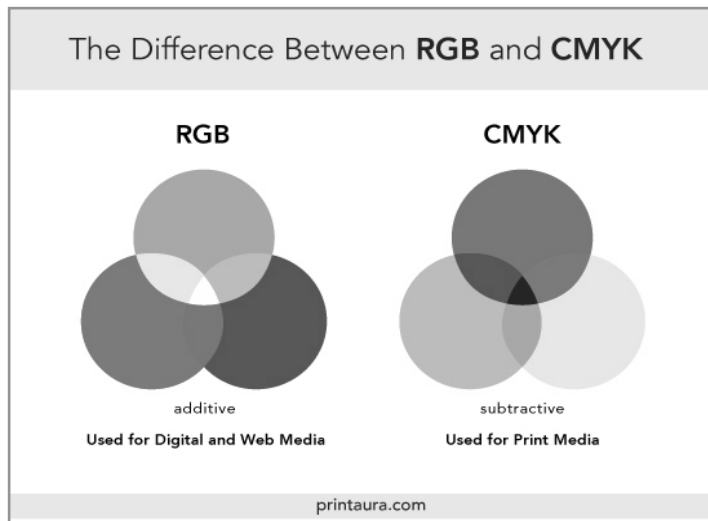
RYB

RYB (red, yellow, blue) is also known as a painting color system often used in art education, especially in painting. It served as a foundation for the modern scientific color theory which determined that cyan, magenta, and yellow are the most effective set of three colors to combine. This is how the color model CMY has been formed.

CMYK

The system CMY has been modified with the appearance of the photomechanical printing. It received the key component meaning black ink and the system was named CMYK (cyan, magenta, yellow, and black). Without this additional pigment, the shade closest to black would be muddy brown. Today this color system is mostly used in the printed design.

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The difference between RGB and CMYK

Color schemes

The color balance is vital in design since users make their impression of the website or application by the first look, and colors have a big influence. Designers distinguished the basic color schemes, aka color harmony, which work effectively.

Monochromatic

It is based on one color with various tones and shades of it. The monochromatic harmony is always a winning choice since it's hard to make a mistake and create a distasteful color scheme.

Analogous

To create analogous harmony, you need to use colors located right next to each other on the color wheel. This type of color scheme is used for the design where no contrast is needed including the background of web pages or banners.

Complementary

The complementary scheme is the mix of colors placed in front of each other on the color wheel. This scheme is opposite to analogous and monochromatic since it aims to produce high contrast. For example, the orange button on the blue background is hard to miss in any interface.

Split-Complementary

This scheme works similar to the previous one but it employs more colors. For instance, if you choose the blue color you need to take two others which are adjacent to its opposite color meaning yellow and red. The contrast here is less sharp than in complementary scheme but it allows using more colors.

Triadic

When the design requires more colors you can try triadic scheme. It is based on three separate colors that are equidistant on the color wheel. To save the balance in this scheme, it is recommended to use one color as a dominant, the other as accents.

Tetradic/Double-Complementary

The tetradic color scheme is for experienced designers since it is the most difficult to balance. It employs four colors from the wheel which are complementary pairs. If you connect the points on the chosen colors they form the rectangle. The scheme is hard to harmonize but if you do everything right, the results may be stunning.

Types of Color Schemes in Design

Put on your little yellow hard hat with the light on it and delve deeper in the world of complimentary colors and the different methods of combining color schemes.

Have you ever had an idea of how you would like your environment decorated, but didn't have a clue how to make that idea a finished product? I'll tell you a secret: it's a strong art composition. Remember back in grade school when your art teacher tried to teach you the elements of art? Each of those elements play off one another and are intrinsically connected to make something "good."

In addition to proportion of color (suggested 60-30-10), there are also palettes based on the color wheel which offer further color suggestions.

Monochromatic

Monochromatic color schemes are all of a single tint, shade, and hue. Because they lack definition or focal areas, they tend to be relaxing. They are really easy to manage, as there are no more decisions to be made concerning color. However, depending on which hue is chosen, it could be stimulating as well. Imagine a room entirely of coral! Yikes! This is the easiest color guide. Just choose one color and go!

Analogous Palette

This palette uses harmonizing colors, either in the warm or cool spectrum. For instance, red-orange-yellow combinations or green-blue-violet are more appealing

than violet-green-orange. Again there are exceptions. Try not to use too many analogous colors because it will ruin the flow of the area.

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Complementary

Ok. Choose two colors. Now create shades, tints, and tones of those same colors. Congratulations! You just created your own complementary color palette. Using shades creates depth and character to your room. In this palette, the tints are used for focal points. This can create everything from a bright, cheerful style to a soothing, formal look.

Split Complementary

On the color wheel, these are exact opposites. Red's opposite is green. Violet's nemesis is yellow, and the anti-blue is orange. Here is where it gets difficult, so I'll break it down. 1. Choose a color (I'll choose blue). 2. Find its complimentary (orange). 3. Now choose colors on either side of orange on the color wheel (yellow-orange and red-orange). This allows for nuances of color, yet still maintains strong focal areas.

Triadic Complementary

Have you ever played cat's cradle with a piece of string? Working with a triad complementary color scheme is kind of like that. It looks easy if you know what you're doing. If you don't, you just end up with a mess. The fundamental idea is that you take three colors which are evenly spaced around the color wheel. When everything is working, the palette provides a rich, balanced, and harmonious style that the others do not have. Because of its nature, it is used by many artists.

3.4 STUDENT ACTIVITY

1. What is **Color Wheel**? Explain the **Primary Colors and secondary colors**?
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2. What is **Mix And Match Colors**? Explain the future and improve **Principles For Matching Colors**?
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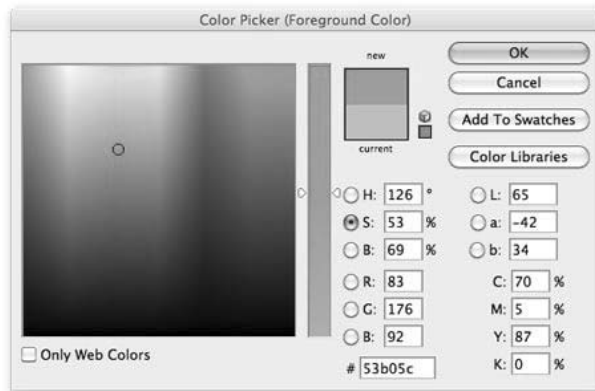
3.5 USE OF COLOUR COMBINATION IN DIFFERENT DESIGNS

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How to Use Color to Enhance Your Designs

People are physically, psychologically, and socially influenced by color. Color has been found to have connections to health and it can help set the mood through which your designs are seen.

Color communicates meaning and so we need to be conscious of what meaning we're conveying when we choose to use one color over another. It's not enough for a designer to use a color simply because he or she likes that color.



Color is a tool in the designer's toolbox much the same as a grid or *whitespace* and it's important to understand how to use that tool.

Color Meaning

The first and perhaps most important thing to understand about the meaning of color is that there is no substantive evidence that support a universal system of color meaning. It's not that colors themselves have specific meaning, but rather that we have culturally assigned meanings to them.

While some color symbolism exists globally (red as the color of a stop sign, yellow for caution), color symbolism tends to be more common within a given culture than across different cultures (white is used for weddings in Western cultures and for funerals in Eastern cultures).

Even within a single culture individual differences will exist. You and I will not necessarily be affected in the same way by seeing the same color.

The above means that it's important to understand who your target audience is and how your audience attaches meaning to color. Again it's not that a color has a specific meaning on its own. It's that we've culturally assigned meaning to colors. Keep that in mind as you read some of the specifics about the colors mentioned below.



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- **Warm Colors:** For the sake of simplicity let's define warm colors as red, orange and yellow. These are the colors of fire. They radiate warmth. Warm colors are more often associated with passion, energy, impulsiveness, happiness, coziness, and comfort. They draw attention and have the advantage of being inviting and harmonious.



- **Cool Colors:** Again for the sake of simplicity let's define cool colors as green, blue, and violet. These are the colors of water. Cool colors are more often associated with calm, trust, and professionalism. They are also associated with sadness and melancholy. They have the advantage of being professional and harmonious, but can also turn people off by the coolness they radiate.

Note: The demarcation point between warm and cool colors falls somewhere between yellow/green and violet red. Green and purple don't fall neatly into either warm or cool camps. They tend to take on the properties of one or the other based on the surrounding context.



- **Red:** is the color of fire and blood. It's emotionally intense. Red is associated with energy, war, danger, strength, power, determination, action, confidence, courage, vitality, passion, desire, and love. It can enhance metabolism, increase respiration, and raise blood pressure. Red has a high visibility and advances to the foreground. It is often used for buttons in order to get people to take impulsive action.



- **Yellow:** is the color of the sun. Bright yellow attracts attention, though it can also be distracting when overused. Yellow is associated with joy, happiness, wisdom, and intellectual energy. It stimulates mental activity and generates muscle energy. Yellow produces a warming effect, arouses cheerfulness and is often used to evoke pleasant feelings. Shades of yellow can become dingy lessening the pleasing effect.



- **Blue:** is the color of the sky and the sea. It has the opposite effect of red and slows metabolism, breathing, and heart rate. It's seen as a masculine color. Blue is associated with trust, loyalty, wisdom, intelligence, expertise, confidence, stability and depth. It creates a calming effect, suppresses appetite and has

been considered to be beneficial to both body and mind. Blue is often used for corporate sites given the previously mentioned associations.



- **Orange:** combines the energy or red with the happiness of yellow. It's not as aggressive as red and calls to mind healthy food (citrus). . Orange is associated with joy, sunshine, the tropics, enthusiasm, happiness, fascination, creativity, determination, attraction, success, encouragement, stimulation, and strength. It can increase appetite and evokes thoughts of fall and harvest.



- **Green:** is the color of nature. It symbolizes growth, hope, freshness, and fertility. In countries with green money such as the U.S. it evokes thoughts and feelings of financial wealth. Green is associated with healing, stability, endurance, harmony, safety, life, and well being. It can sometimes signify a lack of experience and is often used to indicate the safety of drugs and medical products in advertising.



- **Purple:** combines the stability of blue and the energy of red. It conveys wealth and extravagance and is seen as the color of royalty. It symbolizes power, nobility, luxury, and ambition. Purple is associated with wisdom, dignity, independence, creativity, mystery, and magic. Light purple is seen as feminine and purple is a popular color with children. Purple occurs less frequently in nature and some may consider it artificial. In Catholic cultures it is representative of death and in some Islamic nations it is associated with prostitution.
- **White:** is associated with light, goodness, innocence, purity, virginity. It usually has positive connotations and is seen as clean and safe.
- **Black:** is associated with power, elegance, formality, death, evil, and mystery. It denotes strength and authority, is seen as formal and elegant, and brings forth feelings of fear and the unknown.



- **Gray:** is the color of sorrow, detachment, and isolation. It connotes responsibility and conservative practicality. It's a neutral color and creates a non-invasive feeling. It's associated with security, maturity, and dependability. It can be used to reduce the intense energy of another color and to emphasize a willingness

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to comply. Some people who prefer gray may be seen as the lone wolf type or narrow-minded.

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- **Brown:** is the color of the earth and tends to blend into the background. It's associated with material things, order, and convention. Its connection to the earth gives it stability. Brown can convey a solid and wholesome feeling.

Understanding Color and the Meaning of Color

By selecting a color and/or color combinations for your brand you will take the first step in growing a favorable acceptance in your chosen industry.

Understanding Color (And What It Means For Your Brand)

Color plays a major part in the correct reflection of your brand. This visually obvious yet subtle application has a significant impact on the way a brand is perceived by the public. No matter if you're designing a brand for yourself, a small company, or a corporation the effects of color will not discriminate based on how much cash you have to start. When looking at color options for your brand it's always best to take a look at other brands to get a clear idea on how color schemes play a part on the perception of brand perception. A company with strong brand recognition, altering the color scheme where it is expected to be maintained can have dangerous results.

Color Is the Most Influential Sense (To Our Minds)

Today's marketplace is bombarded with products that are trying to get our attention at every head turn, decreasing the likely hood that your product will immediately stand out. According to the way our natural senses function Color is the most influential, followed by Shapes, Symbols, and finally Words. Here we will look at what colors mean on a basic level, as well as brands that are best known for their recognition by color, color combination practices, and how you can use these methods to develop your own brand.

But make no mistake, brand recognition will make a good company succeed faster and make bad companies fail faster. People attach most of how they feel about your brand according to their personal experience with your products and services. By selecting a color and/or color combinations for your brand you will take the first step in growing a favorable acceptance in your chosen industry.

Color Theory

The Meaning of Color (And the Impact on Your Brand)

Color meanings vary from culture to culture, and the impact that your brand has on your targeted audience. Here is a list of a few meanings on how colors are interpreted by brands:

Color Wheel

1. Hue is the primary value of a color and how the color red, green, blue, purple, etc. is perceived through the eye.
2. Saturation of a color is the overall intensity or brightness of the color, any color that appears dull is referred to as desaturated.
3. Value is the lightness or darkness of overall colors schemes.
4. Blue: Security, Trust Worthy, Stability, Loyalty, Wisdom, Confidence, Trust, Friendliness, Preservation, Courage, Science.
5. Green: Wealth, Money, Calming, Trees, Ambition, Endurance, Healing, Calm, Generosity, Natural, Completion, and Protection.
6. Red: Energy, Power, Vigor, Leadership, Courage, Passion, Activity, Joy.
7. Yellow: Optimism, Childish, Freshness, Law, Education, Arrogance.
8. Pink: Romantic, Feminine, Love, Beauty.
9. Orange: Cheerful, Passion, Pleasure, Enthusiasm, Fascination, Creativity, Fun.
10. Black: Powerful, Mysterious, Elegance, Sophistication, Functionality.

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FASHION DESIGNING GUIDE TO OPTIMAL COLOUR COMBINATIONS FOR ATTIRES



Marc Chagall made an interesting quote once that said “All colors are the friends of their neighbors and the lovers of their opposites.” How well it reflects the psychology behind choosing colors for garments to be fashionable!

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Being avid about fashion and **fashion designing**, you should be eager to know more about pairing the right colors for the right occasion and be reasonable with it. Many fashion design schools are particular about this topic. Granted the need for experimentation, certain combinations of colors rock for sure. Learning the optimal combinations involve a good understanding of staple fashion design classes topics like the color wheel.

If you are into **fashion and design courses** already, we’re going to reiterate a few things you already know and agree with, and explore a few more that are interesting.

Let’s get going with a guide to optimal colour combinations to stay fashionable.

Yellow and Green



It’s amazing how these shades are the peppiest colours to choose for your attire. Moreover, this combination looks great on most skin complexions. So try pairing a yellow blazer with a green skirt or a khaki pant. Gold and green accessories add to the overall style and vibe. This combination is a great one to be in a wardrobe especially for winter.

Gray and Crimson

Crimson color tops can complement grey bottoms and blend well into a balanced mix. The beauty lies in having a brilliant shade like crimson combined with a neutral colour that creates a sober effect when you want to be radiant, but not too loud.

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Red and Blue



Bring your favourite blue jeans and pair them with a red colour shirt and the most killer combination is on. This is a well known, energetic combination and is popularly worn by all. If you're donning a red blazer or jacket, the shirt/tshirt can

ideally be a white one. The two basic colors make a combination that never fails to bring out your bold side.

Orange and Blue

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The most brilliant complimentary color combination you can have is orange and blue. The combination oozes energy and vigour. A black footwear and alternately colored designer jewellery can pep up this mix.

Pink and White



It's a charming combo for a girl to have pink and white for her attire. It's so sweet and feminine; it brings a breeze along and softness to the eyes. The nearest best combination is gray and pink, which are complementary colours. The combination

of white or gray with pink make you look versatile and it really works in almost all outdoor situations.

Tan and Maroon



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It's almost impossible to pair rich colors with neutrals. A striking exception though is combining tan and maroon. Imagine maroon pants paired with a tan top or a maroon jacket with tan skinny jeans. Adding tan or maroon shoes alternately works great for this combination.

PERFECT CLOTHING COLOUR COMBINATIONS FOR 2021

Pairing colours can either make or break your outfit. So, it's only natural to feel a little uneasy when experimenting with new tones and partnerships. But, that doesn't mean you have to stick to plain old head-to-toe black. Here, we take you through a variety of colour-coordinated looks that will excite and enhance your style. From bold green and yellow outfits to chic pink and grey ensembles, these stylish ideas will teach you how to wear bold colours without clashing. Here are the clothing colour combinations you need to try this year.

Green and Yellow

There's nothing crisper than the smell of freshly cut grass on a warm summer day, and this colour combination is just that. Fresh and clean, green and yellow looks great on most complexions. If you're warm-toned, focus on mustard, khaki and dark green. If you're cool-toned, sharpen up an outfit by adding bright yellows and iridescent greens.

To rock this colour combination, try partnering a smart yellow blazer with a simple grey skirt or pair of jeans. Then, add a fresh white shirt and green accessories for a bright new everyday look. Colour blocking is an easy way to add vibrancy and take your winter wardrobe through to the warmer months. Just add some solid colours to your outfit and watch the transformation. But remember, keep it simple and don't be afraid to mix it up.

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Pale Blue and Pink

Nothing says spring more than pastels. Soft pinks and blues may sound subtle, but when styled in the right way, they can be as eye-catching as a bright pop of colour. This colour combination will remind you of the soft scent of jasmine and a warm spring breeze.

Try a soft blue cashmere sweater with a pink jacket for a day look that will melt away any remnants of winter. Soften up a classic all-black ensemble with some pastel arm candy. Layer your accessories and don't be shy to add a combination of pastels. This colour combination works well with a statement shoe like a white stiletto to even out the colour palette.



Red and Blue

The red and blue colour combination is one of our all-time favourite looks. We love how you can completely transform a pair of jeans with a tailored red jacket and killer heels. It's business up top and party on the bottom. It's sexy without being over the top, and it smartens up a casual look.

Who can go past a classic Breton striped shirt? It's every bit the quintessential French Chanel-inspired look when worn with a pair of jeans and a red blazer. Alternatively, you can wear a crisp white shirt underneath your jacket to highlight the brightness of the red and the contrast of your blue jeans.



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Cobalt Blue and Turquoise

Combine cobalt blue with turquoise and you have a colour match that is powerful and bright. Think 'Breakfast at Tiffany's' and wear this colour combination with elegance and class. You don't necessarily need to break it up with a neutral colour like white or cream, and it's one of those combinations that can look great with both silver and gold accessories making a versatile styling partnership. Your imagination only limits you.

A regal blue dress, paired with a casual flat turquoise shoe will see you looking picture perfect regardless of the occasion. Pair it with a statement necklace and you'll be dreaming of nights spent dancing in Santorini.



Orange and Blue

Orange and blue is the perfect colour scheme to use for a colour blocking technique. Opt for blue pants and add an orange top or choose a piece that mixes the perfect blend of both colours. For something a little different, try a burnt orange mix with a darker navy blue. Whichever way you choose to wear these shades, be sure to add the perfect shoe. A nude shoe will give just the right emphasis to your outfit and tie all the brightness together into one lovely sunrise.



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Tan and Maroon

Tans and light neutral colours can be hard to style and leave you looking drab and rundown, but if you style them with a deep rich colour like maroon, you will have a match made in heaven. The key to keeping it exciting and suitable for all skin tones is to ensure you mix texture and hue so try a corduroy skirt with a satin camisole. And while fashion trends usually advise you to steer clear of keeping the same colour scheme from head to toe this is one look where you need not play by the rules.



Orange and Black

Whether it's a dress that perfectly combines this brilliant colour combination or individual items; orange and black, is the new black. Nothing lifts a black outfit more than a bright, bold colour and orange certainly does it.

Don't be shy to wear a bright coloured pant. Try a high-waisted flare pant and flaunt that killer abs with this season's must-have item, a black crop top. For those of us who prefer to keep the six-pack undercover, try a loosely tucked-in oversized sweater. Whatever you pair it with, don't forget to add some luxury to the delectable Max Mara Zebra Printed Ponyskin bag.



Pink and Grey

Pink and grey is a great look which you can utilise all-year-round with some versatile pieces. There are no limitations with the way that you can use this clothing colour combination. A dark grey pant with a soft pink top can look as equally complimentary. Extend the colour theme through to your accessories and don't forget to include this season's must-have item – the wide brim hat.

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Purple and Coral

Coral was once reserved for your nanas lipstick but the colour made famous by Ita Buttrose has now taken its place as one of the most versatile shades. Wearing purple and coral with confidence will make the perfect summer outfit.

Coral is flattering for all skin tones, and the deep rich tones of purple give it just the right amount of contrast to ensure it's not too striking. Try a coral top matched with a bright purple bag or shoe and break it up a little with some gold accessories.



Purple and White

While white goes with anything, nothing looks more fantastic than when it's paired with purple. It makes your skin look creamy, and it just oozes femininity and sensuality. This marriage is so versatile that you can also mix in some gold and silver accessories and convert a daytime high tea look to a night out with friends.



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Colour combinations for Clothes

Since the time I learnt about the 7 colors of the rainbow and all the colours in between, I have been fascinated by colours one way or the other. The colour wheel is the phenomenon which explains it all. So here is the ubiquitous Colour wheel, seemingly simple but hidden beneath it, the whole visual spectrum of a thousand colours and explanations.



The scientific ideology called the colour theory is basically guidance for you and me to choose the right colour and its combinations. Knowing the importance of colours in our day to day life, no one would dare to ignore this theory, especially designers, creators and artists, who are vastly concerned about the appearance of things. And the appearance of anything is very much dependant on its colour or lack of it.

We never look at colour in isolation. It is a combination of colours and their proportion and balance which gives us the right perception of an object. For this, it is important that when we use colour, we analyse how effectively it stands together with other colours used around it. Because at the end of the day; it is not just the professionals who are concerned about colour. It is for everybody.

Colour is everywhere, and if there is a harmonious colour experience, colour theory is not far behind.

Match Clothing Colours

Here is a simple example showing the importance of colour harmony in our daily life : when you wear an emerald colour dress it is going to look more visually striking to choose a blood red lipstick to go with it than if you were going to wear a dull mauve shade. If that is the effect you are going after, you will choose the red rather than the mauve, right?

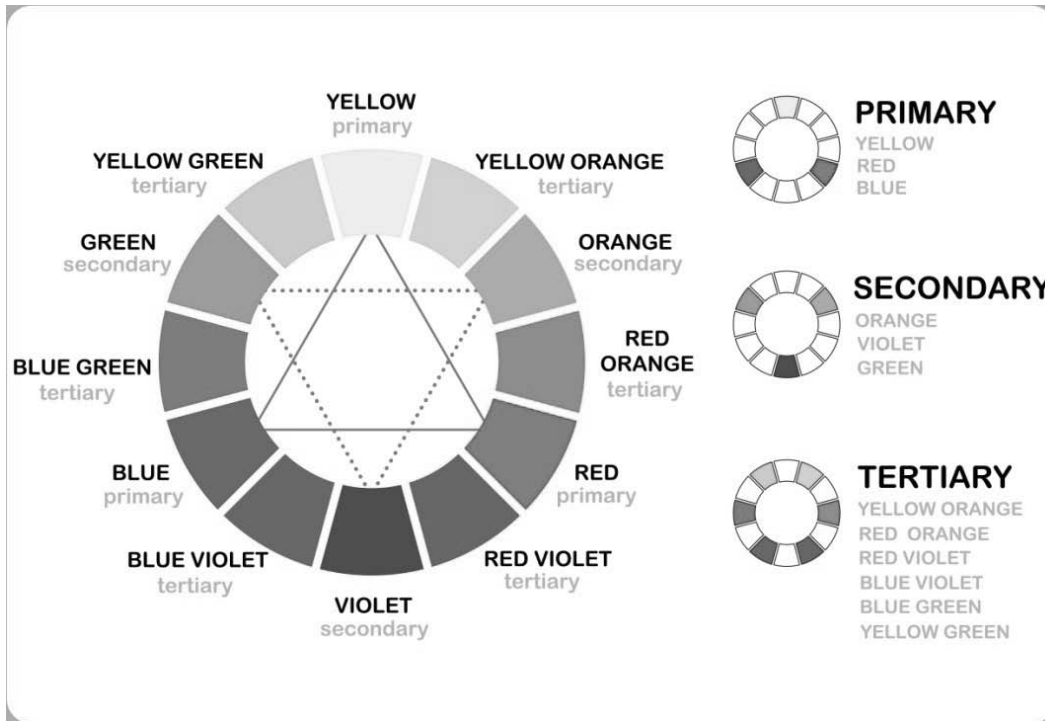
Colour theory is nothing but common sense like this. But then, "Common sense is uncommon"; which is why we see atrocious colour combinations. Indeed, common sense is uncommon.

By learning the colour combinations mentioned in this post you will be having a better idea about what colours will go together for clothes, accessories, and even for embroidery and other embellishments.

Colour wheel

Colour wheel is the visual representation of the colour theory. Sir Isaac Newton invented the colour wheel and then Johann Wolfgang Goethe elaborated on it so that we have a better time understanding of various colour schemes / colour harmonies.

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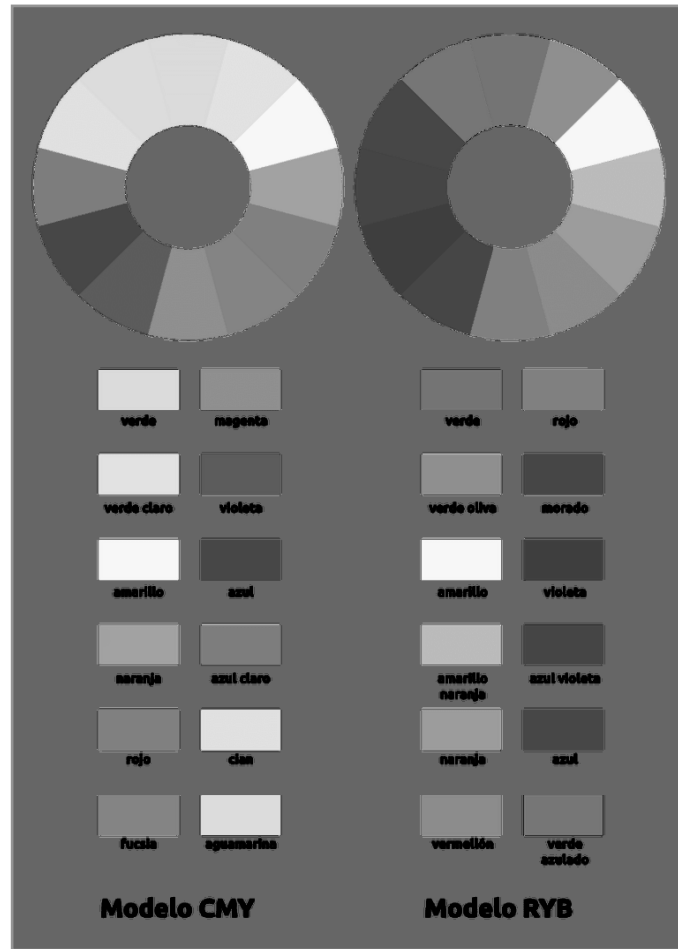
The basic Colour wheel combinations

You would be using the colours in the colour wheel on a daily basis like the obvious ones here – Yellow, yellow green, spring green, green, blue green, aqua green, aqua blue, turquoise blue, cerulean blue, blue, blue violet, violet, red violet, purple, fuschia, magenta, blue red, red, orange red, orange, yellow orange, orange-yellow, golden yellow. There are so many more that consists of shades, tones and tints of these colours.

You have the primary colours and then combine them to get secondary colours. These groups are again combined in varying proportions to get the tertiary colours. But then these details are of interest mostly to an artist ; you and me, who are more interested in the visual aspect of colours can skip this and checkout the simple fashion colour wheel charts/combinations that will help you co-ordinate clothes. (If you like to know more about the colours, their mixing etc you can check out the post on colour in the fabric painting tutorial)

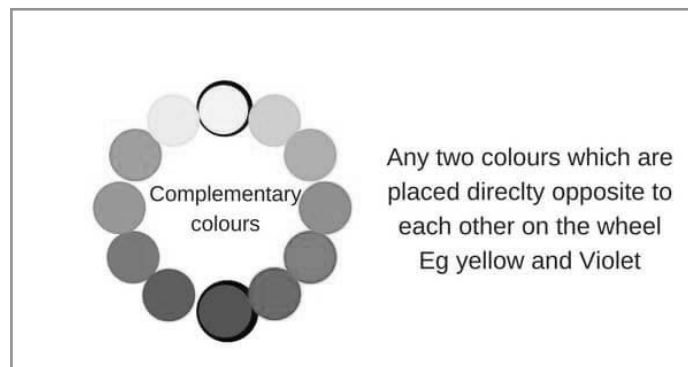
Complementary colours

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These are colours which are opposite to each other on the colour wheel. They are basically contrasting colours so will give you a striking high contrast effect.

Well, if you follow this colour scheme you just may end up looking like a Christmas tree, if you are not too careful. Well, maybe not so dramatic, but these are bold and striking colours and should be used carefully, because of the high contrast effect. Designers usually bypass this problem by choosing small accents in complementary colours.



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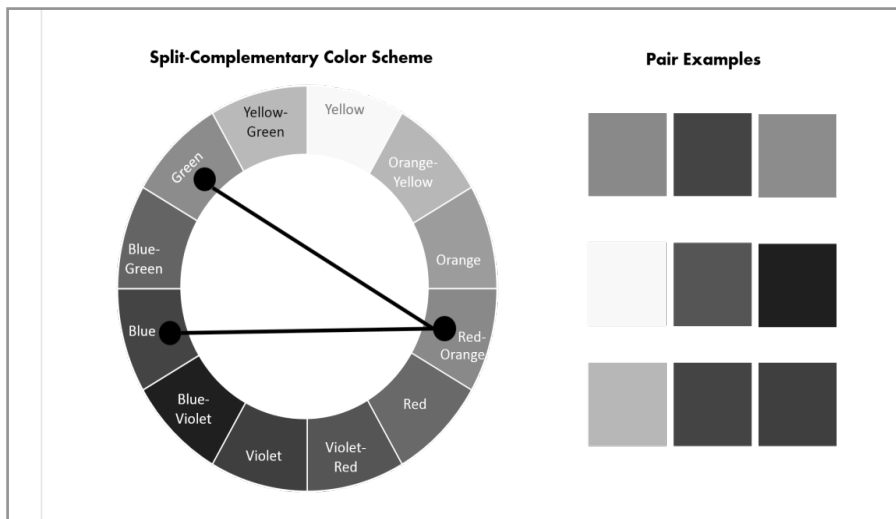
As you can see from the colour wheel the complementary colors are

- Blue-green & red-orange
- Yellow & violet
- Blue and Orange
- Yellow GREEN and red violet
- Blue Violet and yellow-orange
- Green and red



Complementary colors work with the greatest impact when bright versions of blue are used.

Split complementary colours



Fresh Split Complementary Colors

In this colour combination, you take one key colour and then combine it with the

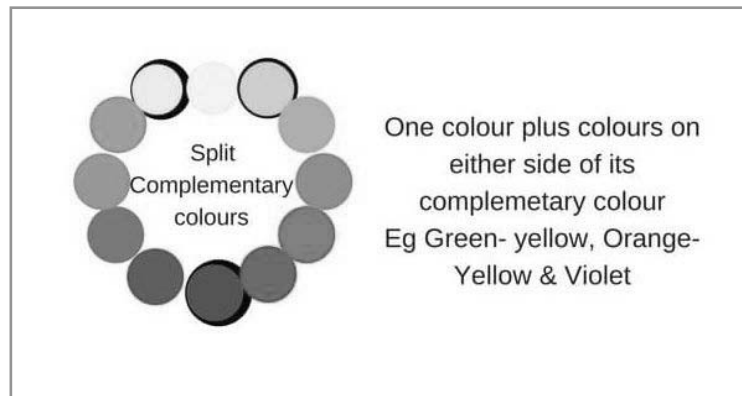
adjacent colours of its opposite complementary colours. The result is a toned down version of the high contrast complementary colours.

You get the contrasting effect but without the drama. They are stable and harmonious.

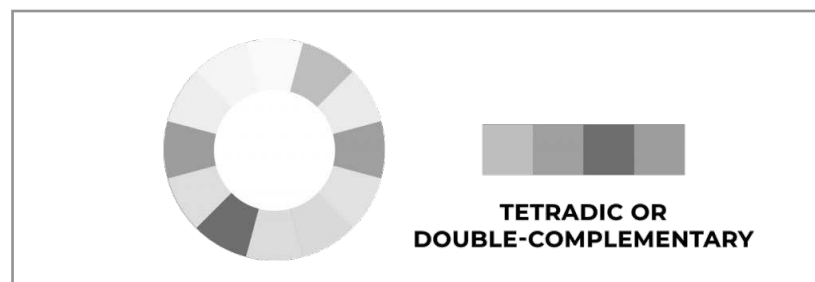
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The split complementary colours are

- Yellow-green, violet, red
- Green, red violet, red orange
- Blue, green red, orange
- Blue, red orange, yellow orange
- Violet, yellow-orange, yellow green
- Red, violet, yellow green
- Red, yellow green, blue green
- Yellow, blue violet, red violet

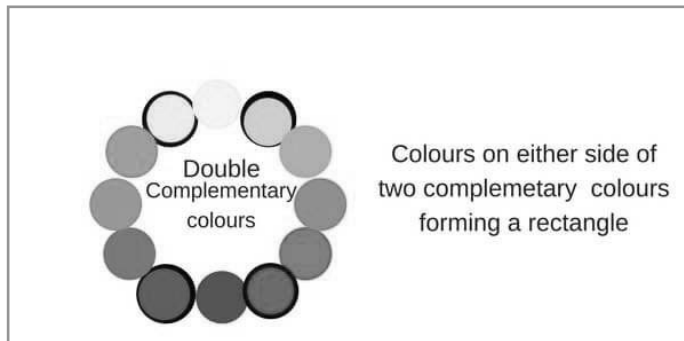


Double complementary colours (Tetradic colours)



This colour combination consists of two sets of complementary colours. In this combination, the complementary colours are further toned down. Instead of one key colour, adjacent colours are chosen from opposite sides ie four colors arranged into two complementary color pairs. You have to draw a rectangle through the colours of the colour wheel to get this combination.

The colour spectrum is wider here, so it is difficult to balance if all the colours are used in similar proportions. You will have to find a good balance of these striking colours.

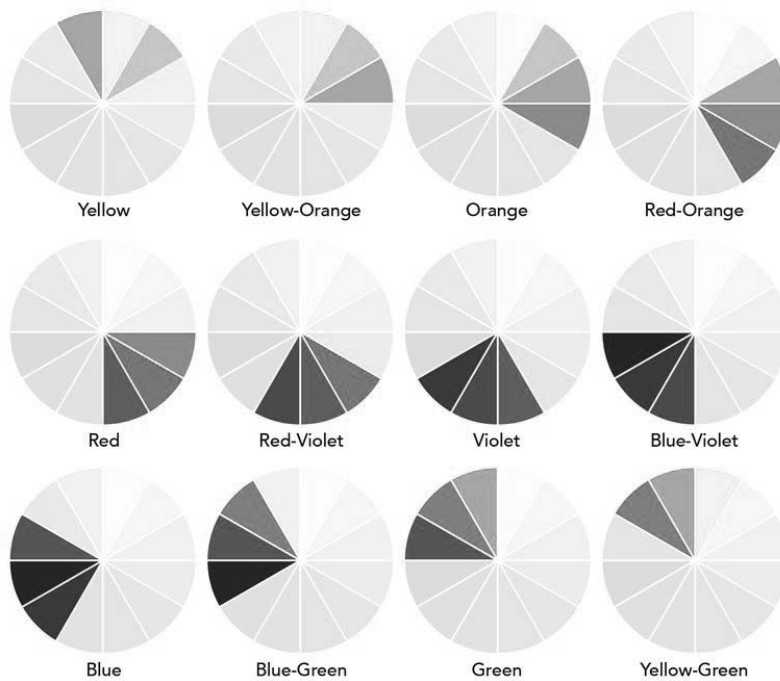


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Analogous colours

ANALOGOUS COLORS

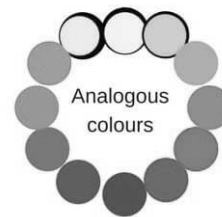


Analogous colours are any 3 – 5 adjacent colours sharing a common colour. The colours have a unifying effect as they share the same colour family. Some Analogous colour combinations are red, orange yellow, orange; yellow, yellow green, green.

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You may not get the high vibrancy of complementary colours but this colour combination is rich and at the same time harmonious and soothing.

Ensure that you do not combine warm and cool colours in this colour scheme. If you are not careful this colour combination can feel a little flat.



Any 3 - 5 adjacent colours sharing a common colour

Triad Colours

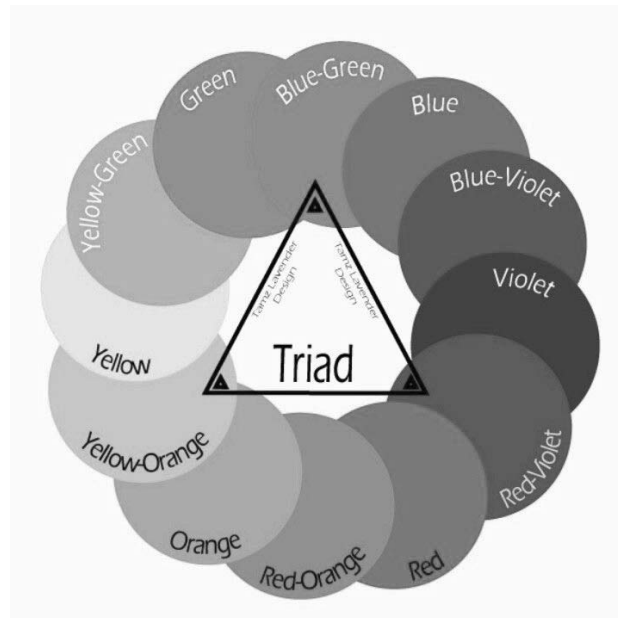
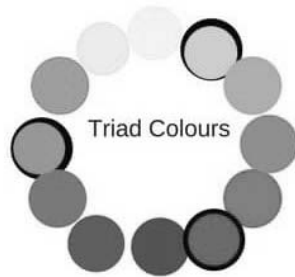


Fig. Triad Color Scheme

Triad colors are equidistant from one another on the color wheel. You will get contrasting colours which are surprisingly harmonious.

The triad colours are:

- Red, Yellow, Blue
- Yellow orange, Blue green, Red violet
- Red orange, Yellow green, Blue violet
- Orange Green Violet



Any colours equally spaced from each other on the wheel

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Monochromatic colours

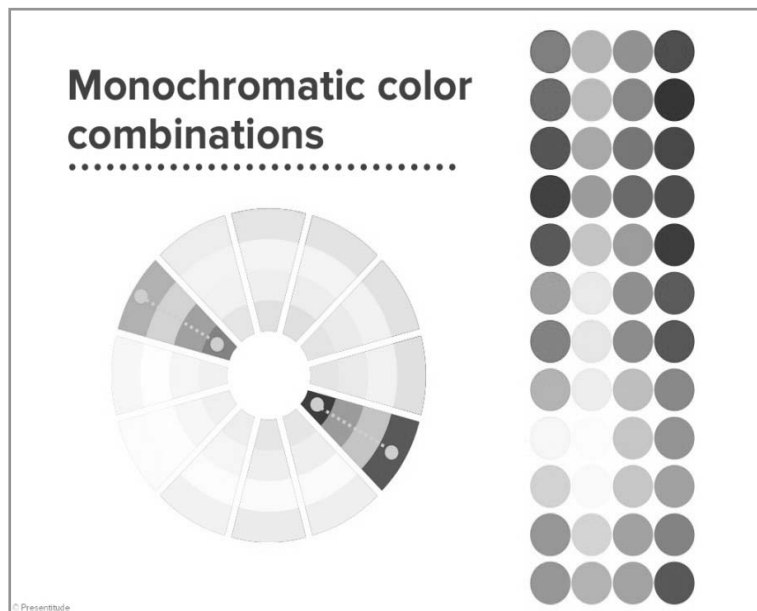


Fig. Monochromatic colors

This refers to a single colour in a range of hues ie you get saturation of a single colour. Simply said, from dark to light of one colour. Eg violet, purple, lilac etc. The result is a set of colours which are very easy on the eye. They have a unifying effect.

But if you want to highlight a particular feature this colour scheme is found lacking. Some may find this colour scheme boring.

NOTES



Other than these colour schemes outlined in the colour theory there are some more colour combinations which you can use to end up with a pleasing harmonious visual experience.

Classic colours

	C	M	Y	K
A	40	30	20	60
B	25	20	15	40
C	15	5	5	15
D	20	30	30	60
E	15	20	20	40
F	10	10	10	20
G	40	50	30	80
H	20	40	20	50
I	15	20	10	20
J	65	20	40	60
K	60	10	20	30
L	50	5	40	20
M	0	0	0	100
N	100	30	30	70
O	60	20	10	30

CLASSIC-C CLASSIC-G CLASSIC-N
CLASSIC-F CLASSIC-G CLASSIC-D
CLASSIC-I CLASSIC-I CLASSIC-G
CLASSIC-L CLASSIC-N CLASSIC-J
CLASSIC-O CLASSIC-O CLASSIC-N



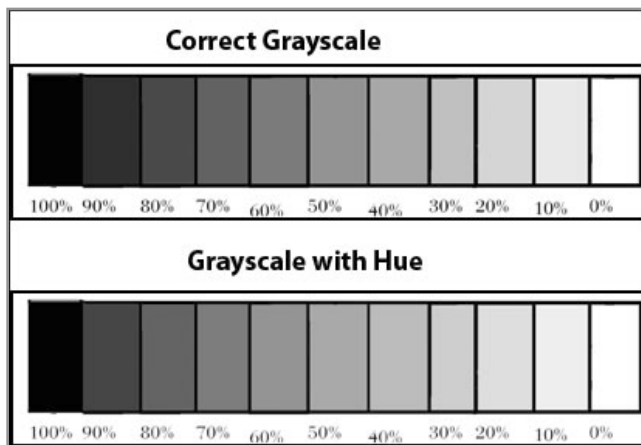
Fig. Classic color schemes

Classic colours are versatile, timeless colours which never go out of style. You will not be able to pinpoint these colours to a particular style or era. But they are appealing colours nevertheless.



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Grayscales Colours

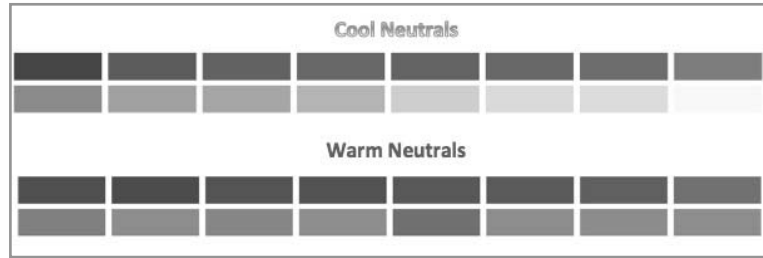


This is a monochromatic colour scheme with variations of grey hue. They can turn out to look drab if you are not too careful. But this colour combination can give a feeling of depth with the correct usage. Black and its different variations in this colour combination can give a visual perception of thinness.



Neutral colours

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Neutral refers to a state of having no colour. In colour combination, it means hues which are toned down. When you want to play down some thing this colour scheme is used. Black, white, grey, and Ivory, brown beige, tan shades of white, gold and silver are the prominent neutral colours.



Pastel colours and soft colours

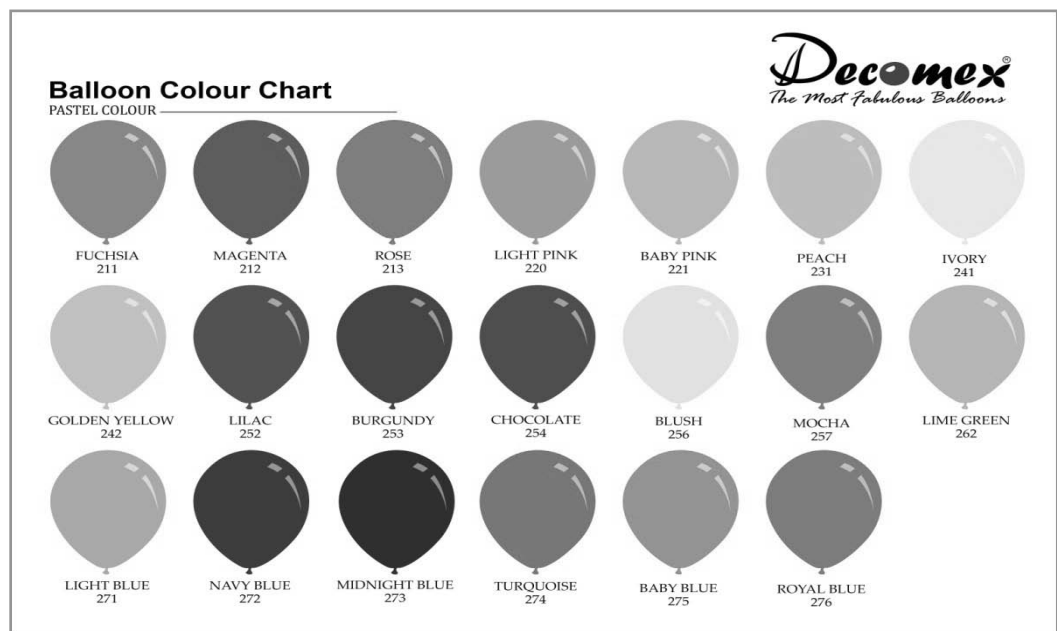
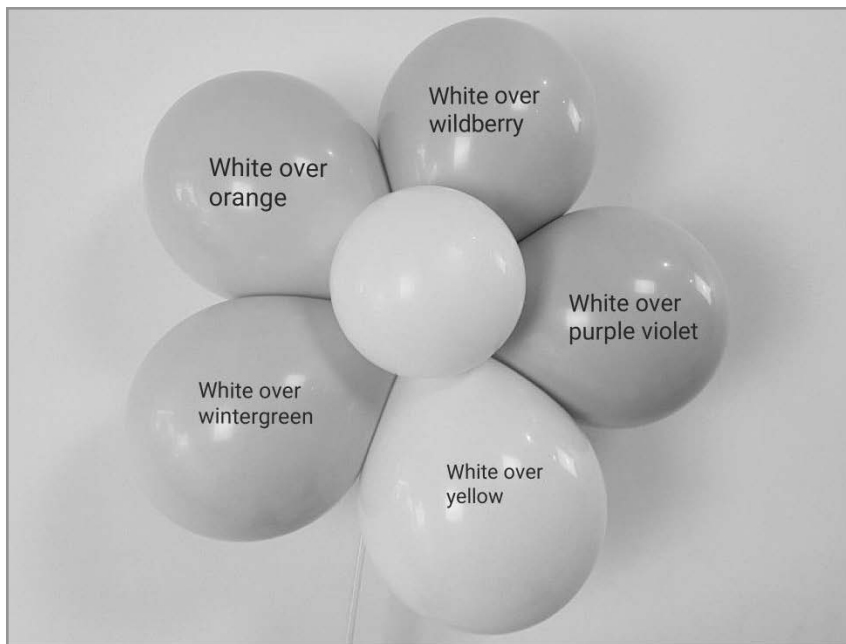


Fig. Soft Pastel Colour Chart



Soft pastel colours

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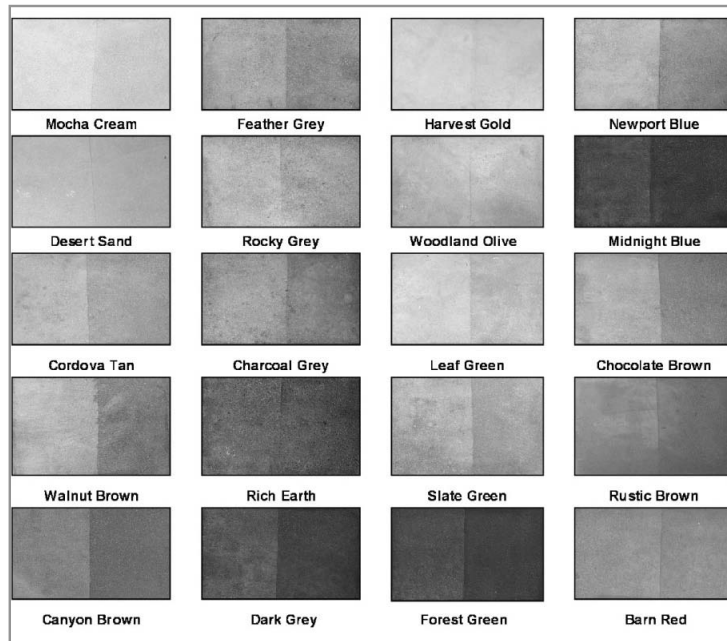
These are color combinations you associate with all things pretty, delicate and wonderful. The first thing that comes to mind perhaps is a baby. They have a soothing calming effect but is somewhat limiting in its application because not everyone prefers them.



Earthy colours

This is a colour scheme which tries to mimic colours found on the earth (colour of soil, trees, rocks, moss etc) It includes a whole spectrum of colours encompassing some shades of brown. It is a muted colour scheme and can look dull if not careful.

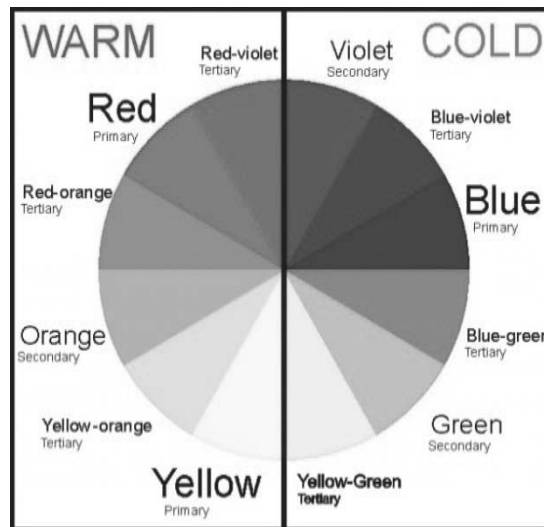
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Earth Colours



Cool colours



<i>Cool Summer Color Names</i>	
89 Carnation	110 Soft White
2 Light Blue Red	116 Icy Blue
7 Deep Rose	117 Icy Violet
19 Buff	124 Dark Taupe
22 Light Lemon Yellow	128 Cocoa
26 Grey Navy	134 Charcoal Grey
32 Medium Blue	139 Green Grey
42 Lavender	142 Light True Grey
44 Sky Blue	143 Medium True Grey
48 Powder Blue	144 Light Blue Grey
49 Pine Green	145 Medium Blue Grey
51 Emerald Green	148 Muted Navy
61 Muted Turquoise	151 Blue Violet
62 Dark Teal	152 Dark Medium Grey
69 Med. Blue Green	153 Cool Taupe
71 Pastel Blue Green	154 Black/Brown
77 Burgundy	161 Cadet Blue
82 Mauve	168 New Pine Green
83 Orchid	171 Almond Cream
92 Rose Pink	302 Bright Metallic Silver
94 Pastel Pink	303 Antique Metallic Silver

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Cool colours are dominated by colours in the blue family. These colours are very soothing and very easy on the eye. Cool colours are white, grey, blue and green and its varying shades. You can add accent colours from the warm colour family to break the monotony of cool colours.

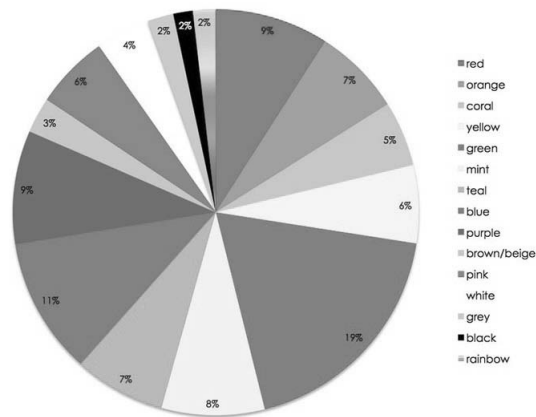


Lively colours and vivid colours

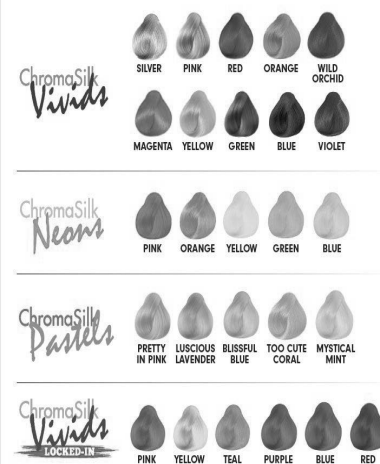
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P.S.- your favorite colors



As the names suggest, these groups of colours can give a lively sporty look. These bright colours maynot be everyone’s cup of tea but for those who find them attractive relish the energy given by these colours.



VIVIDS Collection

ETHNIC COLOURS
sewguide.com



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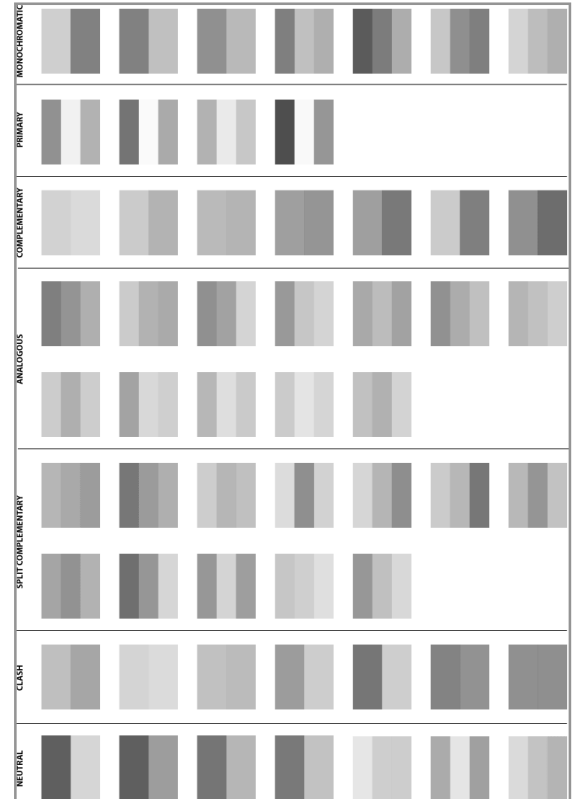
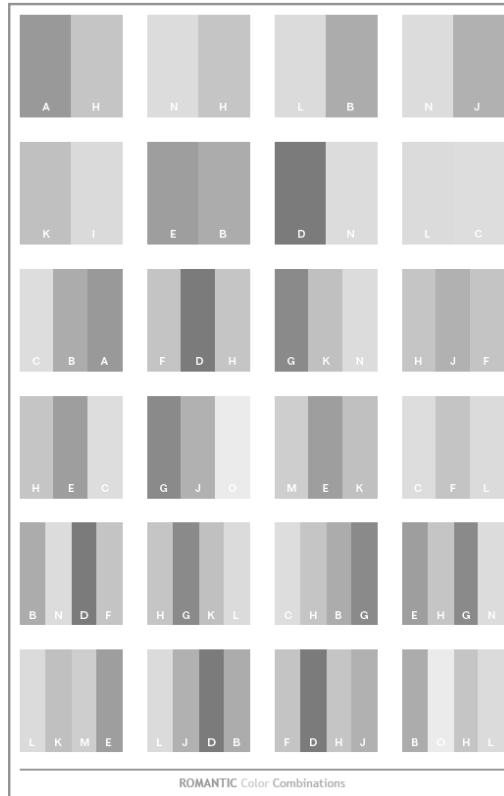
Ethnic Colours and Fashion

These are deep colours with a strong vibe. These are colours you would associate with the traditional motifs of Asia and Africa and other cultures.



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Romantic colours



These are colours straight out of a Disney movie. The candy pinks and bright yellows and sea greens in this group fascinate people ie, those who dig these colours. They look for these combinations in every purchase they make. I have one such giddy girl at home, so I know.

No colour combination is right or wrong, whatever the colour theory and the media try to tell us. Whatever colour combination you choose for your clothes, accessories, it is a reflection of your personality. You can wear the colour of your choice with pride and celebrate life and its myriad colours.



NOTES

3.6 SUMMARY

Complementary colors are colors on opposite sides of the color wheel, For instance, red/green, yellow/purple, and blue/orange. Complementary colors always match. Usually the colors are the same distance from the center of the color wheel (i.e. shades), but you can play around with complementary colors at various distances from the center to produce a similarly satisfying combination.

A trick professional designers use is to pick two complementary colors, then select one that is a slightly darker shade. For instance, instead of red/green, opt for red and olive green for variety while retaining a harmonious color combination.

Analogous colors (also called *dominance harmony*) are colors that are continuous shades on the color wheel. Different shades of the same color almost always look great together giving us another way to produce matching (i.e. pleasing) color combinations. Red, reddish-orange, orange, yellow-orange is one example of a set of analogous colors.

- **Triadic colors:** Triadic colors are colors on the wheel that are equally spaced apart, forming a triangle across the color wheel. These colors include not just

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the primary (red, yellow, and blue) and secondary colors but any combination of colors that are equally spaced on the color wheel. Triadic colors look well together and are typically quite vibrant.

- **Split complement colors:** Split complement colors are also pleasing to the eye. To find the split complement colors on the color wheel, start with a color, then find the two colors next to its complementary color (the color on the opposite side of the wheel). Surprisingly, these colors often provide a pleasing balance of color. For example, using the wheel below we can see that the complementary color for red is green. The two adjacent colors, yellow green and blue green, also work well in an outfit that is predominantly red. As you can see in the dress below, the colors indeed work well together.
- **Tetradic colors:** Tetradic colors, also called *double complementary*, are the richest of all color schemes but the most difficult to harmonize properly. A tetradic color scheme requires one color dominate over the others. Tetradic colors can be uncovered by looking for a rectangle of colors on the color wheel. Similarly, a square color scheme uses four colors spaced evenly around the color circle. Again, pleasant tetradic color schemes are difficult to form but are sometimes found in professionally designed patterns.
- **Conclusion: Using The Color Wheel In Your Wardrobe:** The relationship between colors is a science — you can get advanced degrees in it, as a matter of fact. Don't let that intimidate you. The three basic relationships outlined above are always good staples for your wardrobe.

And remember that you also have tints and shades to play with — a deep burgundy shirt reads just the same as a vivid red one for purposes of contrast and relationships on the color wheel, even though it appears much more restrained (and more socially-acceptable) in outfits.

Not all your outfits will follow the color wheel relationships rigidly. Don't worry too much if they don't. Look for combinations that you feel comfortable in, using the color wheel schemes as a very basic guideline. A splash of difference here or there is what makes the outfit *yours*.

3.7 GLOSSARY

- **Computer Aided Design (CAD):** A pattern design CAD software application is a tool for creating repeat patterns by computer. Not to be confused with fashion CAD systems that deal with creating patterns for garments, footwear, or accessories.
- **Calico:** A small-scale all-over floral design in bright colors originally from India. Later associated with American country-style.
- **Camouflage:** A pattern that conceals the object by blending it into its environment or providing a false impression of the object characteristics (disruptive pattern). Digital camouflage patterns are often pixelated, without discernible shapes or features.

- **Cartouche:** An oblong decorative figure resembling a frame, tablet, shield, or scroll bearing an inscription or emphasizing a design element. Used as a standalone or as part of a pattern's motif. On ancient Egyptian monuments, an enclosure for royal and divine names.
- **Cat Patterns:** Patterns featuring cats or generally on a cat theme.
- **Celtic Knot:** A knot formed by interfaced ribbons that lead seamlessly into one another. Same as everlasting knot.
- **Check:** A pattern of squares. Some of the check patterns (in order of increasing size) are pincheck, mini check, Gingham check, tattersall check, and windowpane check.
- **Chequer:** A pattern of squares of alternating colors, textures, or materials. Another spelling is checker pattern. Same as checkerboard pattern.
- **Chevron:** A traditional, woven or printed design of zigzags in a stripe layout, also called herringbone.
- **Chinoiserie:** Any Western interpretation of an Oriental design.
- **Chintz:** Glazed fabric usually printed in bright florals and stripes, mostly used for drapery and upholstery, but also for apparel.
- **Christmas Patterns:** Patterns on the Christmas theme. Used for gift wrap, fabrics, greeting cards, and other applications.
- **Collage:** A collage pattern is one assembled by gluing paper scraps, photographs, cloth, or other objects onto a flat surface. Also an imitation of such a technique. Derived from the French "coller" to glue.
- **Composite Overlay:** Two or more patterns stacked on top of each other. A typical example is patterned background.
- **Composite Repeat:** A combination of two or more symmetry types in one pattern. For example, rotational medallions put in a drop repeat. In Artlandia Symmetry Works, created with replicas.
- **Contemporary:** A design with simple, extremely stylized motifs.
- **Contour:** A pattern of outlines highlighting or suggesting shapes or figures of the motif.
- **Contract:** A design for nonresidential markets such as offices, hotels, and hospitals.
- **Coordinates:** Two or more designs related to each other in color, subject matter, and/or technique that are intended to be used together.
- **Coral:** An organic all-over pattern suggestive of coral growth.
- **Color saturation:** the pure hue at its fullest intensity without white, black, or complementary color added.
- **Elements of photographic design:** those parts (such as point, line, and plane) that are used to make a composition.
- **Feathering:** a technique used in drawing and painting; to feather is to blend an area or edge so that it fades off or softens; blending; smudging; the overlapping of values and/or colors in the manner of the overlapping feathers of a bird.

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- **Focal length:** the length of a lens (measured in millimeters) from the center point to the image sensor when the lens is focused at infinity.
- **Informal balance (asymmetrical balance):** the type of balance that results when two sides of an artwork are equally important, but one side looks different from the other.
- **Maquette:** a small-scale two-dimensional sketch or three-dimensional model or plan of a proposed work, such as a sculpture or architectural form; used by architects and sculptors to design large-scale works.
- **Non-representational:** an artwork with no recognizable subject; artwork that uses forms that make no direct reference to external or perceived reality.
- **Pigment:** a substance used in coloring; usually, an insoluble powder mixed with a base of water, acrylic, or oil to produce paint or other similar products.
- **Proportion:** a principle of design; the relationship of parts to a whole or parts to one another in regards to size and placement.
- **Sheer:** Any very light-weight fabric (e.g., chiffon, georgette, voile, sheer crepe). Usually has an open weave. Sheers mostly feel cool.
- **Silk:** A natural filament fiber produced by the silkworm in the construction of its cocoon. Most silk is collected from cultivated worms; Tussah silk, or wild silk, is a thicker, shorter fiber produced by worms in their natural habitat. All silk comes from Asia, primarily China.
- **Silk Shantung:** Similar to Dupioni silk, Shantung has a more refined appearance with smaller slubs. It's appropriate for tailored pants fuller skirts and gowns.
- **Sisa:** A strong bast fiber that originates from the leaves of the Agave plant, which is found in the West Indies, Central America, and Africa. End uses include cordage and twine.
- **Slinky Knit:** It drapes well, never wrinkles and washes beautifully. It's the perfect travel fabric with four-way stretch for ultimate comfort. Suitable for almost any wardrobe item.
- **Spandex:** A manufactured elastomeric fiber that can be repeatedly stretched over 500% without breaking, and will still recover to its original length.
- **Suede:** Leather with a napped surface.
- **Surah:** A light weight, lustrous twill weave constructed fabric with a silk-like hand. Surah is the fabric of ties, dresses, and furnishings. It is available in silk, polyester, and rayon.

3.8 REVIEW QUESTIONS

1. Discuss the 3 Primary Colors.
2. What kind of The 3 Secondary Colors?
3. What is The 6 Tertiary (Or Intermediate) Colors?
4. How to Know What Colors to Match?

5. What Are The Principles For Matching Colors?
6. How to Match Clothes Using the Color Wheel.
7. What Is a Color Wheel?
8. What Are Primary, Secondary, and Tertiary Colors?
9. What Is Color Theory?
10. Understanding Color and the Meaning of Color.

Colour Wheel and
Colour Schemes

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4

PLACEMENT OF MOTIFS USING DIFFERENT REPEATS

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STRUCTURE

- 4.1 Learning Objective
- 4.2 Introduction
- 4.3 To Understand the Process of Placement of Motifs in Different Ways
- 4.4 Able to Create Designs through Different Methods of Motif Placement
- 4.5 Student Activity
- 4.6 Motifs using Different Repeats: All over, Half drop, Brick, Oogy pattern, Diagonal, Border and Central line
- 4.7 Summary
- 4.8 Glossary
- 4.9 Review Questions

4.1 LEARNING OBJECTIVE

After studying this unit you should be able to:

- Explain the meaning and definition of **Design Parameters**.
- Describe the main responsibilities of a **Types of Motifs**.
- Describe the Different Types of Motif Prints.
- Explain the meaning and significance of Placement of Design.
- Explain the procedure of Different Methods of Motif Placement.
- Describe the technology for modify All Over Design.

4.2 INTRODUCTION

The job of a textile designer is so fascinating – ideating and creating beautiful prints and patterns on fabrics all day long. After all Textile design is the art of designing those prints and patterns on fabrics. A textile designer creates patterns keeping in mind current trends, style specifications, motifs, their own drawings, colors as well as the technical and ethical and cultural considerations and then communicate it via the medium of textiles.

In all patterns and prints on textiles, you will find there is a repeat – i.e. the identical or dissimilar motifs are arranged with horizontal or vertical distance between them in a repeated manner. There are infinite ways of arranging these repeats on the fabric – but some basic layouts are commonly used individually or collectively to form the patterns that you see on fabrics

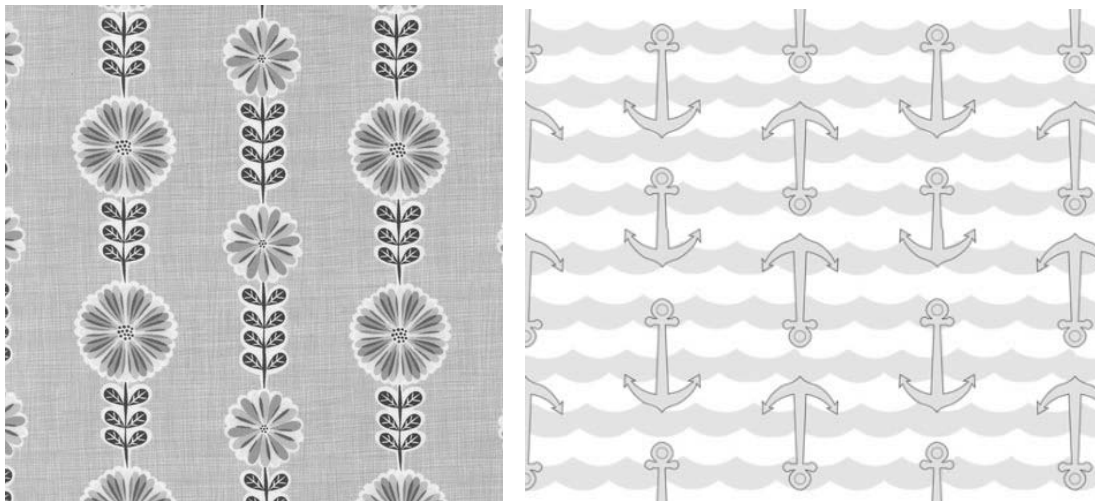
4.3 TO UNDERSTAND THE PROCESS OF PLACEMENT OF MOTIFS IN DIFFERENT WAYS

Design Parameters

Directionality and Orientation

Directionality refers to the number of ways you can rotate fabric and keep the print looking the same. Most directional prints are oriented with the lengthwise direction of the fabric and can be one-way or two-way.

- **One-way prints** can be turned only one way; otherwise they look upside down or sideways. These kinds of fabrics present a real challenge for sewing because cutting layouts for lots of projects are designed in a way where pieces are oriented the same lengthwise and crosswise to minimize fabric leftovers. With one way fabric all pieces must be oriented the same way and because of that projects require more yardage.



Two way prints look the same on the right and on the wrong side so they don't limit fabric usage as much as one way fabrics. Stripes are considered a two-way print but they can be oriented in 4 or more directions and look good.

There are also **non-directional prints** and these are the easiest to work with because sewing pieces can be cut out in any direction which means less waste. These prints can be divided into tossed and 4-way prints. **Tossed prints** look the same

when you rotate them in any direction, even on the bias. Visually they appear fun and relaxing. **4-way prints** look the same when oriented at 0°, 90°, 180° or 270°. Tartan plaids are an example of this type of a print. .

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Tossed Print



4 - way Print

Railroaded prints have motifs that run parallel to the selvage and they are usually found in upholstery fabrics. **Border prints** are usually designed with a specific end use in mind, such as tablecloths, skirts and aprons.

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Craft panels include all the ready-to-sew pieces for a project, for example a stuffed toy, printed directly onto the fabric.

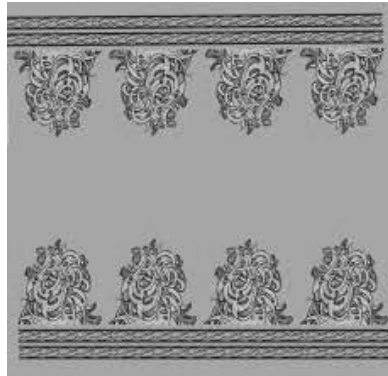


Placement prints are printed directly on a finished product, such as a T-shirt.

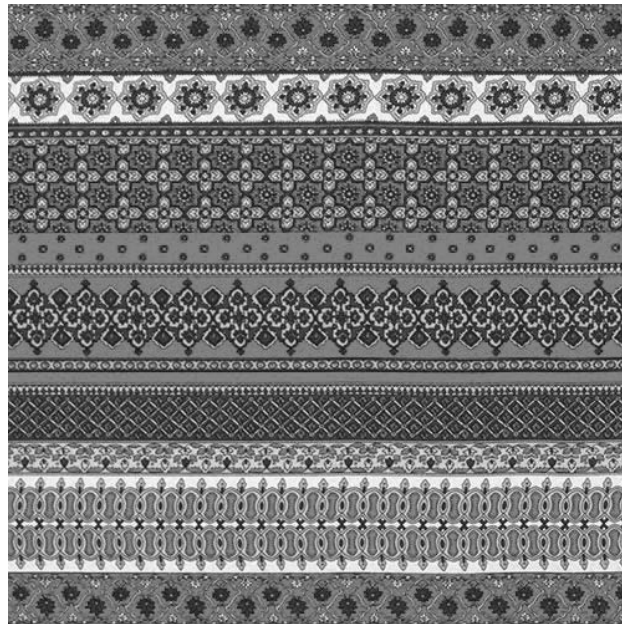


Engineered prints are similar to craft panels but more used in fashion, where the pieces are printed directly on the fabric, with the print already filled in.

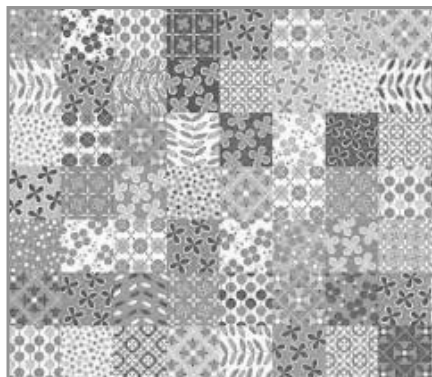
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All-in-one prints include a mini-collection of different prints all on one length of fabric.



A **cheater print** is mock patchwork, usually simple squares or traditional quilt patterns and it makes quilting easier as there is no need for piecing before layering.



Types of Motifs

A motif is any element in a design. It is usually a repeated element but it doesn't have to be the case always. In textile design there are only 3 big categories of motifs: geometric, floral and novelty.

Geometric motifs include polka dots, stripes, plaids, checks and diamonds. They can be simple or complex, regimented or random, straight or curvy, or somewhere in between. Geometric prints are the most versatile and universal of prints.

Floral patterns and prints are a great part of every design tradition. They are feminine, beautiful and classic and they have a universal appeal.

Novelty prints include everything else that doesn't fall into these two categories. They have a special language, visually and as an emblem of identity for the one that wears them. There are several classic themes such as kitchen, nautical, zoo and holiday motifs but there are many others that fade in and out with fashion.

Placement of
Motifs using
Different Repeats

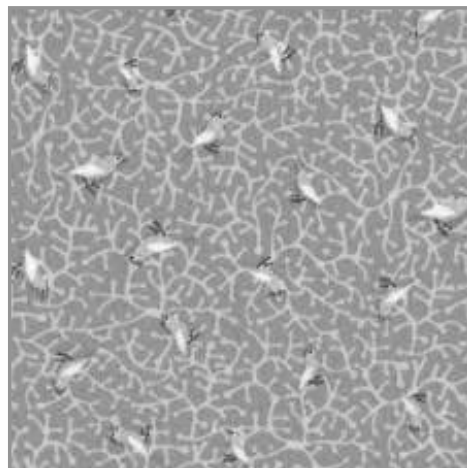
NOTES



Geometric Print



Floral Print



Novelty Print

Repetition

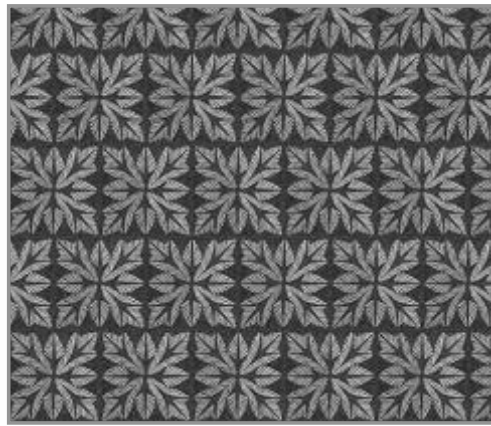
In classic pattern design, motifs can be arranged into repeating units to be printed continuously and seamlessly on a length of cloth.

NOTES

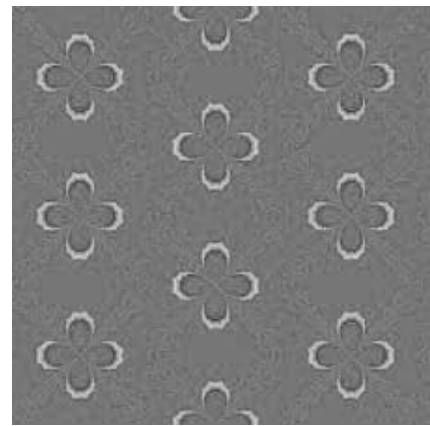
Square repeat also known as block, side or straight repeats are the simplest type. The motifs are built within or overlapping a foundational rectangle and that rectangle is repeated as a simple grid.

Half-drop repeat involves alternating columns of the square repeat grid and pushes them down a fraction of the block height ($1/4$, $1/2$, $1/3$) and creating a drop. This design creates a pleasant flow and balance when looking at it.

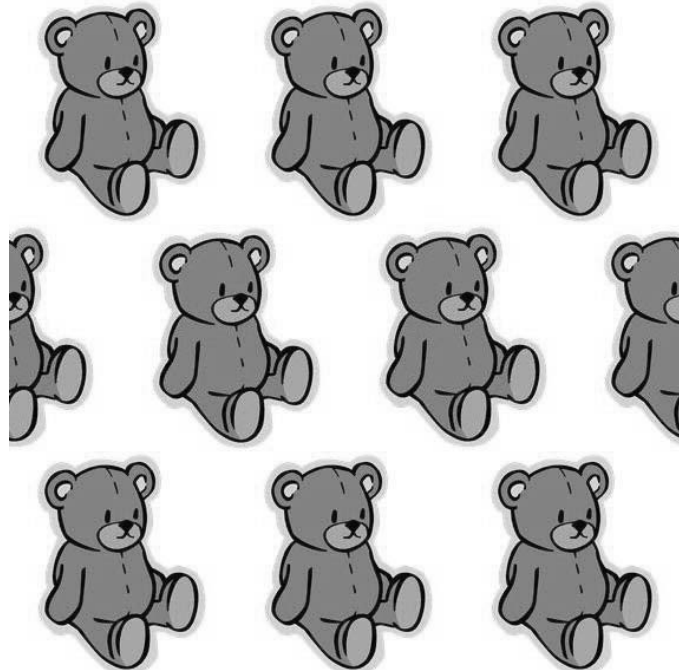
Brick repeat has the same concept as drops but affects pattern rows instead of columns.



Square Repeat



Half-drop Repeat



Brick Repeat

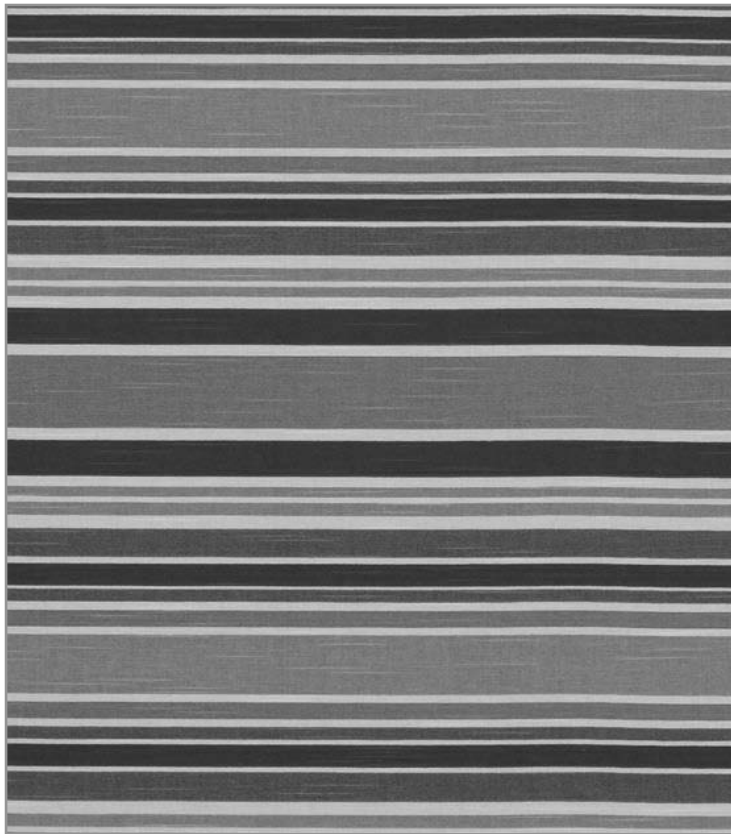
Random and Set Layouts

Motifs can be laid out so they look randomly scattered on the fabric or so they appear in some kind of arranged pattern.

Random layouts make the repeat not obvious. When the eye flows over the cloth, the viewer should have to work a bit to find where the design begins to repeat. Square and drop repeats are most commonly used.



If a repetition is flaunted as an important element of the design, then this design is said to be in a **set layout**. Square, drop and brick repeats can form the underlying grid of a set layout. Geometric motifs are the ones most commonly used in set layouts.



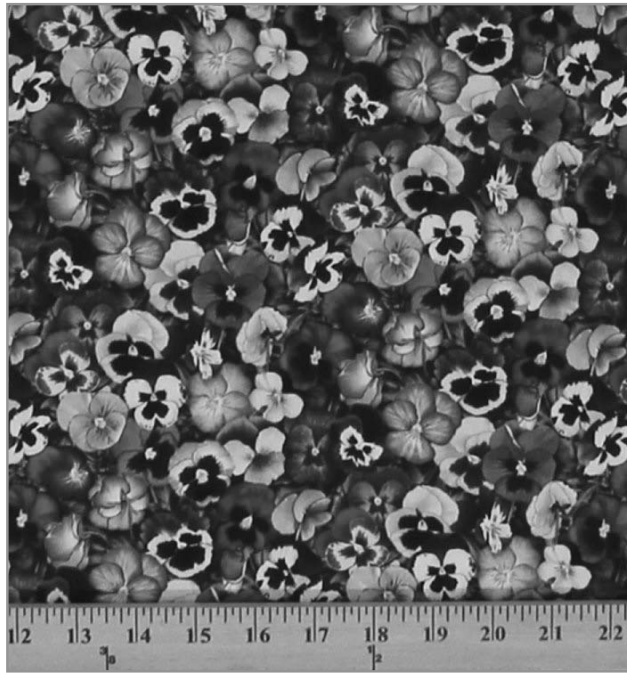
Placement of
Motifs using
Different Repeats

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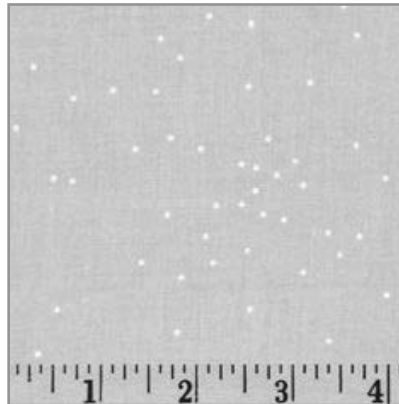
Spacing and Scale

Motifs can be **packed** together or **spaced** with lot of background showing. Some designs are alternating packed and spaced areas and are called open-and-closed.

NOTES



Packed Print



Spaced Out Print

Motifs can be miniature such as pin dots or gigantic, such as supergraphics. **Small scale** motifs are considered to be $1/2$ " square and under, **medium-scale** motifs are from $1/2$ " square to 4" square and **large-scale** motifs are greater than 4" square.

Motif Prints

Motif in a motif print is simply repeated to create a pattern or design. Motif prints have a very graphic and illustrative look. They are generally used in kid's clothing

and cushion covers, bed sheets or wallpapers. Motif Prints are used in aprons, dining table covers or napkins. They make a very clear statement and thus, they communicate strongly.

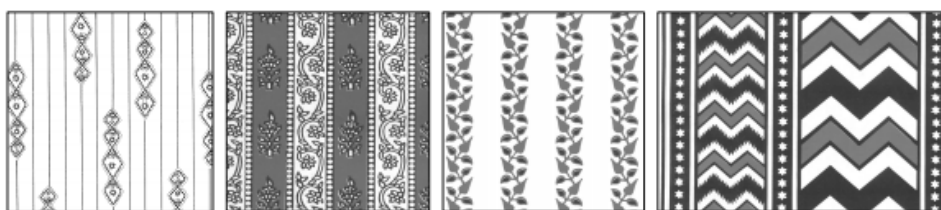
Placement of
Motifs using
Different Repeats

Animal Prints

Animal prints on textiles resemble the pattern on the skin or the fur of an animal such as a leopard, cheetah, zebra, tiger, spotted hyena, striped hyena, African wild dog, giraffe or monkey. Animal Prints date from the early nineteenth century, when Napoleon brought back real hides collected on his expedition to North Africa. In the twentieth century, animal skins began to appear on clothing almost exclusively in fashion for women. They are also used for accessories like handbags, bets, jewellery and footwear. The two most common kinds- big cats and snakes – have become perennial favourites in the fashion world. Animal prints have long been a popular style for many reasons. They are generally expensive and hence they are a symbol of wealth and status. The look is primal, wild, eye catchy, and savage. Many recently, with the increasing awareness of ecology and animal rights, view the wearers of real fur as barbaric, but the fake has become fashionable. A major difference between animal prints and fur clothing is that animal prints today very often use fake fur instead of animal coat. Animal print applications extend beyond clothing and art prints and are commonly used for other decorations, including rugs, wallpaper, or painted surfaces. The colors used in these prints are those found on the animals' body which generally are shades of brown, black and white.

THE CONCEPT OF PLACEMENT OF DESIGN

In textile design, we have to deal with different kinds of surfaces. For example, our product could be a scarf, sari, bedcover, curtain panel and so on. The surface could be woven, printed, embroidered, textured etc.. All the techniques applied on the fabric require the motifs or designs to be placed on such surfaces in interesting and aesthetically pleasing compositions. This positioning of the motif on the surface is called 'placement of design'. Any motif or pattern can be used to create a design on a given surface when placed appropriately.



Woven



Printed



Embroidered

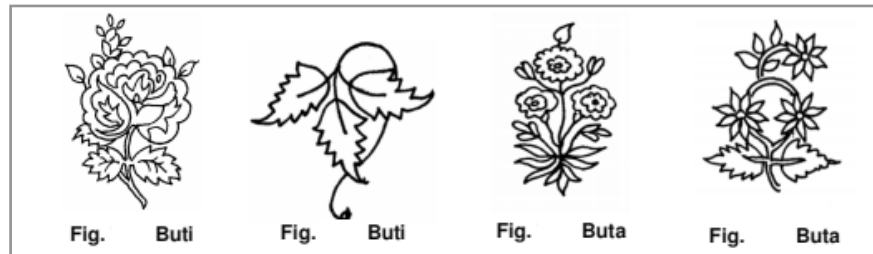


Textured

NOTES

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Our textile traditions have a rich vocabulary of motifs and various interesting placements. You can place the motifs according to the impact you want to create. Our traditional textiles have a lot of butis and butas. If you study the art of block printing, for example, you will see that the same motif in the same size, is repeated a number of times to fill up the entire space



If we need to do something bold and graphic, one single large motif in a single colour, filling the entire surface will be sufficient. This technique is often followed by artists on canvasses and designers on products like saris or scarves or display banners where they want to create a strong visual impact.

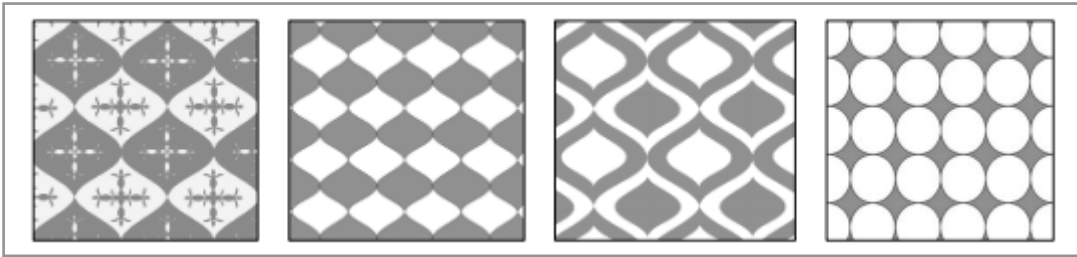


Placement of Designs

Placements are dependent on the space between the motifs in a design. Placements of motifs can be in the same direction or the space can remain the same but the direction of the motif changes. On a smaller scaled grid the motif can be placed close together. On the same grid which is larger in scale, the same motifs may be placed by increasing the space between the motifs.

In a design, both, the form (the motif) and the counter form (the space in the background) have equal importance. It is important to see how the space behind the form is interacting with the whole design surface. As we have learnt about the Gestalt Laws in the unit on lines, the form and counter form can both become active.

In the practical class study some examples where the design and its background both become part of the design, such as ogees in a repeat design based on the hexagonal grid and zebra stripes.



In all of the above illustrations the positive and the negative space both lend to the design.

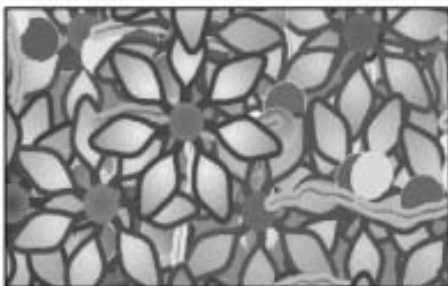
NOTES

4.4 ABLE TO CREATE DESIGNS THROUGH DIFFERENT METHODS OF MOTIF PLACEMENT

Different effects with the same pattern. By repeating patterns in several ways; butis, butas or border designs could give different appearance on the fabrics. The final presentation of the design could be thus changed by working with different repeat effects.

An All over Design

All over design, as the name suggests, covers the fabric to a large extent. The design surface can be divided into two parts-the background and the foreground. The background is the base of the fabric and the foreground is the design on it. When the foreground is more than the background then it is an all over design. In other words in all over designs the back ground gets covered by the design and little or no background is seen.



Here in the first design there is no background to be seen while in the second design with red poppies the navy blue background can be seen. Both the designs fall in the category of allover designs.

Presentation of Design

Designers prepare the portfolio of their designs in such a way, that it represents their idea and their design for a particular item, e.g.-a garment, dress materials, or a fabric for tapestry, upholstery etc.

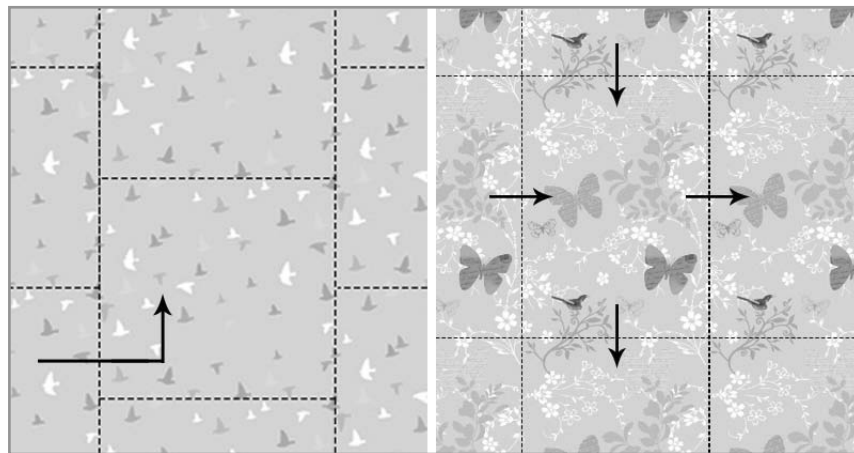
NOTES

The presentation should be complete in all aspects. For preparing the portfolio, one should follow the following steps-

- First, prepare the outline or rough sketch of the final product or item such as tapestry.
- Then make a design according to the type of article to be made. Prepare this design as an all over pattern or in repeatable form.
- After finalizing the design, finalize the colour scheme.
- Then make a complete design for the final product with colours on ivory sheet in 9" X 9" block
- Now enlarge a small portion of the design to clarify the motifs and colours, in a corner of this sheet in a block of 3" X 3".

Design repeats

Design repeating is used to obtain a motif that repeats without boundaries, without break or interruption, with a regular or irregular visual rhythm. The sides of the motif correspond perfectly when the motif is duplicated and juxtaposed. The motif can thus be printed on any surface size in an unlimited way.



There are several types of **textile motifs**: all-over patterns, semi-engineered patterns and engineered patterns.

The repeat is designated depending on the direction of the repeat:

- along the height of the fabric : **vertical repeat**
- along the width of the fabric : **horizontal repeat**

Types of repeats

There are many ways to repeat a motif, including:

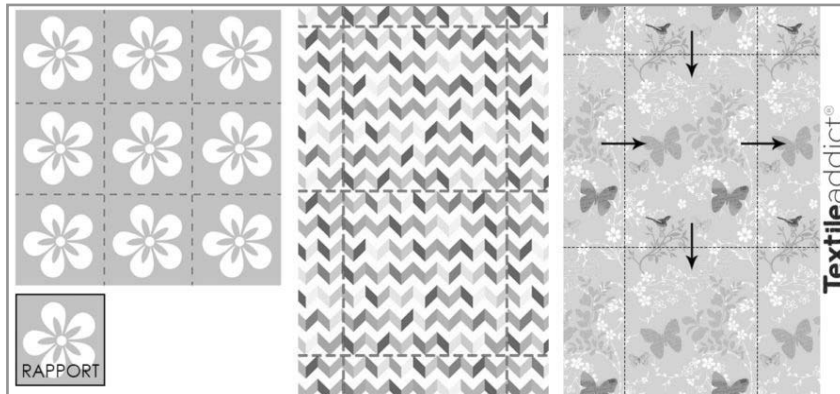
- block repeat (rectilinear repeats)
- offset repeat
 - brick/half brick (staggered horizontal repeat)
 - drop/half drop (staggered vertical repeat)

NOTES

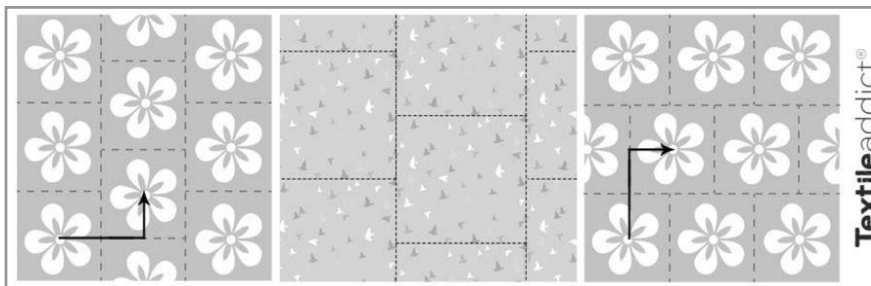
- mirror repeat
- diamond repeat

In practice, **repeats are often halfway offset**, which is equivalent to a staggered pattern repeat. The shift between each row equals half of a motif or figure, so that the created repeat is balanced.

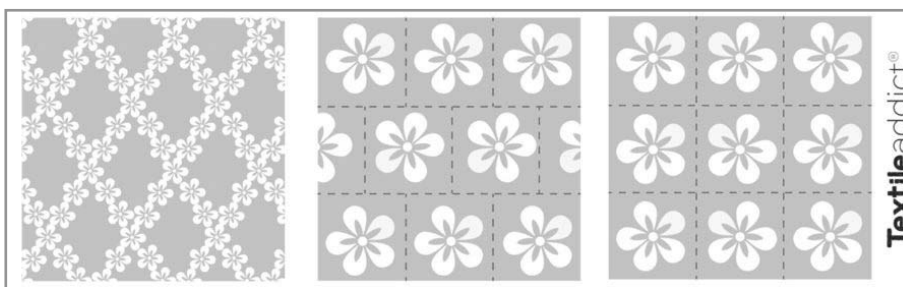
Block repeat:



Staggered repeat:



Diamond and Mirror repeats:



The size of the motif

In **traditional rotary-screen printing**, also called **cylinder printing** or **rotary printing**, the size of a pattern depends on the size of the cylinders that will be used to print the pattern. This is not true of digital printing, which does not limit pattern sizes as it does not use print cylinders.

NOTES



Vertical repeat

The **vertical repeat** refers to the basic unit of repetition in the direction of the **fabric height**. Its size is a function of the circumference of the cylinder used for printing. The repeat of the pattern is a sub-multiple of this measurement.

For example, for a cylinder with a 64 cm. circumference, (the most common size), the **vertical repeat height** of the motif can be:

- 64 cm
- 32 cm ($\frac{1}{2}$ of 64 cm)
- 33 cm ($\frac{1}{3}$ of 64 cm)
- 16 cm ($\frac{1}{4}$ of 64 cm)
- 12,8 cm ($\frac{1}{5}$ de 64 cm)
- 10,66 ($\frac{1}{6}$ de 138 cm)
- 8 cm ($\frac{1}{8}$ de 64 cm)
- etc

Horizontal repeat

The **horizontal repeat** designates the basic unit of the repeat in the direction of the **width of the fabric**. Its size depends on the length of the cylinder, generally usually 140 cm or 160 cm or even 280 cm (especially for upholstery).

The horizontal repeat is calculated by subtracting the selvedge* (fabric edges) from the length of the cylinder.

For example, on a 140 cm fabric base with 2 cm selvedges, the base horizontal repeat is 136 cm.

The **size of the horizontal repeat** is a sub-multiple of the width of the cylinder *minus* the selvedges, so, in this case, a sub-multiple of 136 cm.

The horizontal repeat (the width of the pattern) can be:

- 136 cm (this results in a semi-engineered repeat)
- 68 cm ($\frac{1}{2}$ of 138 cm)
- 45,33 cm ($\frac{1}{3}$ of 138 cm)
- 34 cm ($\frac{1}{4}$ of 138 cm)
- 27,2 cm ($\frac{1}{5}$ of 138 cm)
- 22,66 cm ($\frac{1}{6}$ of 138 cm)

NOTES

Horizontal/vertical repeat combinations

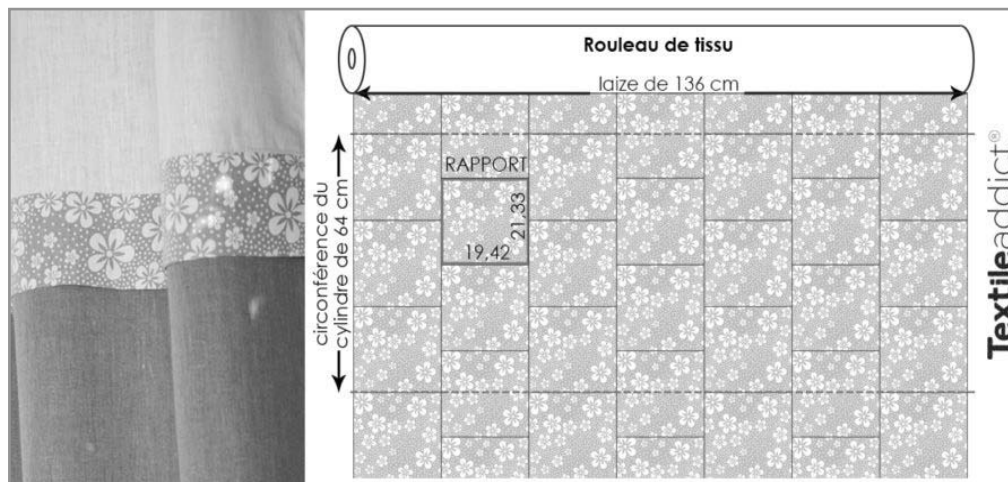
After calculating the horizontal and vertical repeats, you can obtain a **multitude of horizontal/vertical repeat combinations resulting in various pattern sizes:**

- 64 cm (height: vertical repeat) x 68 cm (width: horizontal repeat)
- 64 x 34
- 32 x 68
- 32 x 17
- etc.

With a horizontal/vertical repeat of 64 x 68, the pattern would repeat 2x across the width of the fabric, 4x for a 64 x 34, etc.

Horizontal/vertical repeats can be infinitely combined as long as the sub-multiples are respected.

In this example, the size of this all-over motif, which has a half-drop repeat, is 21.33 cm x 19.42 cm. The motif has a 21.33 vertical repeat (height) and a 19.42 horizontal repeat (width).



Semi-engineered repeat

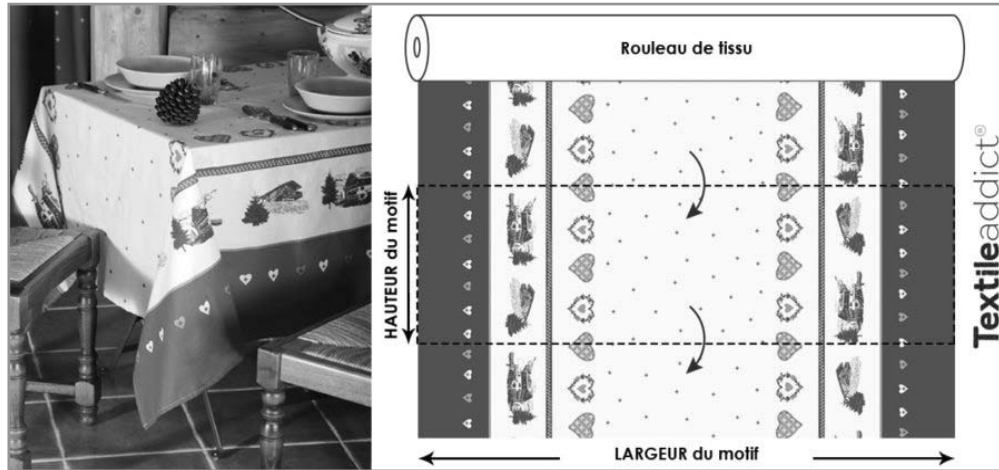
When a **pattern is placed along the entire fabric width **** with a height which corresponds to the circumference of the cylinder or is a sub-multiple of it, the design is called a **semi-engineered repeat**. The motif is said to be a **semi-engineered motif**.

For example for a cylinder with a circumference of 64 cm, we can obtain a motif that is

- 64 cm high x 136 cm wide (height = 1 circumference)
- 32 cm high x 136 cm wide (height = $\frac{1}{2}$ of the circumference)
- 21,33 cm high x 136 cm wide (height = $\frac{1}{3}$ of the circumference)
- 16 cm high x 136 cm wide (height = $\frac{1}{4}$ of the circumference)

Example of a semi-engineered motif for a tablecloth (the height of the motif corresponds to the vertical repeat of the pattern, the width corresponds to the horizontal repeat)

NOTES



Software

Pattern repeats are created using professional textile software such as those of the *Ned graphics suite (design & repeat)*, *AVA*, *Pointcarré* ...

It can also be done in Photoshop or Illustrator with some tools that I will present to you shortly.

To proceed to colouring the desired motif, the textile designer now proceeds to reducing the colours of the motif.

Common Pattern Repeats, Understanding the Basics

Computer software may make it easy to take a motif and tile it out, but that doesn't mean that a pattern has been designed in a pattern repeat. In fact, a skilled pattern designer can spot a design that has just been tiled out and not designed in a pattern repeat from a mile away. Ok, maybe not a mile, but definitely from a few steps behind someone on the sidewalk walking with a dress printed with a horrible repeat.

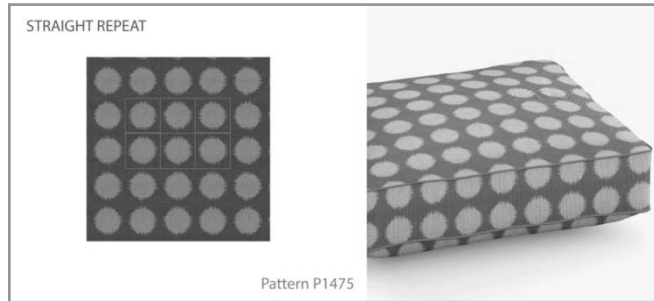
How can pattern designers spot it? It hurts our eyes. Well, and also it stripes. It's true, focus on the design as a whole, maybe squint your eyes a little, and you can spot the box around which the design had been made. Once you see those stripes, you can't see anything else.

Pattern designers such as the ones who design for us at Design Pool have been trained in the skills needed to create designs that are intended to be repeating. And not all repeats are the same. A skilled designer is designing for the type of repeat they want to use for the pattern they are designing. For example, an ogee design may require something different from plaid. Yes, there are more than one or two types of repeats.

So what are the different types of repeats? Here are seven of the most common pattern repeats.

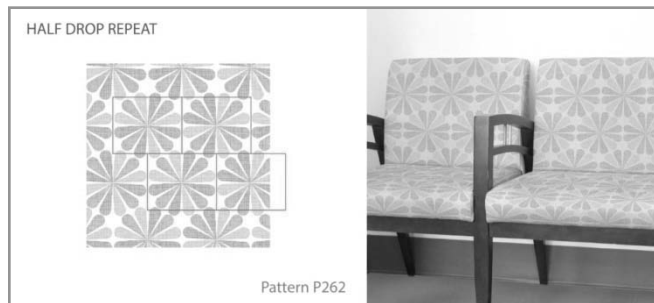
Straight Repeat

This is the most basic layout where the motif repeats out directly in a horizontal line to the left or right, or the original motif.



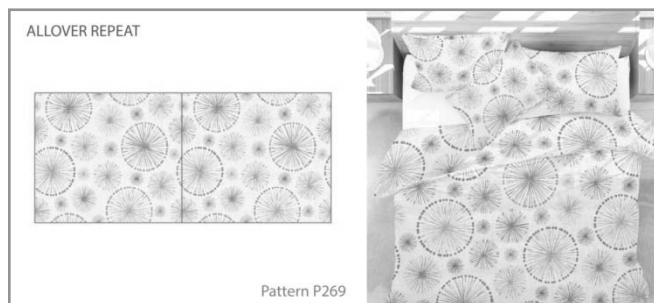
Half Drop

This layout occurs when a motif is repeated again, but halfway down vertically or horizontally from the original motif.



Allover Pattern

An allover pattern doesn't appear to have any direction to it. The motifs, design elements and colors are evenly distributed through the whole pattern. The repeat may be straight or half dropped, but it should appear seamless. These types of designs can be cut easily and used on furniture or garments without having to be engineered.



Directional Pattern

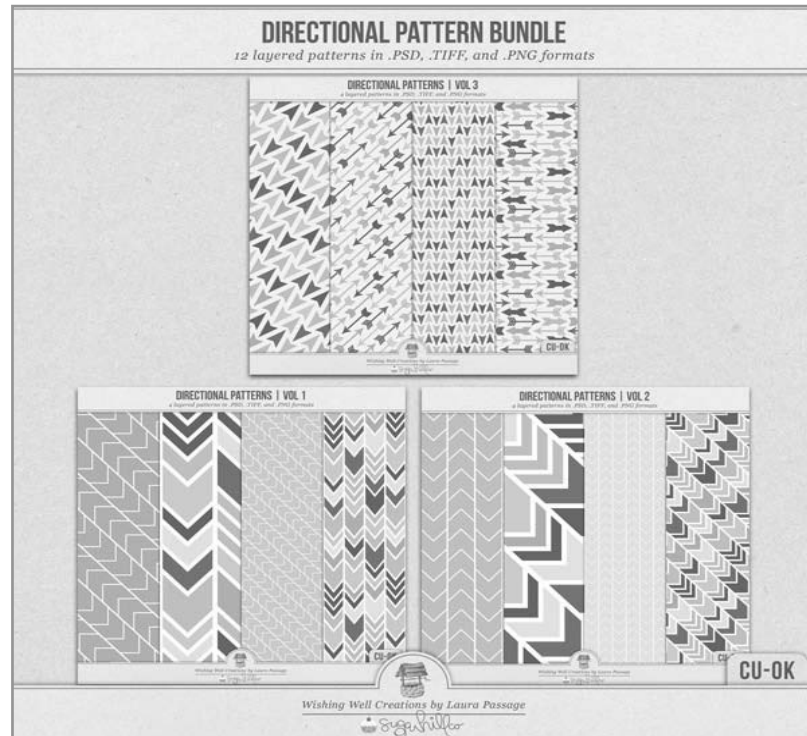
Directional patterns are patterns that have a definite direction to them. Motifs are organized with a particular direction, and the overall design has a definite top and a bottom, such as a landscape pattern or a damask. This type of design only looks

Placement of
Motifs using
Different Repeats

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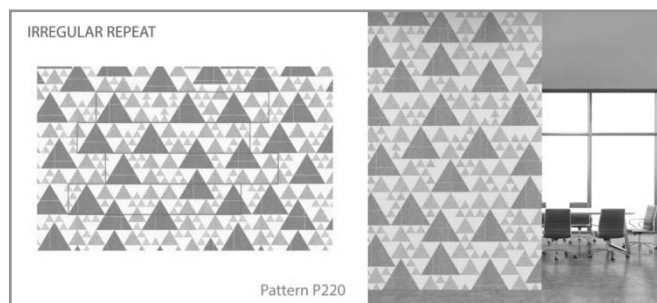
correct in one direction and items made from these patterns need to be engineered with that direction in mind.

NOTES



Irregular Repeat

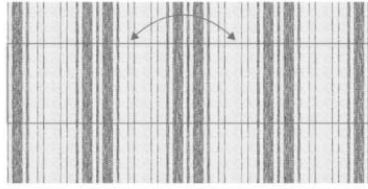
Sometimes referred to as a free drop, these types of repeats are similar in principle to a half drop but don't always repeat using the same fraction of a repeat size each time.



Mirrored Pattern

These types of designs have a point from which a design is mirrored, often seen in stripe or plaid patterns.

MIRRORED REPEAT



Pattern P1443

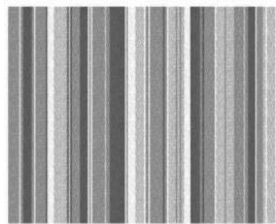


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Unbalanced Pattern

Unlike a mirrored pattern, an unbalanced pattern is a stripe layout that is not mirrored but rather irregular or seemingly random.

UNBALANCED REPEAT



Pattern P1309



Can you spot the different types of repeats and layouts in our designs? Quiz yourself while you scroll through our collection of licensable patterns. And don't blame us the next time you see a cheaply done repeat out in the wild. Consider yourself warned, your eyes will hurt!

4.5 STUDENT ACTIVITY

1. What is **Design Parameters**? Explain the **Types of Motifs Design**?
.....
.....
.....
2. What is **Motif Prints**? Explain the future and improve **Animal Prints and Placement of Design**?
.....
.....
.....

NOTES

4.6 MOTIFS USING DIFFERENT REPEATS: ALL OVER, HALF DROP, BRICK, OOGY PATTERN, DIAGONAL, BORDER AND CENTRAL LINE

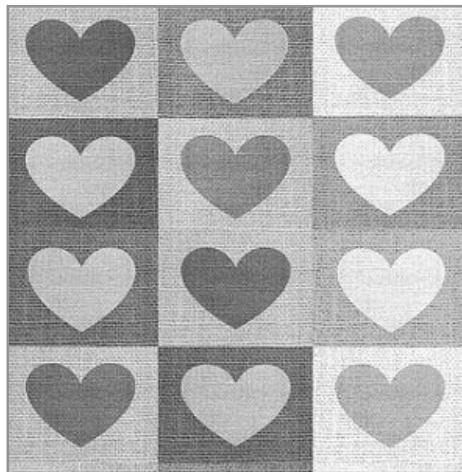
Allover layout (Overall)



Allover basically means covering the whole extent or surface. This is a layout with motifs distributed all over the fabric – Here the motifs are randomly placed with regular or irregular spacing between them, but usually very close to each other and facing different directions

Block Repeat

(Other names are Basic repeat, Full drop repeat, Square Repeat, Straight-across repeat, straight repeat)



In this type of repeat, the motifs are placed directly on a horizontal line to the left or right of the original motif. i.e. they are laid up and down and/or side to side. It is the simplest layout; when complete it looks as if the motifs are stacked in an imaginary grid

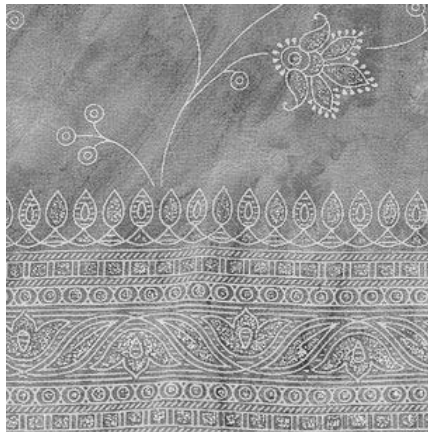
Tossed layout

(Other names random layout or irregular pattern layout)



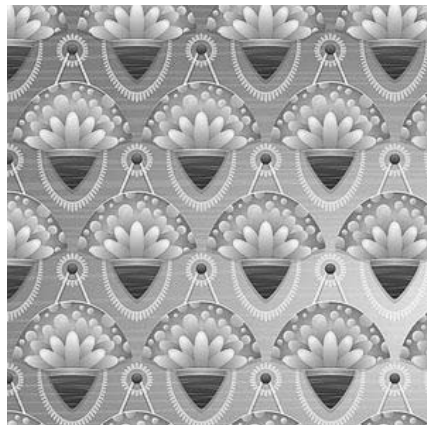
In this layout the motifs are scattered randomly; there is no symmetry or any formal arrangement to the motifs; the motifs are placed in a repeating fashion but without a specific plan or calculation.

Border layout



This is designed so that the motifs are placed on the edge of the fabric

Brick Layout



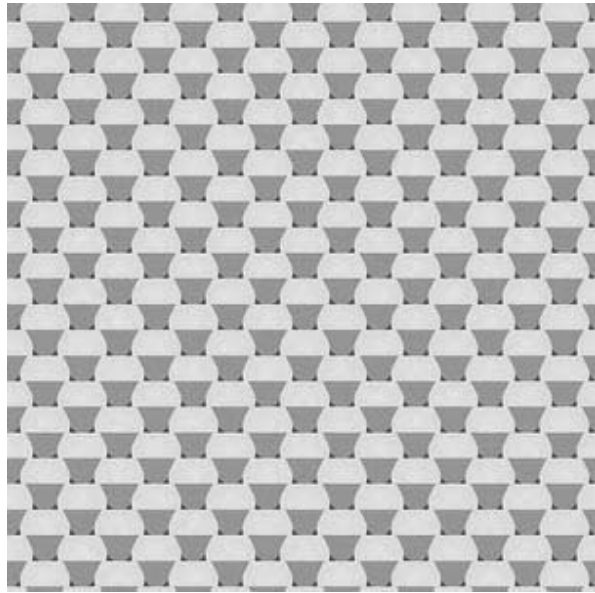
Placement of
Motifs using
Different Repeats

NOTES

This is a layout in which every second row is placed halfway to the front – it looks like the way bricks are laid out on the brick wall.

NOTES

Half drop repeat layout



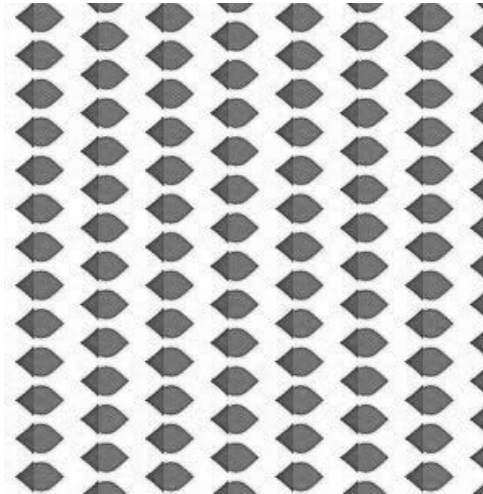
This is a very popular layout in fabric pattern design. In this, the motif is repeated vertically such that the motif on the next column is placed down half of the length of the motif above it ie motif is repeated halfway down the side in the vertical direction. The end result is a pattern that steps downwards each row. In a half drop layout, the repeat can be said to be staggered vertically or horizontally.

Diamond layout



In this motifs are placed in a pattern resembling a diamond shape

Striped layout

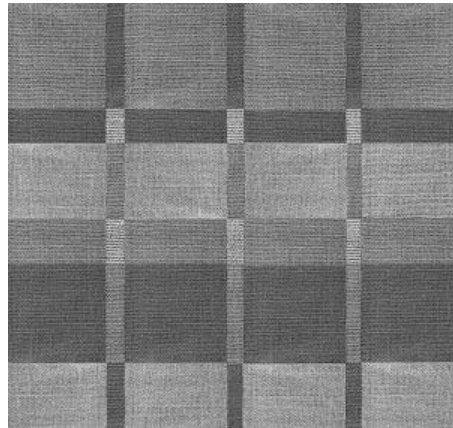


Placement of
Motifs using
Different Repeats

NOTES

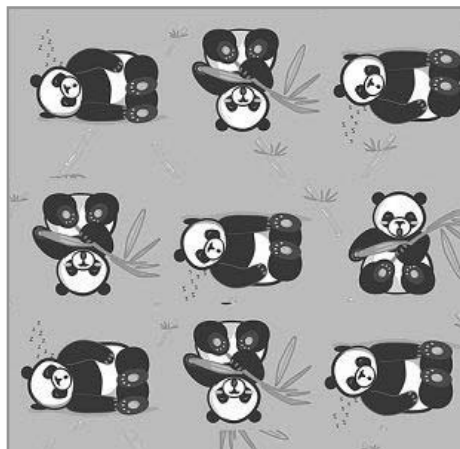
In this layout motifs are arranged in a line across the fabric; it could be vertical, horizontal or diagonal

Check layout



The motifs are placed so that the whole pattern looks like a plaid / check design

Turnover layout



This is a pattern in which the motifs are flipped horizontally or vertically

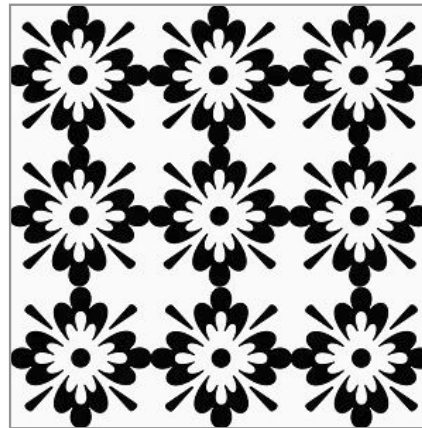
NOTES

Composite repeat



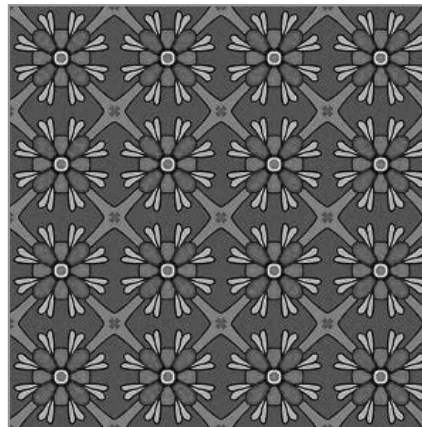
This is a repeat of patterns with two or more symmetrical motifs in one pattern – these motifs are mirrored or reversed or rotated to create new designs. A composite overlay refers to the pattern formed when two or more motifs are placed on top of each other. New motifs are created as a result of this combination or superimposition and the new colour which results from this create new designs.

Counterchange



This refers to patterns in which the motif and the background reverse in colour- a two colour symmetrical patterns.

Diaper



These are small scale intricate multi coloured patterns formed by interlocking geometric shapes

Placement of
Motifs using
Different Repeats

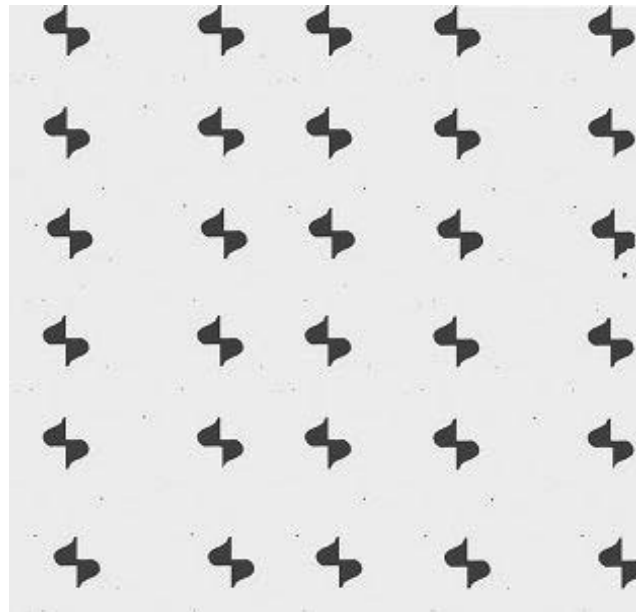
Fall-On



NOTES

This pattern has motifs/elements/threads which overlap – this results in a different colour than the original where they intersect. You can find this on tartan patterns

Foulard

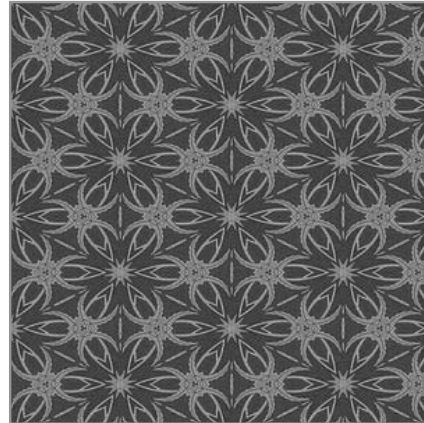


This is a layout with small motifs repeated all over the fabric in a block repeat layout.

Non-directional layout

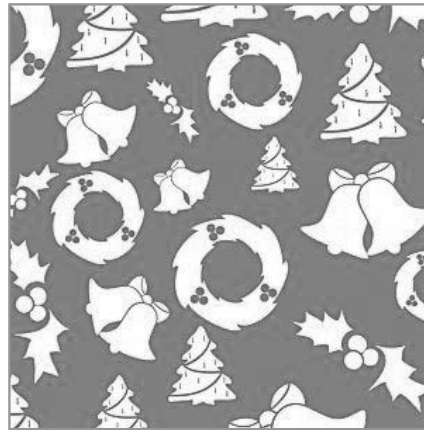
(Un-directional pattern)

NOTES



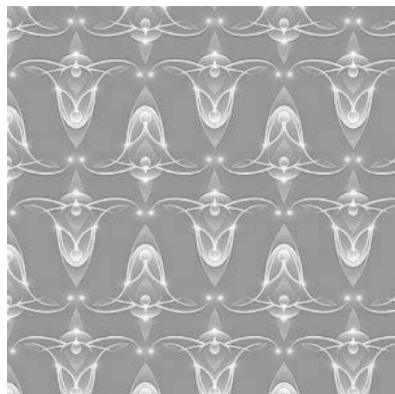
This is a layout which results in the pattern looking the same from any direction

One-directional



This is a layout in which the pattern has a distinct top and bottom – you would get a good view only from one direction. Same as One-way Layout; the motifs will all be facing one single direction

Two-directional Pattern

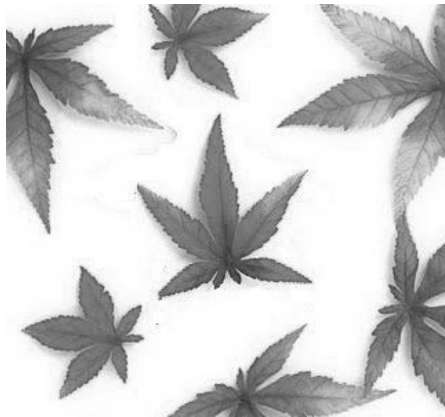


In this kind of layout you will find that the motifs face two different directions. Similar to Two-way Layout. In this half the motifs face an opposite direction, for example, up and down.

Placement of
Motifs using
Different Repeats

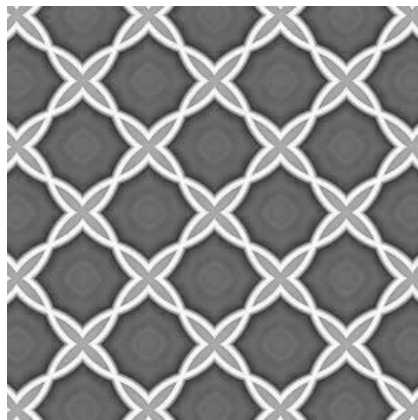
NOTES

Four-way Layout



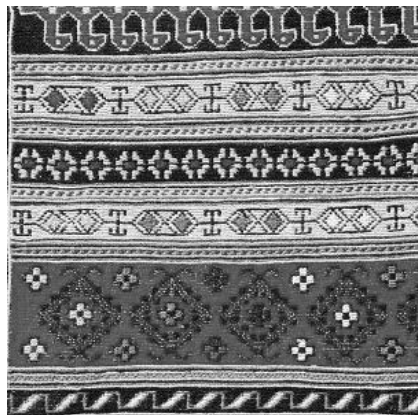
In this layout the motifs are placed so that they face all four directions

Positive-Negative layout



In this, the motif (positive) and the background (negative area) have identical shapes or at least they look like shapes not just a background and the motif

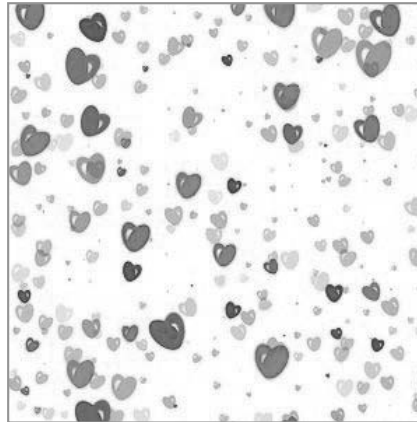
Freize pattern layout



A frieze pattern is an infinite strip with a repeating pattern. This pattern repeats in only one direction and is usually used as a border design

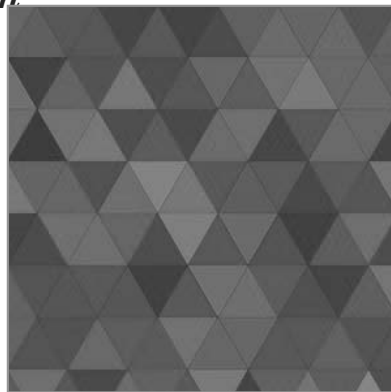
Gradation pattern

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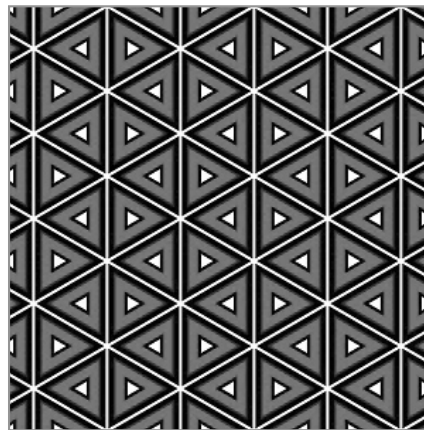
This pattern type has motifs of different sizes and/or shades of colours

Interlocking Pattern



In this layout the motifs are linked together or connected to each other in some way or the other

Packed



This is a layout in which the motifs are placed close together

Asymmetrical layout

Placement of
Motifs using
Different Repeats



NOTES

This is a layout in which you will not find any symmetry in the placement of motifs or the motifs themselves – no rhyme or reason why they are arranged the way they are but can be as equally captivating as any carefully planned motif placements

Placement print

This is not a repeat as such but this is a kind of placement of fabric pattern such that a strong motif or design is formed and it is usually the highlight of the clothing.



Fabric Designers do not consider these layouts in isolation – they are most of the time overlapped – a single pattern can have many of these elements in it.

How to perfect your repeat: full drop vs. half drop

When creating a pattern there are many steps involved; from the initial idea and sketch all the way to colouring and adjusting, but the most important step, in my opinion, is the very last step: the creation of the repeat.

For some reason this step is often rushed. Maybe we're just tired after working on the pattern for a long time, or maybe we're just impatient to get the pattern done and move to the next exciting project. Whatever it is, we should really keep in mind, when creating the repeat that this step can make or break the pattern and special care should be used when doing it. It is THAT important.

But with a little patience, we can learn how to make the perfect repeat or, at least, a good one!

Example of a square repeat

A good repeat is one that can't be immediately individuated or catches your eye. The repeat should be hidden within the motifs and textures allowing the eye to flow around the pattern unhindered.

Although there are various repeat styles, the two most popular ones are the square repeat and the half drop repeat. In the square repeat the motifs are repeated horizontally and vertically and form, as the name suggests, a square. However, just to confuse ourselves, a rectangle shape can also be included in this category; when the horizontal (or the vertical) repeat is longer than the other side the pattern creates a rectangle, but the repeat would still be very identifiable.

Example of a half drop repeat where the motifs drop half of the vertical repeat.

When you create a half drop repeat, the horizontal repeat is staggered so the motifs are shifted half the length of the repeat either up or down the vertical line. This creates an uneven number of pattern repeats across the fabric/wallpaper/paper width.

Although the example on the right is very simple, in general when using half drop repeats the repeat is better concealed and more difficult to spot, especially if there are different elements and textures.

If the repeat is not designed properly, the eye will be drawn to follow the horizontal or vertical lines formed by the motifs and the beauty of the motifs would be lost, no matter how wonderful they are.

If you want to train your eye to spot mistakes like this, you can take a look at patterns you see around you, or take a look at your own work for a self-critique.

Check if you can identify the repeat, can you tell if it's a half drop? Or a square repeat? Can you actually see the repeat and if so what motif makes that possible?

What is your favorite pattern repeat? Do you like a different type of repeat? Do you know of an unusual repeat type? Let me know your thoughts in the comments!

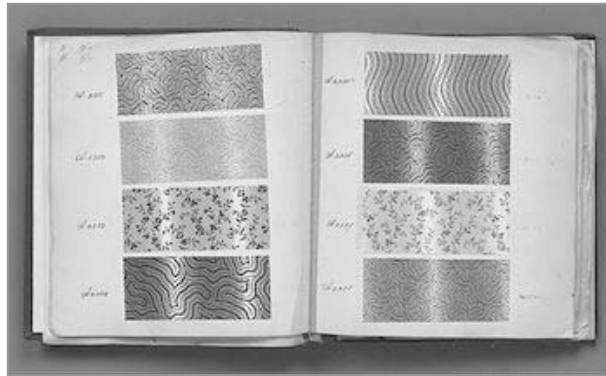
4.7 SUMMARY

Have you ever tried to sew an item or clothing or make a pair of drapes? Were you able to match fabric pieces so the pattern on them lined up without gaps? The point where an identical design begins again on a textile is called a **repeat**. Textile designers use repeats because they can enable large pieces of fabrics to be printed without breaks or awkward gaps in a pattern. The idea of repeats in textile designs has been around for a long time, and there's an endless variety of them. Why use repeats? The goal is to make a textile design look like it never ends. It can be an effective decorative strategy and can be done on almost any type of fabric. Today, with digital technology, the variety and complexity of repeats can be almost endless.

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And by the way, if you've ever tried to wallpaper a room and worked to make sure the pattern lined up, that's another example of a decorative material using repeats.

Placement of
Motifs using
Different Repeats

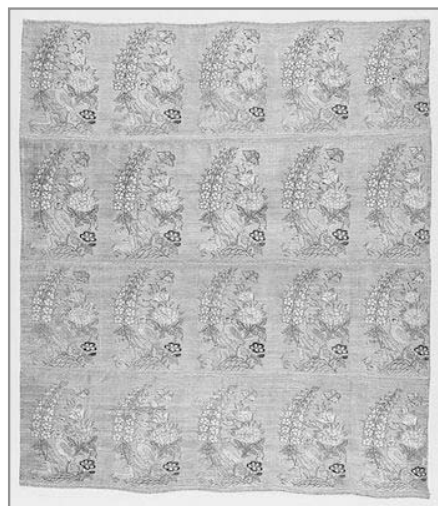


Fabric sample booklet with examples of different kinds of repeats, ca. 1850

Within the textile industry, there's another, more specific meaning for repeat. It's also the distance between identical figures in a repeat pattern, the number of inches before the whole pattern starts over. Small repeats like dots simply cover the fabric for a uniform appearance. Large repeats (for example, paisley prints on drapery fabric) may take up more inches before the pattern repeats. In fact, the standard for upholstery fabric is a 48-inch wide piece of fabric with designs that use a 24-inch horizontal repeat. That means the design starts over every 24 inches.

Different Types of Repeats: Repeat patterns may run horizontal or vertical. Designers have many ways of taking a single figure and covering a textile with it. Now let's look at a few of the most basic types of repeats. For this discussion, the word 'figure' means a single design element. It's this element that will be used to create the repeat.

A **block repeat** takes the figure and places it on a simple grid. The figure, always pointing in the same direction, appears over and over again in rows that line up vertically and horizontally.



Example of a block repeat on a 17th century silk

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A **half-brick repeat** takes each horizontal row and staggers it so that it doesn't line up with the rows above and below it. This repeat pattern gets its name from the resemblance to how bricks are laid to form a brick wall. The figure is placed over and over again along a horizontal row. Then, when the next row is placed, instead of forming a simple grid, the pattern is offset so the figures don't line up vertically.



Example of a half-brick repeat. Notice how each row of figures is offset from those above and below it.

Now, take that type of offset pattern and make it vertical instead of horizontal. A **half-drop repeat** places the figure over and over again in a vertical column. Then, in the next column, each figure is offset halfway from the ones in the neighboring column so the figures don't line up horizontally. Think of a brick wall placed on its side so that each row of bricks runs in long vertical columns. This kind of repeat, by the way, is one of the most popular in textile design.

4.8 GLOSSARY

- **Diaper:** A small-scale geometric pattern in a set layout of interlocking or closely aligned forms. Also a weave forming a diamond (diagonal) pattern.
- **Digital Pattern:** A pattern that consists of computer-generated elements, such as pixelated or fractal shapes. More broadly, can refer to digital pattern art. An example of a digital pattern would be a digital camouflage pattern.

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- **Digital Pattern Art:** A pattern created using a computer as an essential tool in the design process. Examples include digital patterns that exhibit typical computer-generated elements or shapes, such as pixelated or fractal shapes; patterns that would be difficult or impossible to create without a computer, such as algorithmic or procedural patterns; and patterns produced using digital image manipulation techniques.
- **Directional Design:** A design in which motifs are oriented along one or several directions. Examples of directional design include one-way, two-way, and four-way layouts. Also a design that looks correct from only one direction. The opposite is a non-directional (undirectional) design.
- **District Check:** A check pattern that originates from uniforms identifying specific Scottish estates. Famous district check patterns include the Glen checks, the Shepherd, the Dupplin, the Benmore, and others.
- **Flannel:** Usually a 100% cotton fabric that has been brushed on one or both sides for softness. Typically used for shirts and sleepwear.
- **Flax:** The plant from which cellulosic linen fiber is obtained. Linen is used in apparel, accessories, draperies, upholstery, tablecloths, and towels.
- **Fleece:** Synthetic knit fabric that stretches across the grain. Suitable for vests, jackets and tops.
- **Foil:** A thin piece of material put under another material to add color or brilliance.
- **Foulard:** A lightweight twill-weave fabric, made from filament yarns like silk, acetate, polyester, with a small all-over print pattern on a solid background. The fabric is often used in men's ties.
- **Friezé:** A strong, durable, heavy-warp yarn pile fabric. The pile is made by the over-wire method to create a closed-loop pile.
- **One-directional:** A directional pattern that has a distinct top and bottom. Often used in floral, scenic and figurative designs.
- **One-way Layout:** A design in which all motifs are oriented the same way.
- **Optical Art:** An abstract artwork that creates the illusion of movement, vibrating effects, moire (moiré) patterns, an exaggerated sense of depth, or other visual effects.
- **Organic:** A design inspired by, based on, or composed of plants or a matter of animal origin. Contrast to geometric.
- **Overall:** A layout in which motifs are fairly close and evenly distributed as opposed to stripes, borders, plaids, and engineered designs. Another term is allover.
- **Packed:** A layout in which the motifs are placed close together.
- **Patchwork:** A pattern simulating a pieced-together effect of different design elements.

4.9 REVIEW QUESTIONS

NOTES

1. Discuss the Types of Motifs design.
2. What kind of Geometric motifs?
3. What is floral patterns design?
4. How To Know What Colors to Match Novelty prints?
5. What Are the Principles for Square repeat?
6. How to Match Clothes Using the Half-drop repeat.
7. What Is Brick repeat?
8. What are Random layouts?
9. Explain the Animal Prints.
10. What is meant by Placement of design?
11. What are Grids?
12. Discuss the Design repeats.
13. What is an all over design?
14. Explain the repeat for border.

5

ENLARGEMENT AND REDUCTION OF MOTIFS

STRUCTURE

- 5.1 Learning Objective
- 5.2 Introduction
- 5.3 Process of Enlargement and Reduction of Motifs Design
- 5.4 Student Activity
- 5.5 Motifs According to the Need of Design
- 5.6 Summary
- 5.7 Glossary
- 5.8 Review Questions

5.1 LEARNING OBJECTIVE

After studying this unit you should be able to:

- Explain the meaning and definition of Design Parameters.
- Describe the Different Types of Motif Prints.
- Explain the meaning and significance of Placement of Design.
- Define Process of Reduction of Motifs Design.
- Explain the procedure of Different Methods of Motif Placement.
- Define Process of Enlargement of Motifs Design.

5.2 INTRODUCTION

Enlargement and reduction represent two of the very basic designing treatments given to a motif or a design as a whole. Textile designers make use of these techniques quite often, particularly when designing prints, for example, for screen printing or block printing.

Most home printers today can also make photocopies. This is a great tool for minimal scaling options. Use the scaling formula above to determine the percentage to which you will need to set your printer/copier. This works as long as the finished image size will fit on the printer paper.

NOTES

Enlargement and reduction represent two of the very basic designing treatments given to a motif or a design as a whole. Textile designers make use of these techniques quite often, particularly when designing prints, for example, for screen printing or block printing.

The size of a design motif is of significant importance in textile designing. To ascertain the size of design to be placed on the fabric, a designer should be aware of the concept of enlargement and reduction before taking any designing project.

5.3 PROCESS OF ENLARGEMENT AND REDUCTION OF MOTIFS DESIGN

Epidiascope

An epidiascope is an instrument used generally for enlargement of design. The design to be enlarged is placed on the flat glass top of the instrument called the projection plate. The amount of enlargement is adjustable. The enlarged image is projected on the screen or on a white wall in front of the instrument.



Fig: An Epidiascope

An epidiascope helps in magnifying the design to very large sizes. Once the desired size is achieved, a sheet is placed on the screen and the outline of the design can be traced very easily. The epidiascopes are available in various capacities.

Photocopier

We are all well aware of the photocopier which is more popularly known as the xeroxing machine or the xerox machine. In fact Xerox is the name of the company which makes the photocopiers. It has been a pioneer in this field and earned a good name for itself so much so that a photocopy is called a xerox and is thus known by the name of the company itself. A Photocopier can also do enlargement and reduction, copying on both sides of the sheet of paper, and also copying in colour.

The photocopier has become a very essential designing tool. It has made the time-consuming task of manual enlargement and reduction much easier and quicker. Now, it just takes seconds to reduce the size of a design say from 10" X 8" to 5" X 4".

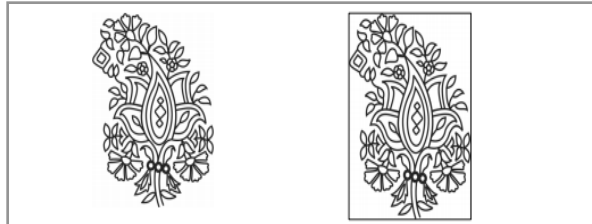
Technique of Manual Enlargement

A motif or a design can also be enlarged by the desired amount, say doubled in size or made four times; etc. by drawing it free hand. This is a possible method,

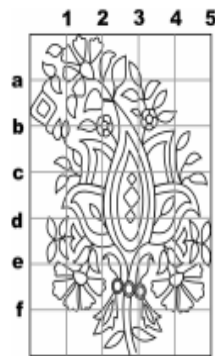
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but in this method the exact proportions of the design may not be maintained. To enlarge a design to a very specific size and with great accuracy, this method will not be very dependable. For exact and precise enlargement the following method is recommended.

- **Step 1:** Enclose the design to be enlarged in a box. The box should be made in such a way that the lines of the box touch the furthest points of the design. Thus you get a box exactly the size of the design to be enlarged.



- **Step 2:** Measure the length and breadth of the box. Now divide this with the number of parts into which the design is to be divided. For example: If the length of the design box measures 3.5 inches, and say we want 7 divisions of the design length then we divide 3.5 inches by 7. This gives us 0.5 inch. Thus mark points at a distance of 0.5 inch each on the left and right line of the design box. So we get 7 equal divisions. Name the points as a, b, c, etc. and so on.

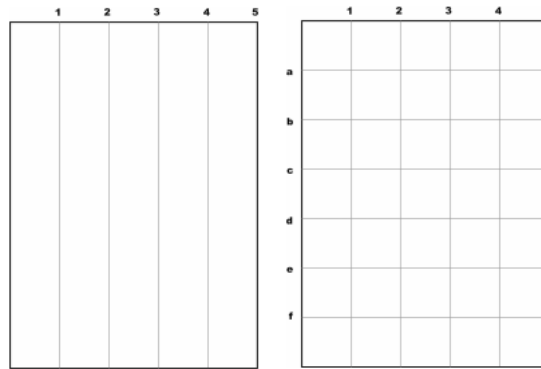


Divided Image 2

Similarly, measure the breadth of the design and divide it into a convenient number of divisions. Suppose the breadth is 2.5 inches, and we decide to divide into 5 parts then we divide 2.5 inches by 5 which gives us 0.5". So we mark points on the upper and lower sides of the box and number them as 1, 2, 3 etc. As far as possible, the divisor should give us a whole number so that marking the points becomes convenient.

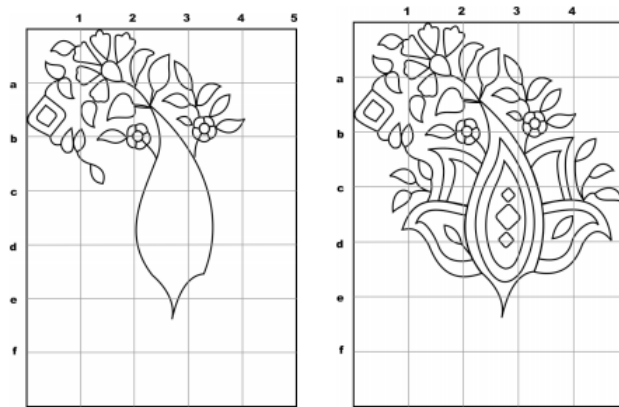
- **Step 3:** Now suppose we want to double the size of the design. To achieve this make a new box of the size which is double the size of the original box measured in Step 2. For example, the size of the box was 3.5"x 2.5". So now the box size will be 7" x 5". If the design had to be thrice its original size then the new box size would have been 10.5" X 7.5".

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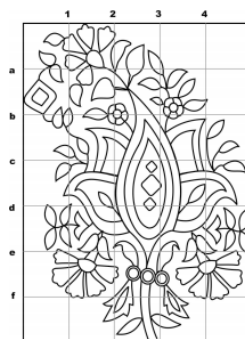
Enlarged grid

Now, once again we have to form the grid in the new big box. For this we have to maintain the same numbers of divisions as were made in the small box. We had 7 divisions, each of 0.5” in the small box. So we again make 7 divisions in the length of the big box, but now the size of each division would be double the size of each division in the original box. So we get each division as 1”. Similarly the size of each division breadth wise in the big box would be double the size of each division in the small box. Now number the points in the same fashion as in the small box.



Redraw design on th enlarged grid

- **Step 3:** Continue drawing the design as described and the enlarged design will be obtained which is exactly double the original design.



Enlarged desing

How to Make Some Motifs

Enlargement
and Reduction of
Motifs

NOTES



Designing a pattern for use on fabric requires you to consider a few things before you start drawing.

Step 1

First, consider your scale. If your motifs are too large, they will look awkward on the final product, and if they are too small, the details will be lost.

Aim for a scale that will let a good portion of your repeat be seen. If you plan to make large items like clothing, cushions, or kitchen towels, you can go with larger motifs. If you want to make accessories like wallets or hairbands, the scale needs to be smaller or the pattern will not be visible.



The safest bet is to make the design larger than you think you will need, since it is easy to reduce image size in Adobe Photoshop, but it isn't possible to increase it without loss of quality. But make sure that the level of detail and the thickness of your lines are suitable for your choice of scale.

Lines that looked great while you were drawing them could look spidery and thin at a radically smaller scale, or conversely they might appear thick and overpowering if the pattern is used at a large scale.

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Step 2

Start sketching your motifs. You can use as many or as few different flowers as you like, but my preference is always for a variety of blooms in different shapes and sizes, because this will later help you achieve a more dynamic repeat.

You can sketch out individual flowers and leaves and put them together later, but they will never fit together quite as well as when you sketch them out in a big bunch. The sketch can be very rough and loose because we will only use it as a guide.

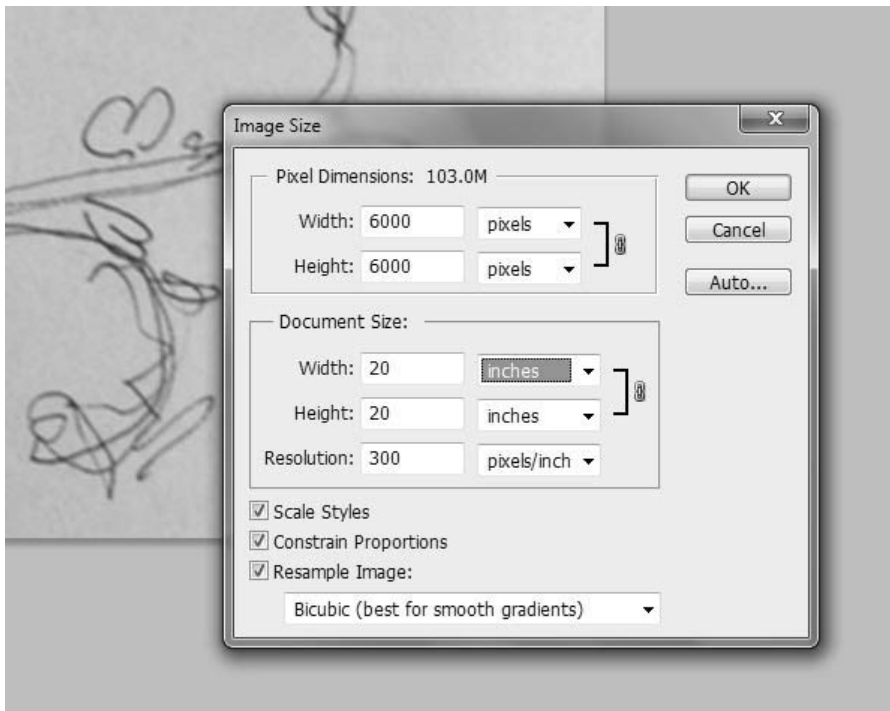


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Step 3

If you have sketched your flowers in the actual size you want to use in your final pattern, scan your sketch at 300 dpi, as this is the image quality needed for a clear fabric print. Then you can use that scan as your working document, and you don't need to resize the image at all before you start drawing the clean linework over the sketch.

If you sketched your motifs smaller than you'd like them to be in the final pattern, feel free to stretch your scan to any desired size by clicking Control-A > Control-T to access the Free Transform Tool controls, and then Shift-dragging one of the corners outwards until your sketch has grown sufficiently large. This will damage the image quality of your scan, but you shouldn't really care, as the sketch will only be used to guide your linework.



Step 4

Now you can select the Hard Round Brush Tool, or any other clean Photoshop brush of your choice, and start to draw out clean lines over your sketch.

As you draw, your line width should vary, to make your lines more dynamic. You don't have to close each shape neatly—you can let the line trail off or fade out for a more hand-drawn feel. If you plan on using a darker color for the lines, you can immediately draw shadows where petals meet or overlap, so the flowers have more depth.

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Step 5

Outline different motifs on different layers, so that you can easily manipulate them later, making additional copies and using Edit > Transform > Flip, Rotate, or Scale to create more variety in your design without drawing new motifs.



Step 6

You should now have a clean line version of your initial sketch that looks something like this.



How to Bring in Some Color

Once the main part of your outline is done, you can start thinking about colors for your floral pattern. If you intend to have the fabric screen printed commercially, limit the number of colors you use to as few as possible, since every additional color screen will increase the price of printing. If you intend to have the fabric printed digitally (e.g. at Spoon-flower), you can use as many colors as your inspiration desires.

Step 1

Lay in the base colors. You can do this by using the Magic Wand Tool to select the empty space within each motif, and choosing **Select > Modify > Expand** and expanding your entire selection by one or two pixels. This ensures that there will be no gap between your line and your color.

Move onto a New Layer, and then click **Alt-Delete** to Fill the selection with your foreground color, or **Control-Delete** to Fill the selection with your background color.

For motifs with lots of line details that cannot be neatly selected, paint in the base color with the Hard Round Brush Tool. Be sure to keep all the base colors on separate layers, in case you want to make changes later.

Enlargement
and Reduction of
Motifs

NOTES

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Step 2

The key to a cohesive color palette lies in finding more than one role for each color you use. Challenge yourself to find clever combinations that let you develop a rich colorway while keeping the number of individual colors low.

Start with two or three warm tones (pink, yellow, red, orange hues), two or three cool tones (blues, greens and violets), and a few neutrals (white, gray, beige, tan, brown). The lightest tone can be used on top of all others to create highlights.



Step 3

Darker tones can be layered on top of lighter ones to create shadows, like the light blue and gray blue in the example given below.



Step 4

A lighter tone can be used on top of a darker tone to give texture and detail, like the candy stripe pattern on the petals of the pink rose below.



Enlargement
and Reduction of
Motifs

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Step 5

Once you have achieved an attractive color palette, you can use the color of your linework to add more shadows between your motifs and layer some additional leaves in the back.

Feel free to keep adding more elements around the core of your design, but start leaving some gaps between them—if your pattern ends up too dense, it can look a bit claustrophobic on the fabric. A balanced mix of dense and spare parts, along with some open (empty) ground, usually makes for the best fashion floral.



How to Create a Flowing Repeat

Patterns can repeat in many different ways, but the main differentiation we'll make today is between set repeats and flowing repeats.

A set repeat is regular—your main motif repeats in straight or diagonal lines, with each four repetitions forming a square or a diamond shape. Set repeats are often found on prints intended for use in home decor: on wallpapers, curtains, or upholstery.

A flowing repeat is irregular—it attempts to disguise the fact that the motif is repeating at all, trying instead to look as if the elements of the motif were spilled casually across the fabric. It is the most popular type of pattern repeat for use in fashion fabrics and accessories.

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Step 1

Creating a flowing repeat requires a bit of intuition. There are no precise rules for it, because the whole point is to achieve a natural scattering of elements. So let's play with our motifs and see what we can come up with.

First, let's Group all our layers together, ignoring only the background layer. This is most easily done by selecting all the relevant layers (hold down the Shift key while selecting to select multiple layers at once) and then clicking Control-E to merge them all into one.

Then make a few copies of your new single layer using Control-J, and arrange them next to each other randomly.



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Step 2

Move the motifs around and rotate them to see if you can minimize the amount of overlap and large gaps of empty space between the flowers. Note which parts aren't fitting well together, so you can add a few more flowers and leaves to those areas, or delete some which seem to be blocking the pattern flow.

If you feel the design is too dense, move the elements further apart and add some smaller, simpler, and less detailed pieces between them.



Step 3

Go back to your main motif file and add elements to the empty places you marked during the repeat experiment.



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Step 4

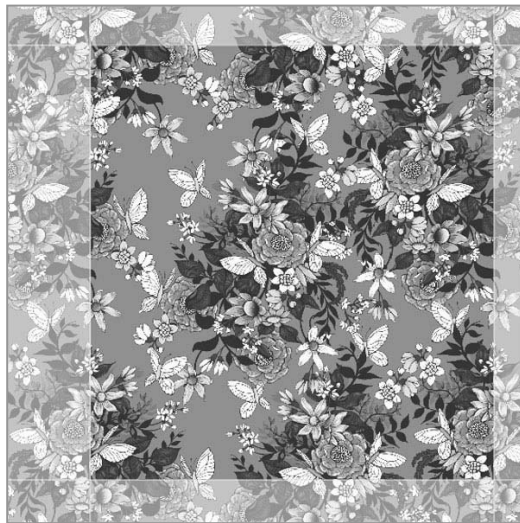
Paint the newly added elements in the same style as the rest of your motif, but feel free to switch up the colors to include more variety. Also if you are hiding flowers behind leaves, for instance, they might have more shadows and darker colors than similar flowers that aren't obstructed by anything.

When you feel you've added enough elements, Merge everything except the background layer once again, and let's try to pull together our final repeat.



Step 5

Make a few copies of your new giant bunch of flowers using Control-J, and start randomly moving and rotating them around until you find an angle at which they seem to fit together well. When you have a few large motifs that look good together, Merge them, and then make a copy of the new merged layer and move it down in a straight line by holding down the Shift key while you drag the layer. Place it where it seems to fit the best.



Merge both layers together again and make a new copy, this time Shift-dragging it to the right. Merge everything again. Find one particular point that you can see repeated four times in a regular rectangle, and mark it with your Guides—this is the corner of your final pattern tile.

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5.4 STUDENT ACTIVITY

1. What is Enlargement and reduction? Explain the Technique of Manual Enlargement?
.....
.....
.....
2. What is Motifs Design? Explain the future and improve An epidiascope is an instrument used generally for enlargement of design?
.....
.....
.....
5. Motifs According to the Need of Design

MOTIFS

Ornamentation of fabric with the help of prints and stripes inherent on fabric or with the help of superficial adherence has evolved over the ages. This generally forms the grooming up of the art of design. Different kinds of prints and patterns are used to evolve a design pattern. Following are the different kinds of motifs.



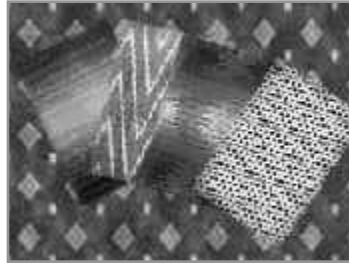
Ethnic

Prints such as the bandhej, batik, paisleys, chitons, French provincials and other country prints evolving from folklores and influenced with traditional customs are termed as ethnic prints.



Floral

This motif is also known as the natural motifs which are basically depiction of inspirations derived from the nature such as flowers, animals, landscapes and similar inspirations.



Geometrical

Uses of geometrical figures such as dots, stripes both horizontal and vertical with other geometrical motifs and there combinations are termed as geometrical patterns.



Abstract

Uses of abstract to depict the unknown have always caught the fancy of the people and are often used for design based ornamentation.



Stylized

It is an abstract floral pattern that has a stylized depiction of floras. A very common motif used for textile.



Enlargement
and Reduction of
Motifs

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Plaids and checks

Use of a combination of linear lines for creating equal sized checks and unequal sized checks known as plaids, has been a common motif for design development.

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Motif (textile arts)

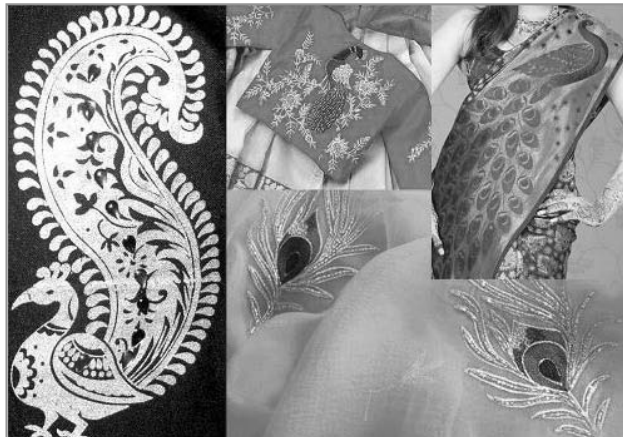
In the textile arts, a **motif** (pronunciation) is a smaller element in a much larger work. In knitting and crochet, motifs are made one at a time and joined together to create larger works such as afghan blankets or shawls. An example of a motif is the granny square. Motifs may be varied or rotated for contrast and variety, or to create new shapes, as with quilt blocks in quilts and quilting. Contrast with motif-less crazy quilting.

Motifs can be any size, but usually all the motifs in any given work are the same size. The patterns and stitches used in a motif may vary greatly, but there is almost always some unifying element, such as texture, stitch pattern, or colour, which gives the finished piece more aesthetic appeal. Motifs may commemorate events or convey information or political slogans. For example, the individual blocks of the AIDS Memorial Quilt, the possible Quilts of the Underground Railroad, and the “54-40 or Fight” quilt block.

MOTIFS USED IN INDIAN TEXTILES

A motif is the most basic unit from which a design is formed. It is generally developed from different combination of geometrical shapes. Motifs are repeated in different ways to create a pattern whereas patterns are repeated to create designs. Therefore a motif has a distinct identity of its own in a pattern or a design. Indian motifs has its own heritage value and are closely linked to natural, cultural, religious and socio-economic factors prevailing in Indian society. Most of the traditional motifs are often inspired from nature.

PEACOCK MOTIF - Peacock which is now the national bird of India is the symbol of Indian ethnicity, tradition and exquisiteness. It is often associated with rain and in southern part the peacock is considered a vahana or vehicle for lord Muruga. In Indian textiles this motif is printed, woven or embroidered with different colour combinations.



GOOSE OR HAMSA MOTIF

This motif represents the symbol of spirituality and vahana of Brahma, saraswathi. It is used in woven and embroidered textiles in southern India and known for its highly stylized intricate forms. We can see the motif usage in Kasuthi embroidery and Kalamkari prints etc.



LOTUS MOTIF

Lotus flower symbolizes prosperity, wealth and closely associated with goddess Sri Lakshmi. Most of the Indian textiles use Lotus as the main motif. It is seen in kanta, kasuti embroidery and woven textiles like ikat, paithani etc. In Hinduism it represents Sun and Creation, in Buddhism and Jainism it symbolizes perfection and purity.



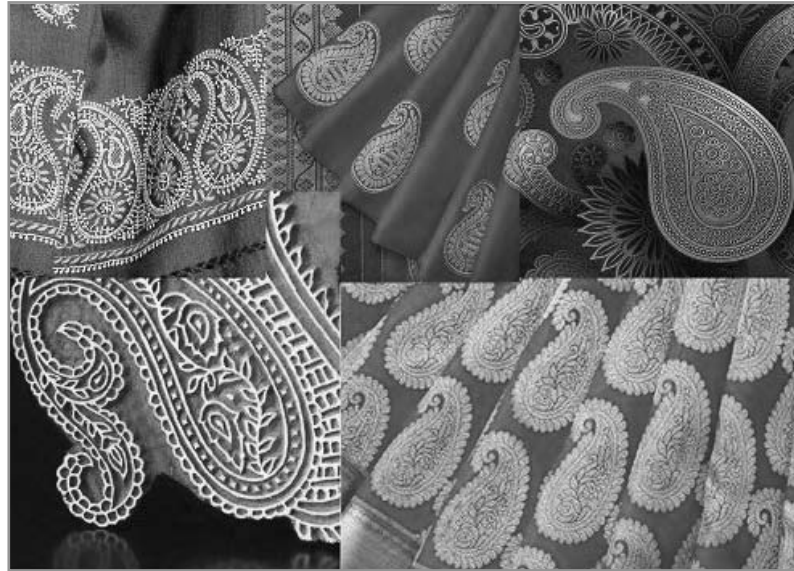
Enlargement
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PAISLEY OR MANGO MOTIF

This motif is used in wide range of Indian textiles. During British rule they carried Kashmir shawls to Paisley, a town in Scotland and there they adapted these motifs and it began to popularize as Paisley pattern. These patterns are exceptionally ornate, classic and royal. In south India these motifs are famous in kanchipuram silk sarees and are known as Manga butta.



TREE OF LIFE MOTIF

This motif illustrates Tree with Flowers, Fruits, Birds and Animals giving an idea that all life on Earth is related and depends on each other. Lot of colours is used in this motif and are popularly seen in embroidery and kalamkari designs.

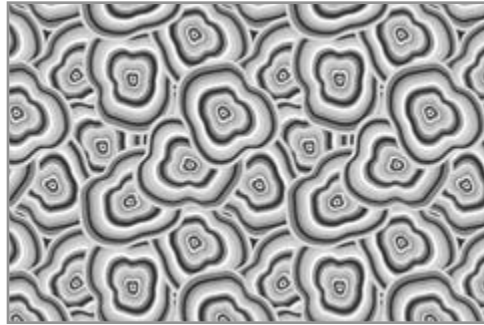


Types of fabric patterns

Within the categories of Geometric and Organic patterns are dozens of specific pattern types. Some patterns can cross lines and fall into more than one pattern type.

Below are the many types of fabric patterns.

Abstract pattern



Abstract patterns consist of unrecognizable forms (lines and shapes), a nonobjective motif that can't be described in any other way.

Adaptation pattern



An adaptation pattern is a pattern based on another design but significantly modified.

African pattern



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Also known as Ankara or Tribal print. African patterns feature vibrant, vivid colors related to African culture.

Airbrush pattern

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An airbrush pattern is a blurry, soft, light pattern looks like created with painters spray gun.

Allover pattern



Allover patterns feature close and evenly distributed motifs. Many pattern types use allover patterns.

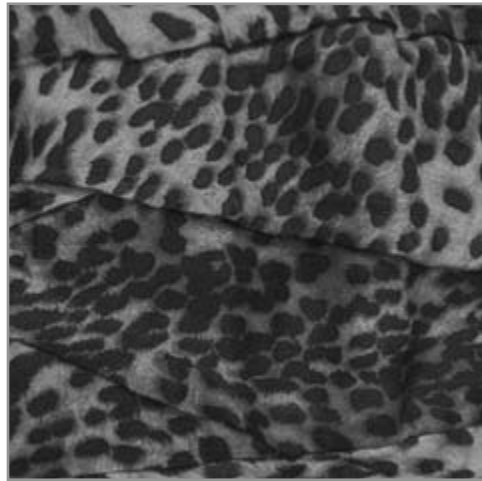
Animal pattern



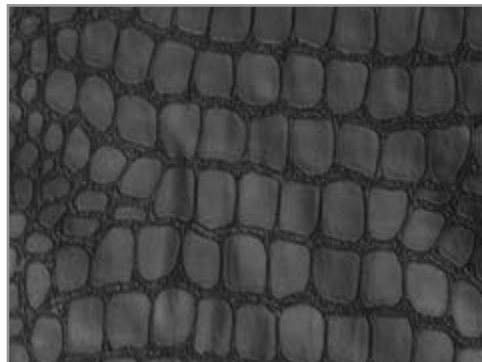
Animal patterns are patterns that look like animal skin or fur. They can be further broken down into categories based on animal the pattern attempts to mimic.

Enlargement
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Motifs

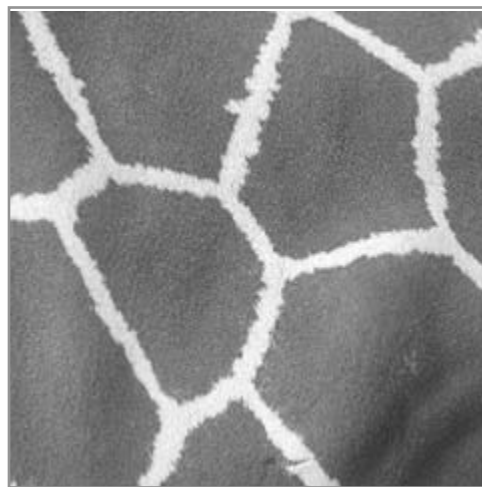
Cheetah pattern



Crocodile pattern



Giraffe pattern



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Jaguar pattern

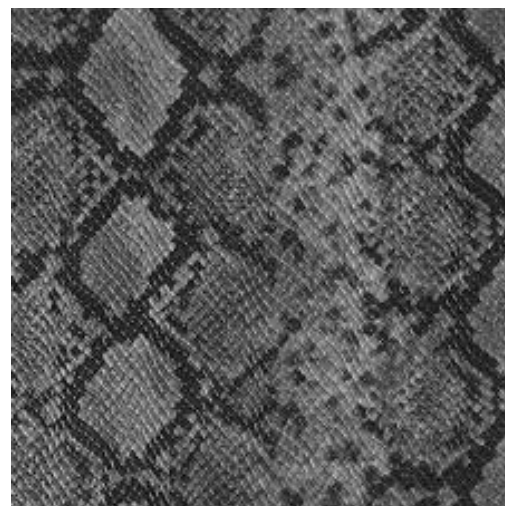
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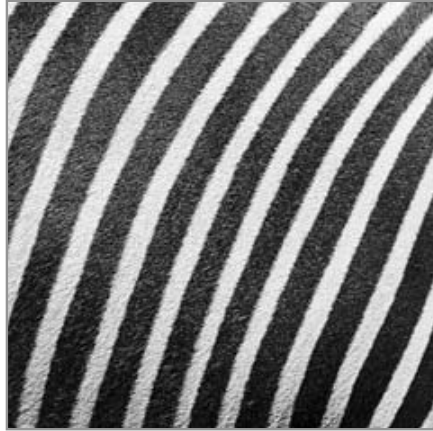
Leopard pattern



Snake pattern



Zebra pattern



Enlargement
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Motifs

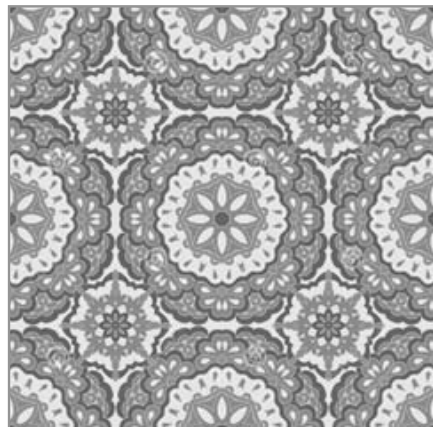
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Anthemion pattern



An anthemion pattern is a classical pattern that uses motifs that look like fan-shaped palm leaves. Anthemion patterns are common in Greek and Egyptian ancient art.

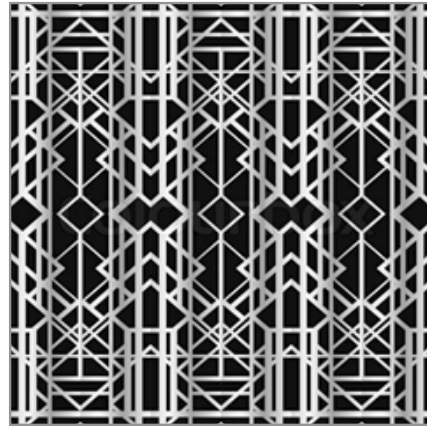
Arabesque pattern



An arabesque pattern is a floral or geometric pattern inspired by Islamic art.

Art Deco pattern

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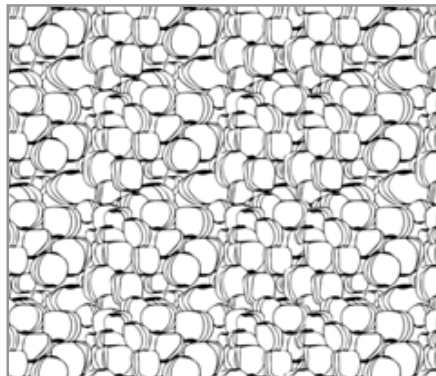
Art deco patterns used motifs typical of 1920's through 1930's. Art deco patterns use precise and clear lines, geometric shapes, and decorations.

Art Nouveau pattern



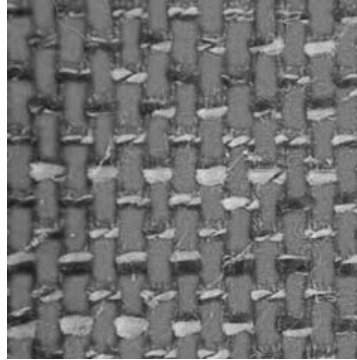
Art Nouveau patterns use dynamic, flowing curves suggesting floral motifs. They often present a surprising look of depth.

Asymmetrical pattern



An asymmetrical pattern is any type of pattern lacking any form of symmetry.

Basket weave pattern



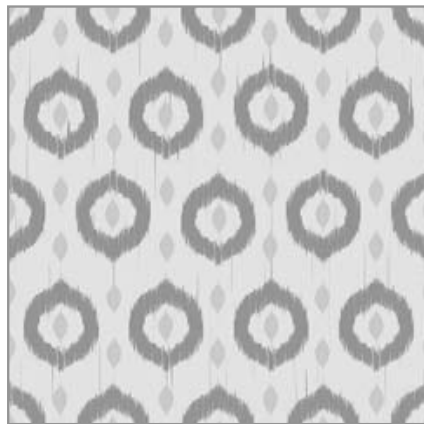
A basket weave pattern features a design that looks like a woven basket.

Batik pattern



A batik pattern uses complex colors in a design that looks like it was created through dyeing with dye placed over removable wax. Batik patterns often include natural motifs (floral, birds).

Bead and Reel pattern

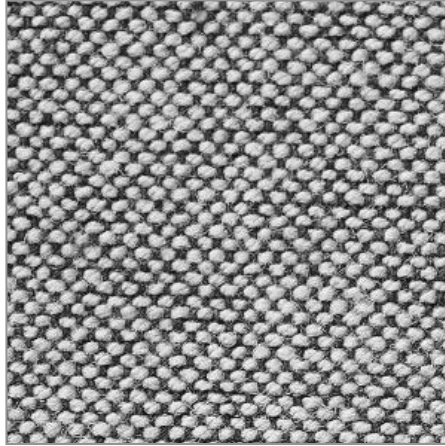


A bead and reel pattern uses oval and round shapes alternating with elongated oval or cylindrical shapes.

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Bird's eye pattern



Bird's eye patterns consist of arranged small diamond shapes (usually four) with dot or space in the center.

Bohemian pattern



Also called Boho prints or Hippie patterns, the bohemian pattern features bright colors and complex patterns reminiscent of the hippie movement of the 1960's.

Botanical pattern



The botanical pattern is based on realistic representation of plants and herbs.

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Boteh pattern



The boteh pattern features a teardrop-shape with a curved upper end. Paisley patterns use this shape with additional decoration and decorative elements.

5.6 SUMMARY

In *art*, a **motif** is a repeated idea, pattern, image, or theme. In the *textile arts*, a **motif** (also called a block or square) is a smaller element in a much larger work.



Fig. Repeat of leaf

Motifs can be any size, but usually all the motifs in any given work are the same size. The patterns and stitches used in a motif may vary greatly, but there is almost always some unifying element, such as texture, stitch pattern, or color, which gives the finished piece more aesthetic appeal.

A **pattern** is a type of theme of recurring events or objects, sometimes referred to as elements of a set. These elements repeat in a predictable manner. It can be a template or model which can be used to generate things or parts of a thing, especially if the things that are created have enough in common for the underlying pattern to be inferred, in which case the things are said to *exhibit* the unique pattern. The most basic patterns are based on repetition and periodicity.

In textiles, **print** is the application of color to the fabric in definite patterns or designs from an engraving. In properly printed fabrics the color is bonded with the fiber, so as to resist washing and friction. Textile printing is related to dyeing but, whereas in dyeing proper the whole fabric is uniformly covered with one color, in printing one or more colors are applied to it in certain parts only, and in sharply defined patterns.

Digital printing is one example from a growing list of new, more sustainable fabric-coloring technologies from both major suppliers and smaller chemical and

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biotech start-ups. The companies see business opportunity in tackling dyeing's wasteful water and energy practices and its reliance on toxic chemicals that can give rivers shocking hues and harm human health.

But the barriers facing those working to promote a more sustainable textile technology are quite high. The industry's sheer scale makes it hard to have an impact: Textiles are a \$3 trillion-per-year business that employs nearly 60 million workers worldwide, according to economic research firm Euler Hermes and FashionUnited, an industry information resource.

It's also a manufacturing industry under pressure. Price competition is fierce, and profits are shrinking thanks to volatile raw material costs and rising wages. Despite public commitments by apparel brands to become more sustainable, suppliers contacted by C&EN say their customers will not buy anything that could raise the cost of a finished garment by as little as a penny.

5.7 GLOSSARY

- **Aircraft:** This category includes everything in aviation from airplanes to helicopters to hot air balloons. These motifs bring the soaring sensation of flight to fabric.
- **Aliens:** Extraterrestrial creatures that range from the familiar green and googly-eyed stereotype to those that challenge the imagination. These otherworldly patterns are fun and fascinating!
- **Animals:** All living things with the exclusion of the plant world. Fauna-based designs bring a sense of vitality and nature to textiles.
- **Arabesque:** Historically rooted in both the Islamic world and the Greco-Roman tradition. This decorative patterning features swirling, curvilinear lines that imitate the form of interlaced plant tendrils.
- **Architecture:** Designs influenced by architectural elements such as columns, blueprints, ornamental motifs, or building materials. From Mosques to concrete jungles to palm huts, these structures bring a variety of textural elements and cultural looks to fabric.
- **Arrows:** These pointing indicators create a sense of rhythm and motion. While traditionally unidirectional, as a textile motif, arrows often bring multidirectional or even non directional feel.
- **Ditsies:** A ditsie (ditzzy) is an all-over design of small buds, circles, zigzags, and other elements that are simple, eccentrically silly, and may be funny.
- **Documentary Design:** A design based on documents or original (usually historical) material and reproduced closely to the original, often using a different technology. Compare to adaptation.
- **Faille:** A glossy, soft, finely-ribbed, silk-like woven fabric made from cotton, silk, or manufactured fibers.
- **Fat Quarter:** A cut piece of fabric which is made by cutting a half yard in half again vertically. The piece is therefore approximately 18" x 22". This allows for

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cutting larger blocks than a standard quarter yard which is 9" x 44".

- **Faux Fur:** Artificial fur made from synthetic material.
- **Felt:** A non-woven fabric made from wool, hair, or fur, and sometimes in combination with certain manufactured fibers, where the fibers are locked together in a process utilizing heat, moisture, and pressure to form a compact material. It is ideal for most craft projects.
- **Paisley:** A stylized teardrop-shaped design that originally appeared on Kashmir shawls mass-produced in Paisley, Scotland.
- **Palette:** The selected group of colors, shades, or patterns chosen to create a particular work of art.
- **Palmette:** A classical motif based on a stylized radiating, fan-shaped palm leaf commonly found in Greek, Egyptian, Assyrian, and other ancient art; also Anthemion.

5.8 REVIEW QUESTIONS

1. Discuss the Epidiascope.
2. What kind of Photocopier?
3. What are the various functions a photocopier can perform?
4. Why does a designer require a photocopier?

