

# Color Secrets!

## Three Keys to Making Crisp, Clear Designs

Have you ever chosen colors that look great together in their skeins, but didn't look so good when woven? You're not alone. Many weavers have difficulty choosing hues for their handwoven cloth. A pleasing palette of yarns can easily blend into mud when woven, obscuring the handwoven pattern. Weavers frequently tell me, "I just don't 'get' color. Whenever I pick my own colors, they never look as good as they do in the skein or on the cone."

I feel your pain. When I started designing my own cloth, I didn't know anything about color. I knew I wanted to pick my own shades, but didn't know what colors would look good together in handwoven cloth. Many of my early projects were disasters because I used the wrong colors - sometimes I got mud, sometimes I got a blurry pattern, and sometimes the colors clashed horribly.

At some point, I decided I should study color. I studied many books about color theory, and did dozens of color exercises to get a better sense of how colors interact. I dyed 1000 shades of silk yarn and 1500 samples of cotton yarn to get a better understanding of color mixing. I wove yards and yards of color samples. And I spent considerable time analyzing handwoven fabric, both successful and awful woven designs. In the end, I worked out some methods for creating elegant, colorful work, such as my Kodachrome Jacket, which was featured on the cover of the September/October 2011 issue of *Handwoven*:



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I have distilled the results of my studies into a few easily-understood color principles, and am developing a series of courses for those who want to choose colors with confidence. To learn more about these classes, and get early notification upon release, please follow the link below.

[www.warpandweave.com/weaving-with-color/](http://www.warpandweave.com/weaving-with-color/)

And now, on to the three secrets of using color in handwoven fabric!

These principles will help you develop crisp, clean handwoven patterns. If you prefer more subtle patterns, simply reverse the directions to get whatever effect you prefer.

## Secret #1: Use a dark color with a light color.

Choosing one dark color and one light color is the most important factor in creating a crisp design. At a distance, the human eye mostly perceives differences in value (how light/dark a color is), and since most handwoven patterns are fairly small, they will tend to blend together when viewed unless there is a strong dark/light contrast between the colors you are using.

To test whether two colors will stand out clearly when mixed, twist them together, put the twist several feet away, and see if the colors stand out distinctly. Or - better yet - use a digital camera or smartphone to take a black-and-white photo of the two yarns twisted together. If they look crisply distinct in black and white, they will most likely show a clear pattern when woven together.

If you don't have the yarn yet, place photos of the cones next to each other, then take a photo in black and white to check the contrast between the yarns.

Here is a twist of two highly contrasting yarns, and a photo of them woven together:



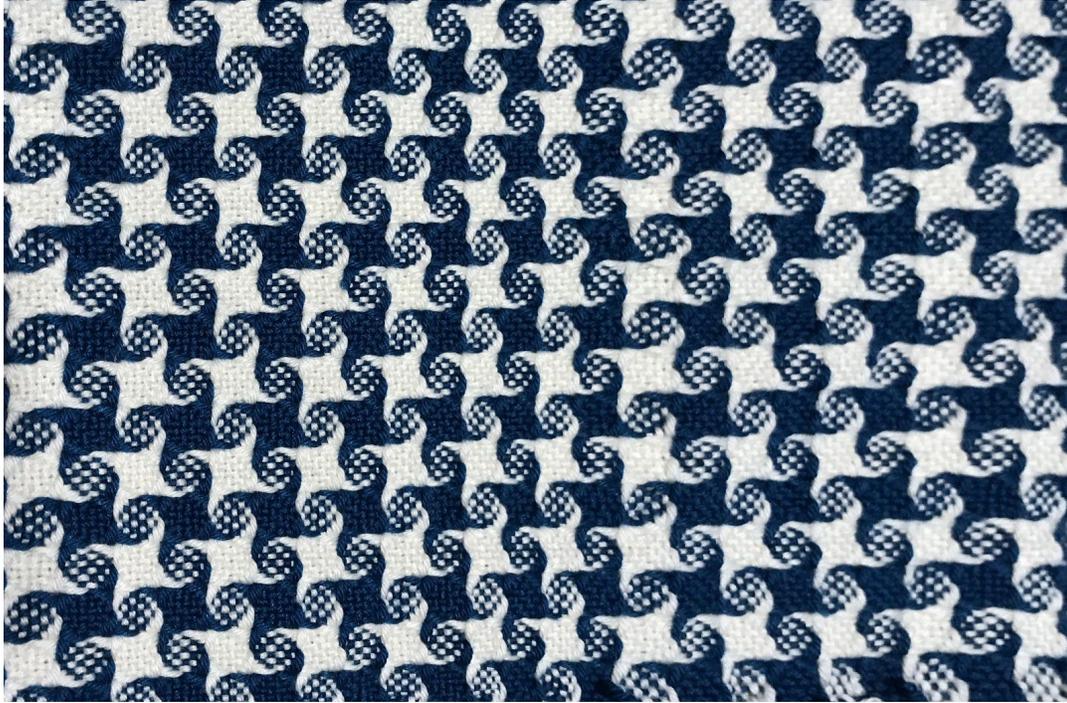
A yarn twist in white and dark blue



Photo of yarns in black and white, showing strong light/dark contrast



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Woven fabric

When woven together, the yarns create a crisp, clean pattern that is highly visible, even at a distance.

If your yarns do not contrast strongly in black and white, they will not contrast strongly in your woven pattern. This sample demonstrates how two yarns, even if they are distinct colors at first glance, can create muddy cloth.

Here are two yarns which look quite different when viewed in color:



Yarn twist of purple and blue yarns

In black and white, however, they are nearly indistinguishable::



And here is the resulting cloth:



Muted pattern when yarns are woven together

This pattern could be seen close up, but far away it would become nearly invisible.

Of course, bold is not always better. If you prefer a subtle pattern, using two colors that are very similar when viewed in black and white will produce a soft, muted appearance.

## Secret #2: Consider the viewing distance.

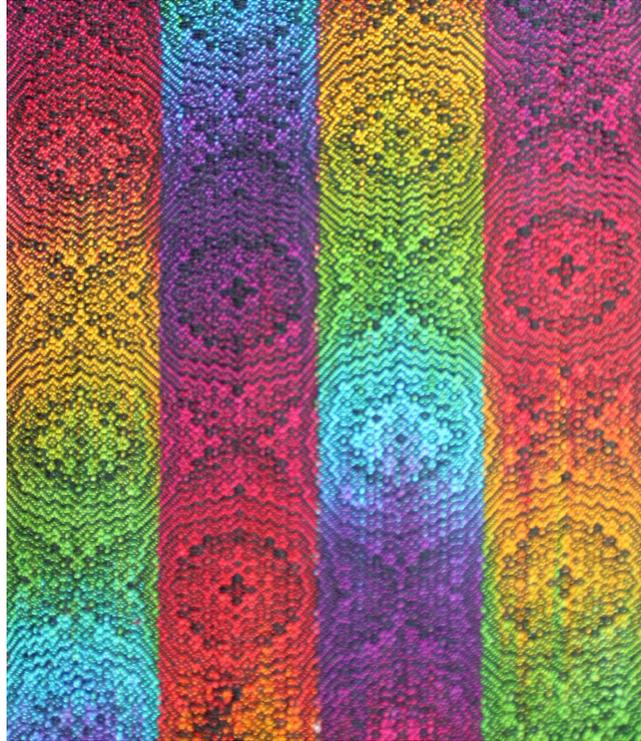
At a distance, small patterns disappear, as the eye blends them together. So you need to consider viewing distance when designing your cloth. A napkin is typically viewed close up, while the design for a wall hanging might need to be visible from across the room. Similarly, a handwoven garment for daily use might be seen from a few feet away, but a garment for a fashion show will need to show distinct pattern from twenty or thirty feet away.

If your blocks of color are too small to be perceived readily, they will tend to blur into a single color. This is known as *optical mixing*. Optical mixing is great if you want your colors to blend into a subtle pattern. But if you intend your pattern to stand out boldly, create larger patches of color.

Here is an example. This is the cloth for my Kodachrome Jacket, which was featured on the cover of the September/October 2011 issue of *Handwoven* magazine:



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Kodachrome Jacket - cloth closeup

Seen close up, the handwoven pattern appears quite distinct. But seen from further away, the woven pattern almost disappears, leaving only patches of color from the dyed warp:



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This choice of pattern and color was intentional. I wanted a garment that would offer something to the viewer at many viewing distances. So I used large blocks of color that would look good from far away, and added a smaller-scale pattern to reward the nearby viewer.

## Secret #3: Use blocks of color.

The last key to creating a bold, distinct pattern is to use blocks of color that can be perceived easily. The size of the blocks will depend on the intended viewing distance. Something meant to be viewed close up, such as a place mat, can use smaller blocks of color than, say, curtains, which are meant to be viewed from further away.

Here are a few ways to make large patches of color.

### Use a weave structure with longer floats.

As a float lengthens, it shows a bigger expanse of either warp or weft. This produces a more visible patch of color. Plain weave produces the most subtle pattern because the colors blend together.

This can be clearly seen in these two samples. Here is a piece of plain weave woven in very fine yarns, viewed at a distance of about six inches:

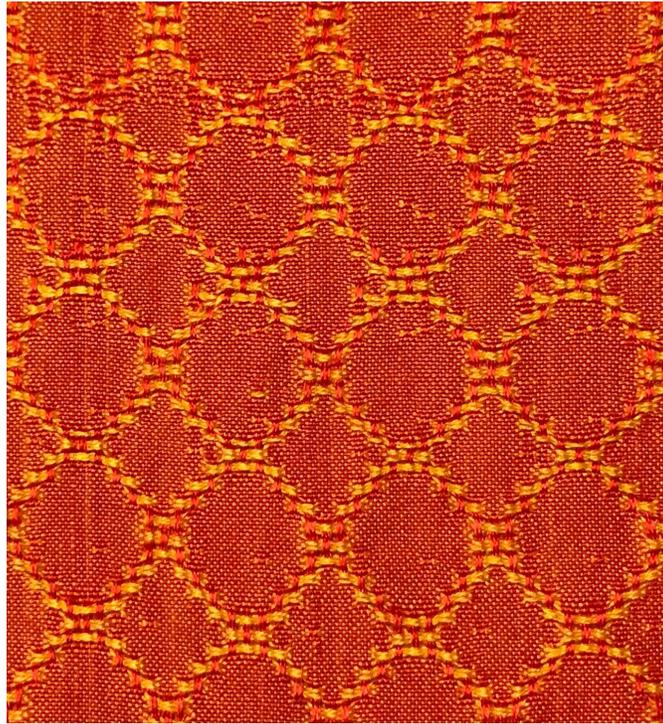


Plain weave in red and yellow 120/2 silk (30,000 ypp)

Because plain weave has very short floats, the red and yellow yarns blend almost completely into a single color.



However, adding short floats (5 threads, or approximately 1/20th of an inch) produces a highly visible design when viewed at the same distance:



Huck lace, red and yellow 120/2 silk

Of course, if you are working with larger yarns, the effects will be more pronounced, since the yarns will be larger.

## Use patches of contrasting weave structures

Patches that show mostly warp alternating with patches showing mainly weft allow you to create larger blocks of color. In this example, diversified plain weave is used to create mostly-solid blocks of black and white, resulting in a sharp design.



## Stripes

Stripes of different colors in warp and/or weft can create large and highly visible designs, as in the cloth for this scarf:



The stripes do not have to be vertical, of course; weft stripes, or painted warps, can create horizontal patterns. Stripes in both warp and weft can create strong color-and-weave patterns.

That's it! I hope you enjoyed reading this guide and that it has helped you feel more confident about working with color. There is no joy quite like the joy of designing and creating beautiful handwoven cloth with the colors you choose.

If you'd like to learn more about using color in handwoven cloth, sign up for my online classes! Click the link below to find out more.

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And good weaving to you!

Tien Chiu

