

CHAPTER 5

MISCELLANEOUS WEAVES

5.1 Crape Weaves

- ✓ Crape weaves contains a useful variety of **simple weaves** and are also known as “**crape**” fabrics due to their crinkled (rough) surface.
- ✓ The size of the pabbles and their arrangement on the fabric surface determine the type of crape fabric.
- ✓ The crape effect can be **achieved** either by the use of
 - ✓ Crape yarn(highly twisted)
 - ✓ A creape weave
 - ✓ Special finishing i.e. embossing
- ✓ Used in combined with other elementary weaves, to produce a variety of various effects in elaborate jacquard designs for brocade and related fabrics

The crape weaves are characterized by the following features:

- a) They contain **no twill** or **other prominent** effect
- b) The cloth is covered by **minute spots** or seeds
- c) Highly **irregular surface-puckered** in appearance
- d) **High twist** yarns are used with **controlled shrinkage**

The four methods employed in the construction of crepe weaves:

- i. Construction of crape weave upon sateen base.
- ii. By reversing a small motif
- iii. Inserting of one weave over another

i. Construction of crape weave upon sateen base.

- ✓ The **base weave** is **sateen** upon which a **chosen weave** is **inserted** to get the irregular effect.
- ✓ Eg. Crape weave obtained by inserting of a **twill weave(3/1& 1/3)** upon the **8/3 sateen weave**.
- ✓ The sateen weave has been marked with a different notation in order to identify the base weave

A

					(X)		
		(X)					
							(X)
				(X)			
(X)							
						(X)	
			(X)				
(X)							

B

	X	X			(X)		X
		(X)		X		X	X
	X		X	X			(X)
X	X			(X)		X	
	(X)		X		X	X	
X		X	X			(X)	
X			(X)		X		X
(X)		X		X	X		

ii. By reversing a small motif

In this method a **small motif** can be chosen and Reversed at interval with in the design repeat to get an irregular effect

Motif

	X
X	X
	X

A

B

	X	X	X				X
		X		X		X	X
	X			X	X		X
X	X	X		X			
			X		X	X	X
X		X	X			X	
X	X		X		X		
X				X	X	X	

At A , is shown a simple motif and at B, is shown the crepe designs obtained by reversal of the motif at regular interval

iii. Inserting of one weave over another

- ✓ In this method **two different weaves** are chosen and are **inserted over one another** to get the desired crepe effect
- ✓ In order to produce an irregular effect, at least one of the weaves should be irregular and would be better if both are irregular.
- ✓ **Sateen and sateen derivatives** are generally used in this method.

					⊗	○	
		⊗	○				
○							⊗
				⊗	○		
	⊗	○					
						⊗	○
			⊗	○			
⊗	○						

A

		X				X	
			X				X
	X				X		
X				X			
		X				X	
			X				X
	X				X		
X				X			

B

		X			⊗	⊗	
		⊗	⊗				X
○	X				X		⊗
X				⊗	○		
	⊗	⊗				X	
			X			⊗	⊗
	X		⊗	○	X		
⊗	○			X			

C

A, is sateen derivative (**reinforced satin**) B, is a **4 end** sateen. In C, is the **crepe effect** obtained by the insertion of A over B.

Example for Construction of crape weave upon sateen base.

Case1: construct crepe weave from a sateen weave having Repeat [R]=6 & 1/5 twill using inserted over one another

			X		
					X
	X				
				X	
		X			
X					

Sateen with R=6

					X
				X	
			X		
		X			
	X				
X					

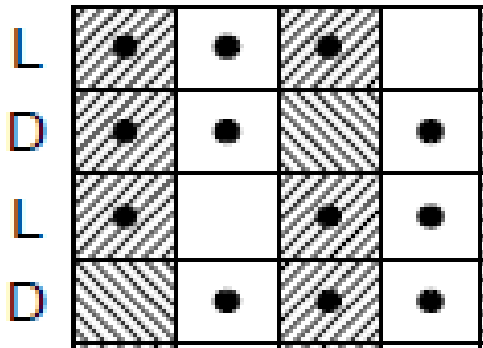
Twill 1/5

			X		X
				X	X
	X		X		
		X		X	
	X	X			
X					

Crepe weave

5.2 Color and Weave Effects

- ✓ In the design of a fabric, **luster** and **colour** are two important aspects that can demand attention from the textile designer as they have a **considerable influence** on the **aesthetic appeal** of the fabrics.
- ✓ **Lustre** arises from the **reflection of light** from the surface of a textile material.
- ✓ **Colour** is due to the **reflection of light** by the **irregularities within fibres** of a textile material.
- ✓ Various colored patterns can be occurred in fabric by combining yarns and weaves
- ✓ See the following figures



Some concepts

Color Sequence- The arrangement of color

Color repeat- the number of complete color sequence threads

Pattern repeat- the number of complete pattern threads and the least common multiple (LCM) of the weave repeat and the color repeat

❖ Arrangement of colored pattern construction

- ✓ The arrangements are
 - I. Weave
 - II. Weft color Sequence
 - III. Warp color Sequence
 - IV. Colored pattern

I	III
II	IV

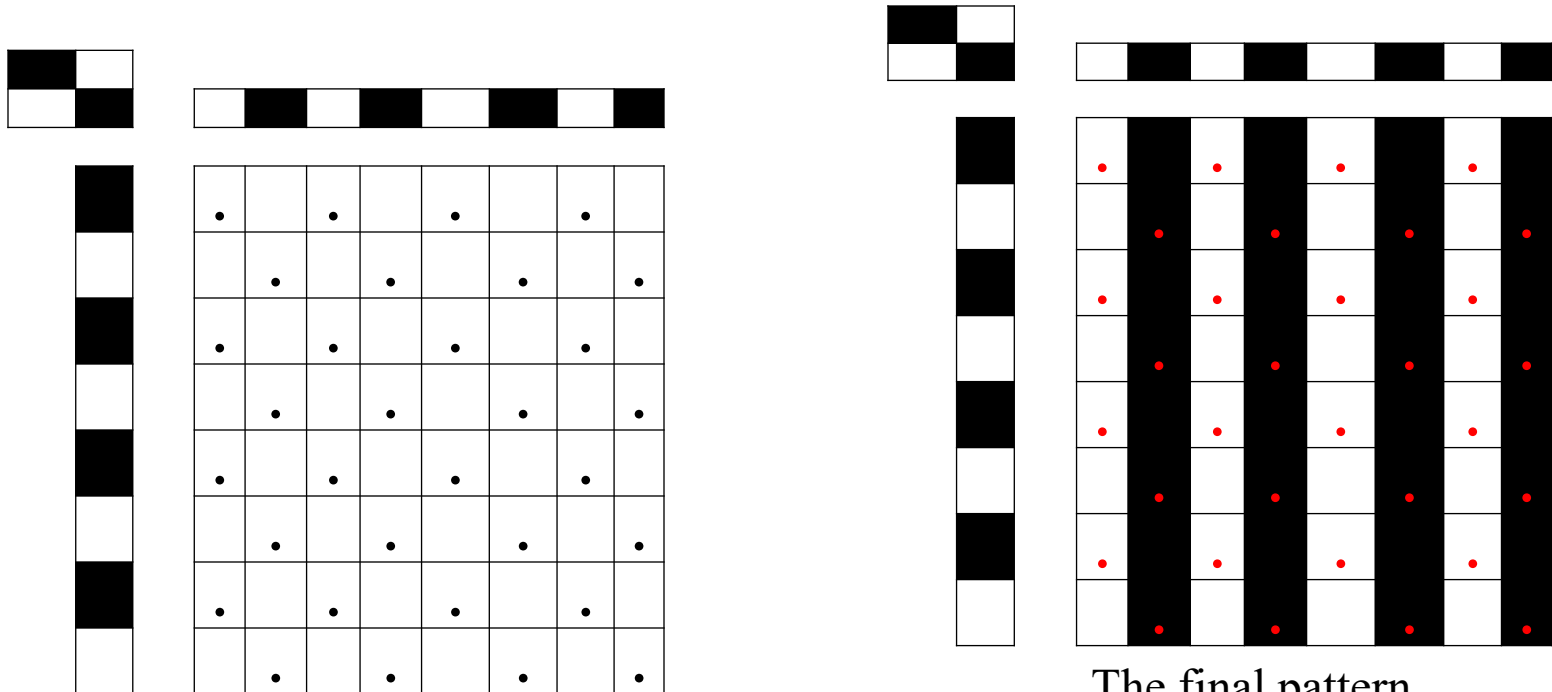
- ✓ During construction of pattern from a given weave and color repeats,
 - ▶ The dark colored warp and weft floats are indicated : 
 - ▶ Light colored warp and weft floats are left blank: 

Methods of Development

- ✓ The pattern are constructed as following steps
 1. Determine the **weave, warp color sequence** and weft color sequence , and calculate the pattern repeat.
 2. Draw the weave, **warp and weft color sequence** on their location, and fill the weave on color pattern location with **dot mark**. In order to see the pattern clearly, more repeats are selected.
 3. According to the warp color sequence , mark the warp floats” ■ “ of the dark colored ends. And according the weft color sequence mark the weft floats” ■ “ of the dark colored

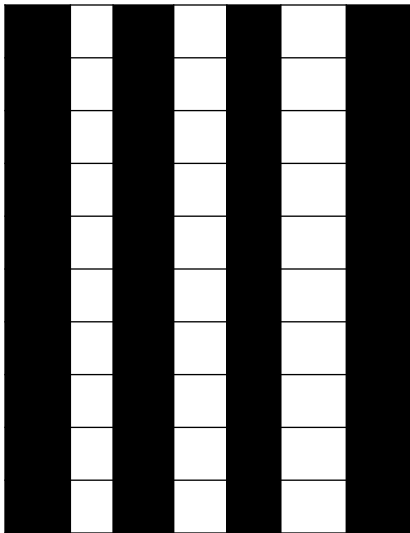
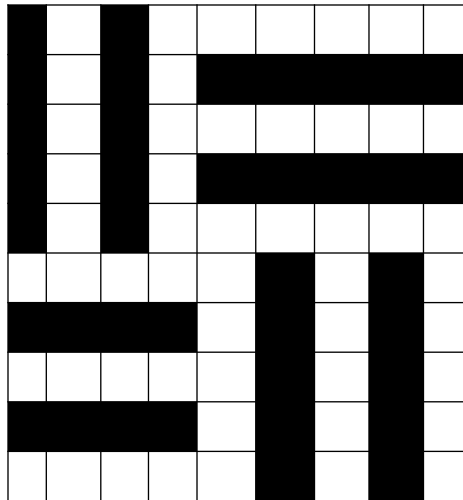
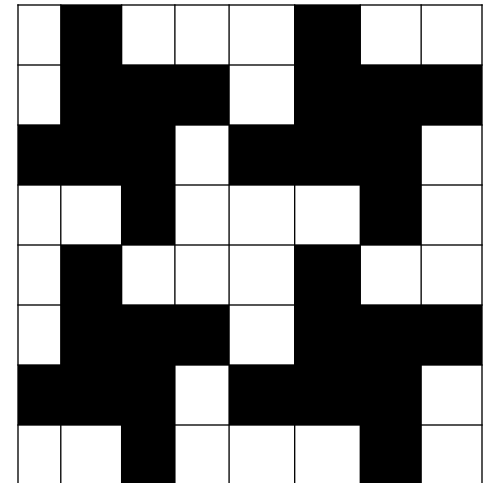
Example:

- 1) The weave is 1/1 plain: warp color sequence and weft color sequence are both 1A, 1B, (A- light color, B-Dark color)
- 2) Draw the Weave, warp and weft color sequence on their location, and fill the weave on the color pattern location with **dot mark**
- 3) According to the warp color sequence , mark the warp floats “■” of the dark colored ends
- 4) According to the weft color sequence , mark the weft floats “■” of the dark colored ends



Verities of Weaves and Color Effects

1. Horizontal and vertical hairline effects
2. Combined horizontal and vertical hairline effects
3. Figured color and weave effects



Horizontal hairline effects

Steps of development for Horizontal effects

- Indicate the base weave
- Indicate the sequence of colours for warping order
- Indicate the sequence of (■) colours for picking order
- Mark the warp lifts(■) of the darkk colour

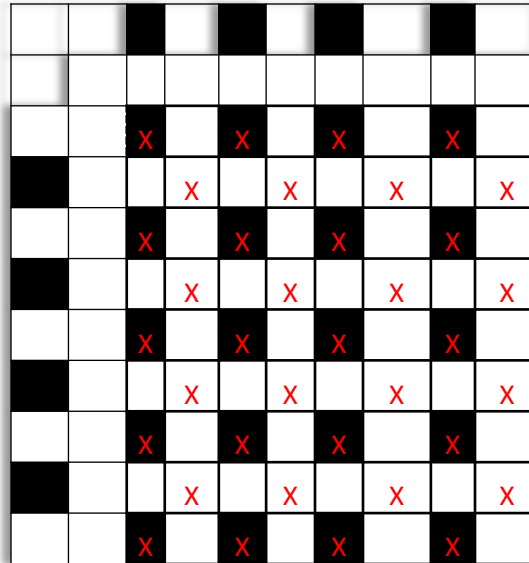
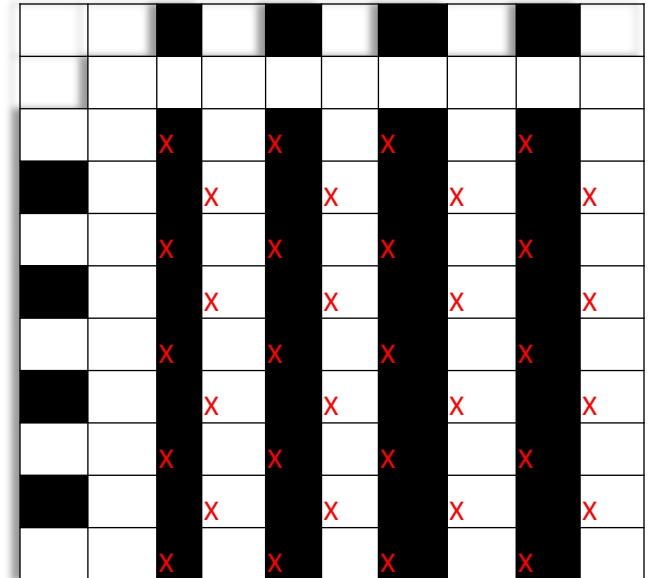
Warp and weft	■	1
	□	1
Repeat		2

		■		■		■		■	
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	

		■		■		■		■	
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	
			x		x		x		x
■		x		x		x		x	

Vertical hairline effects

Warp	☒	1
	☐	1
Repeat		2
Weft	☐	1
	☒	1
		2

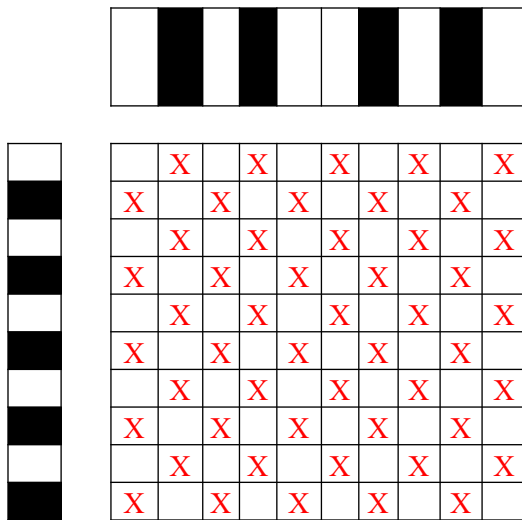
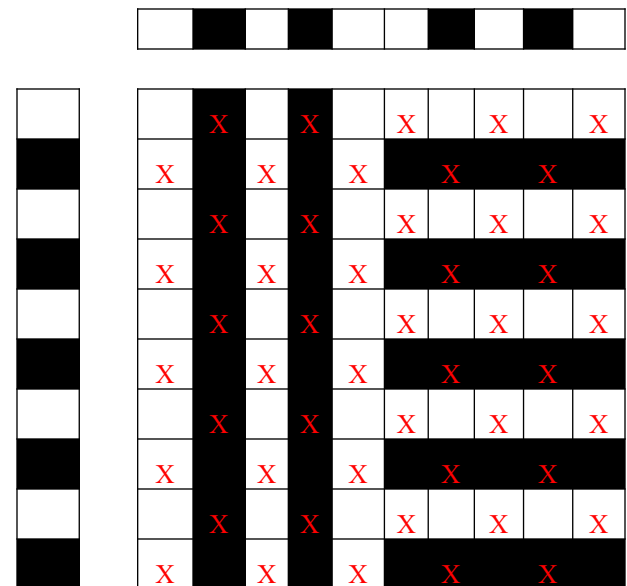


Combined horizontal and vertical hairline effects

1) Stripe effects

Color in warp and weft

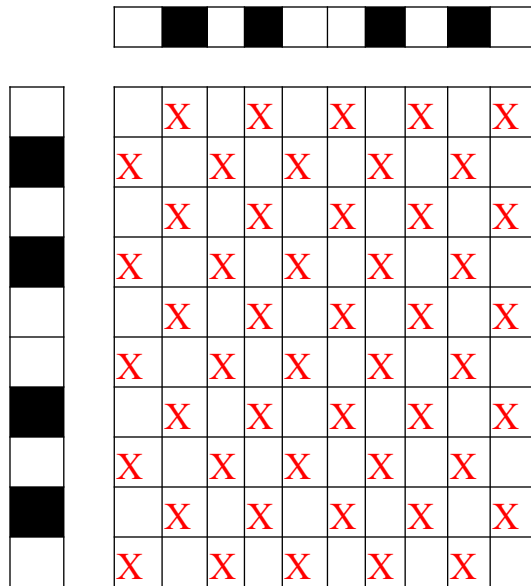
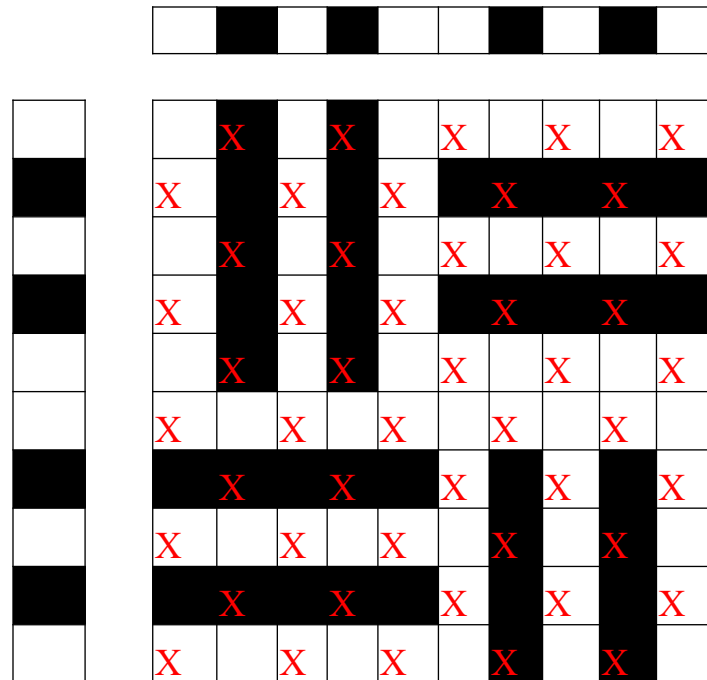
Warp	☐	1	1	2	1	1	=	6
	☒	1	1	1	1		=	4
Repeat		10						
Weft	☐	1						
	☒	1						
		2						



2) Check effect

Color in warp and weft

Warp and weft		1	1	2	1	1	=	6
		1	1	1	1		=	4
Repeat								10



Figured colour and weave effect

✓ Step effect

Warp and weft		1
		1
Repeat		2

