

False Satins and Satins

False satins are actually twills and they could have been discussed in month 2, but there is some confusion about true and false satins so I thought they should be explored in their own rights.

- A false satin is a 3/1 broken twill; by contrast a true satin requires a minimum of 5 shafts which results in a 4/1 structure. Does that extra thread make a difference? Not much, if at all. Both are unbalanced weaves, meaning that one side is predominantly weft-dominant, called sateen when weaving satins and the other warp-dominant, called satin. We tend to weave weft-dominant side up because it is easier to lift fewer shafts.



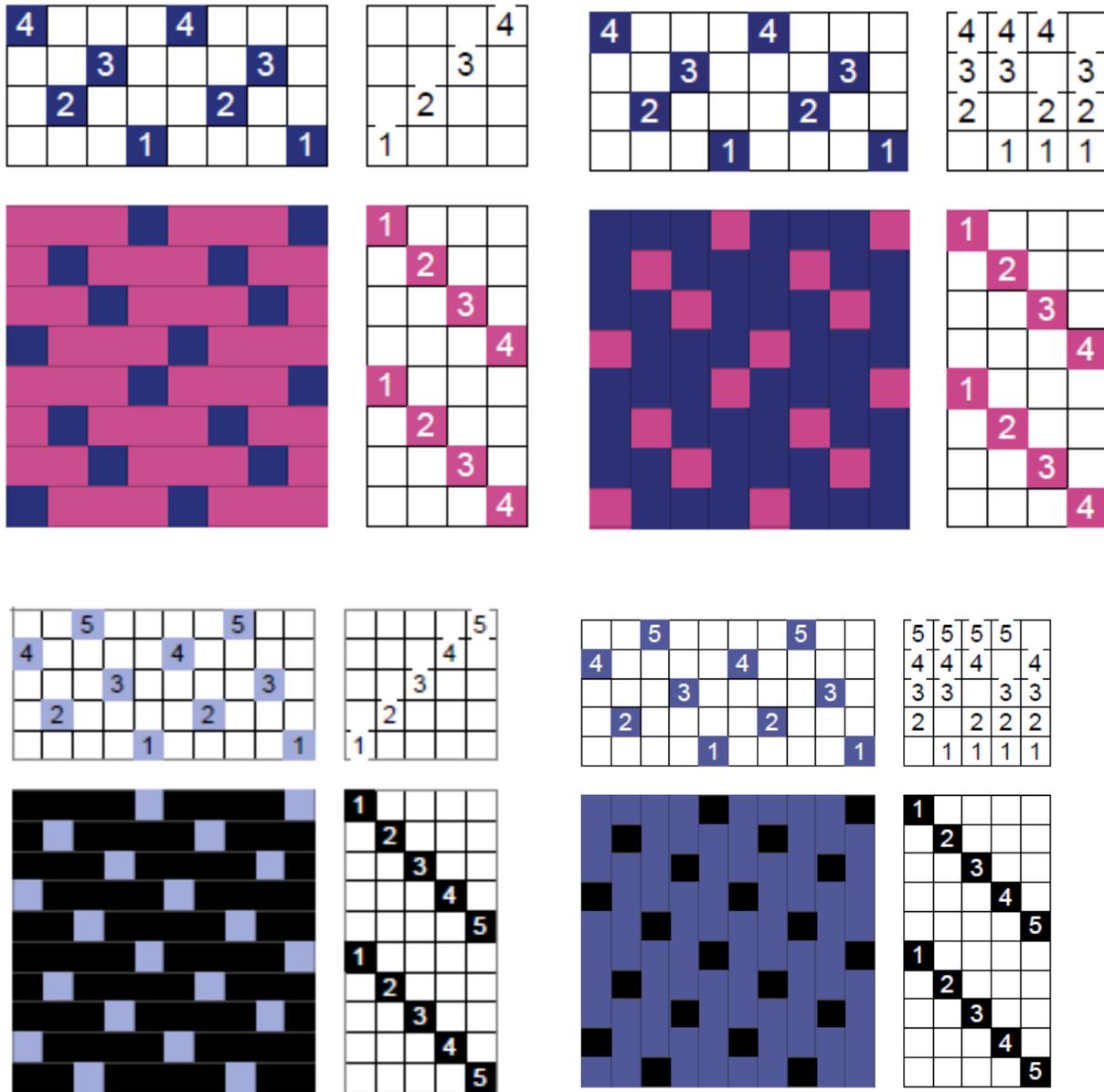
The purple fabric on the left is a false satin, the blue and black fabric below is a true satin. The weft dominant side is on the far left in both cases.

The warp pokes through a bit on the weft dominant side, while the weft shows a bit in the warp dominant side.

However, it is hard to tell that one fabric was woven as a false satin while the other as a true satin. The only slight difference is that the warp is more scattered in the true satin.

The drawdowns for both structures are on the next

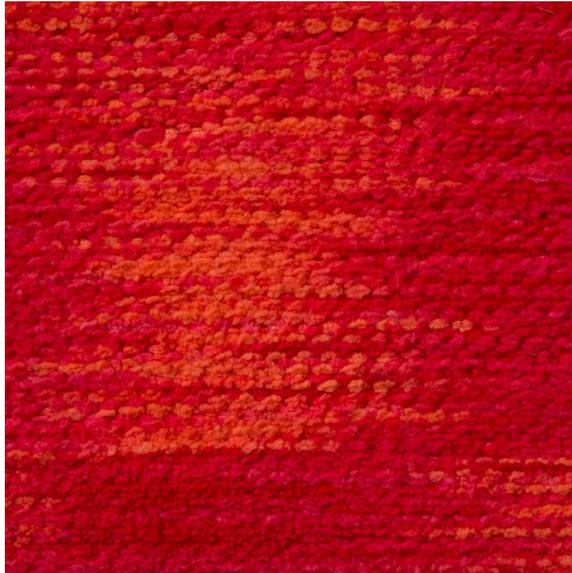
page, 3/1 broken twill false satin first, the 5-shaft satin after, the weft-dominant side on the left, the warp-dominant on the right.



The staggered threadings are very similar, and so are the tie-ups and treadlings. The setts in both cases must be closer than for a balanced twill, to produce the two sides successfully. However, this results in fabrics that tend to be heavy for the size yarn used, because more yarn is packed in the cloth; actually, false satins are less dense than true satins, so that can be an advantage. Using lofty, light yarns, as the one shown in the samples, wool and mohair for weft, makes the fabrics lighter.

Leave lots of weft when weaving either fabric otherwise there can be lots of draw-in, causing the edges to curl in toward the weft-dominant side.

- If you haven't woven false satins, try them; use finer threads or lighter fibers; the purple mohair-wool blend scarf in the false satin above is light and airy.
- If you have woven false satins before, try one with alternating stripes of warp and weft.
- If you have a loom with eight shafts, you can weave a true satin or you can weave a false damask, that is, two blocks of false satin.
- Is the fabric below a true or false satin? Hard to tell; the ribbon-like plush weft is showcased in the false satin. Next time you have a special yarn that you don't want to blend with the warp, a false satin will do the showcasing for you.



Month 3: Satins and False Satins

In addition to this monthly handout, I have written 3 blogs on satins, with links below:

[Satins and Damasks – and Convergence© 2018](#) (July, 2017)

[Satins and Sateens - Part 1](#) (May, 2017)

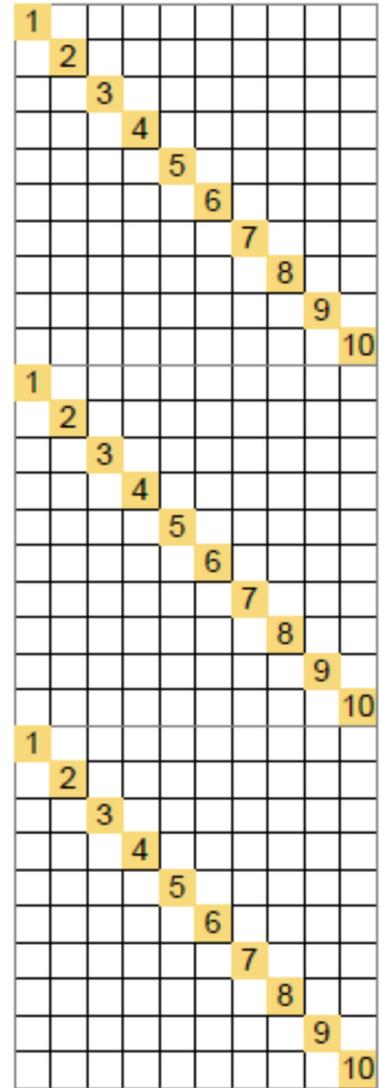
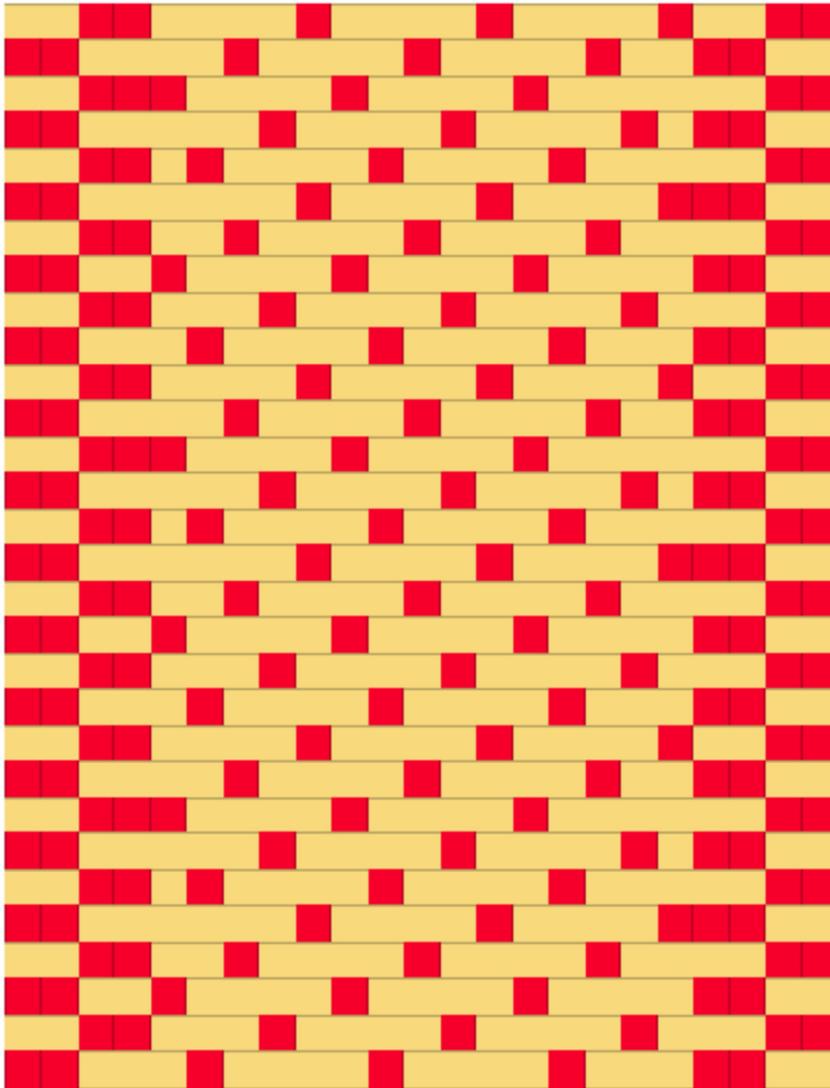
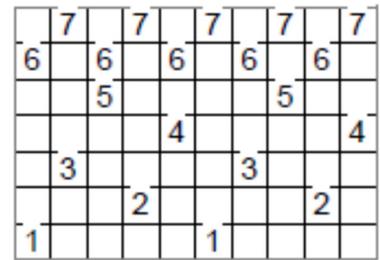
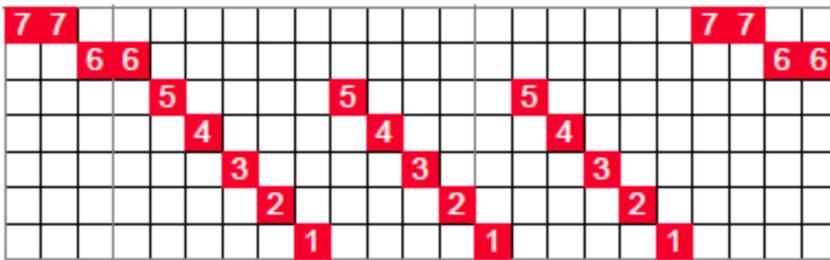
[Satins and Sateens - Part 2](#) (June, 2017)

Remember: the length of the float is one less than the number of shafts used.

When weaving either satins or false satins, be aware that the edges may curl up toward the weft-dominant side. To avoid the problem, leave plenty of weft with each shot, and advance the warp often so that you are weaving in the middle of the weaving distance between your castle and the front beam, the so-called “sweet spot”.

With 8-shafts, you can weave 5, 7 or 8-shaft satins. The higher the shaft number, the longer the floats, the more the difference between the two sides, one warp-dominant, the other weft-dominant, the heavier the fabric. Smaller threads work best.

If weaving a 5-shaft satin on an 8-shaft loom, there are 3 unused shafts, 2 of which can be used to make selvages. Pseudo-basketweave is recommended because of floats. The selvages will still have to be tensioned separately. The drawdown follows. Notice that 10 treadles are needed because the repeats of the satin and that of the basketweave are different.

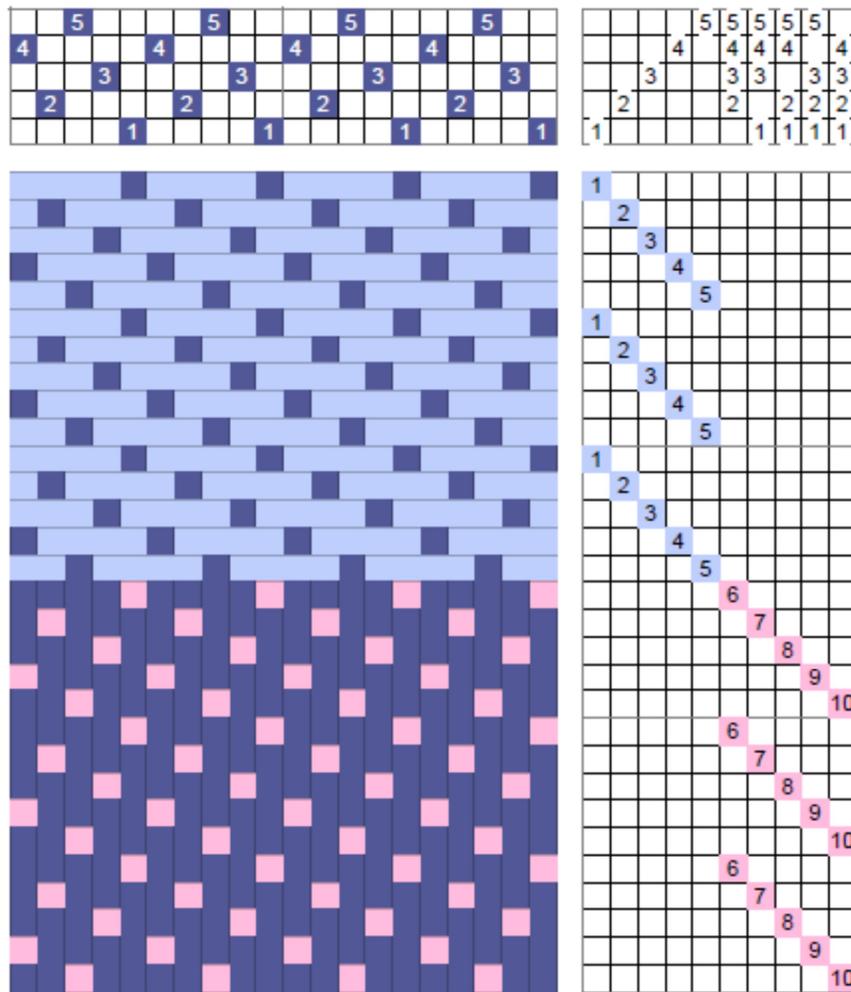


Happy Weaving!

Satins and Sateens Revisited

A satin should have floats equal to the number of shafts used minus 1. A 5-shaft satin has floats of 4 threads. This is true throughout the fabric and should be maintained if possible even if we combine treadlings or threadings.

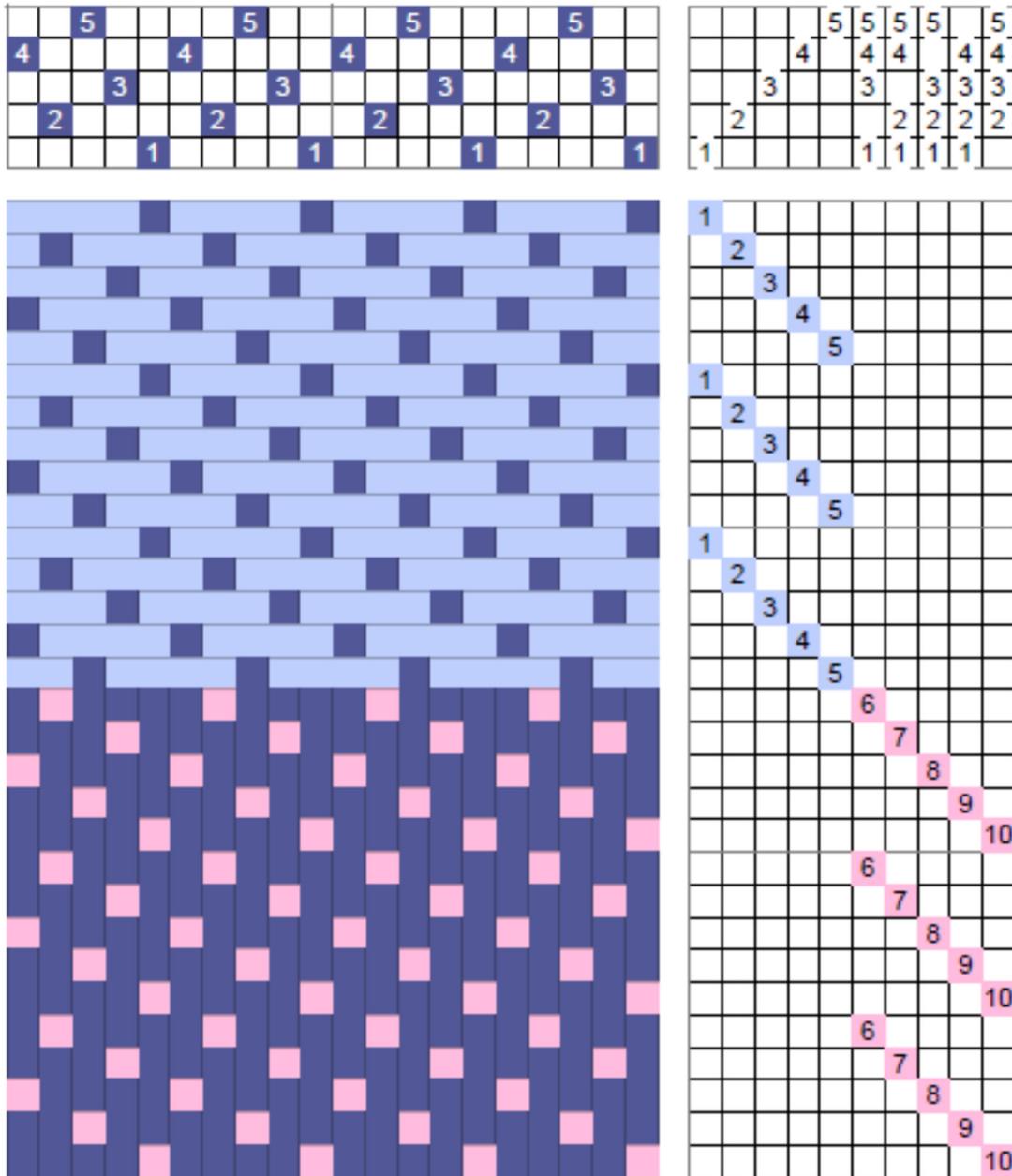
Let's talk about the treadling first. We can weave a sateen (weft-dominant side) and a satin (warp-dominant side) on the same threading by changing the treadling. Below is an example, the way it is often depicted:



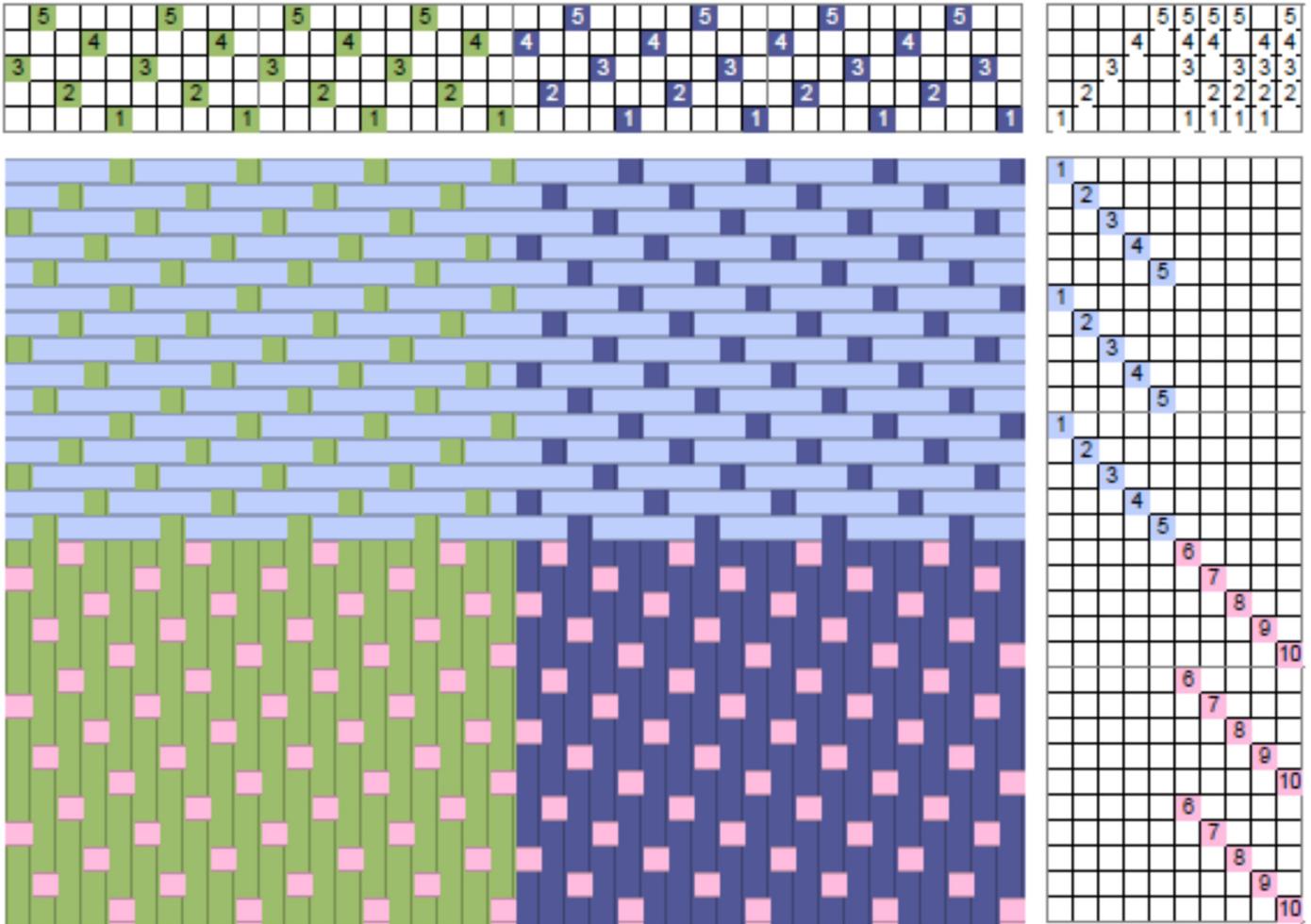
However, if we look at the end of the sateen and the beginning of the satin, we see that there are

5-thread floats.

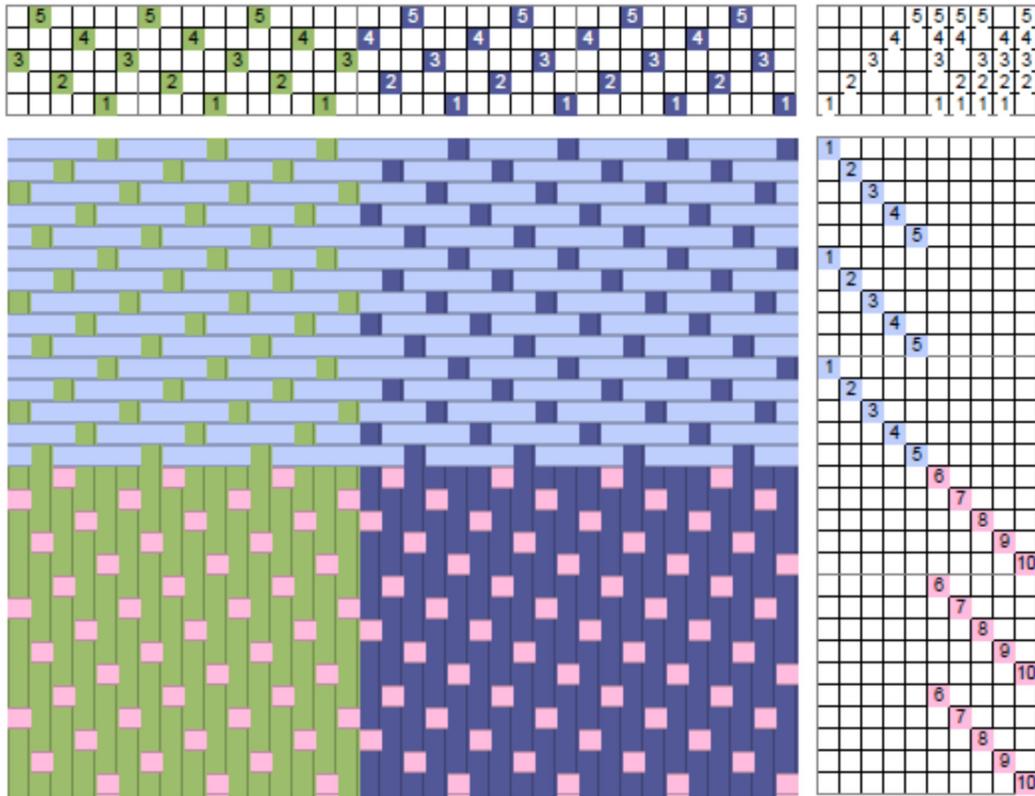
To avoid those floats, we can stagger the tie-up, which will result in the treadling being staggered, without changing the order of the treadles, as shown below. I use this procedure many times with satin blocks.



On 5-shafts there are two threadings possible, which can look interesting together. If we use them consecutively, however, long floats result at the joints, as shown in the drawdown below, the floats can be 7-thread long at the joints.



If we look at the drawdown, we see that the two threadings result in a design reminiscent of a pointed twill. Just like we usually have longer floats at the point of a pointed twill, in combining these satins it's hard to reduce the floats to 4 threads, but the next drawdown shows a threading with a 6-thread float that is serviceable.



Always check floats when you do a drawdown, whether it is by computer or by hand. Make sure that you think not just in the front of the fabric, but also of the back. And check the warp floats as well as the weft floats. Software often does the analysis for you, telling you where the problem occurs and what kind it is – weft or warp floats, top or bottom of the fabric. Do this for all weaving, not just satins. For satins, we know the ideal float length; for other weaving, decide up front what float length is idea for your project, given the structure and the sett, and then adjust accordingly.