

Profile Draft for Tied Unit Weaves

Month 7 Challenge

Weaving Year of Wonder Study Group

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August 16, 2021

The Challenge

- Assume you have 8 shafts
- Use unit weaves only
- Use this profile draft: A, B,B, C, D, D, C, B, B
- Later clarification:
 - Compound Weaves with Supplementary sets
 - Supplementary patterning weaves – unit weaves

There Was a Method to My Madness

- **Using compound supplementary patterning weaves**
 - **We are studying this group of weaves**
 - **They are the “cleanest” unit weaves**
- **Using a profile draft with 4 blocks**
 - **Profile drafts are perfect for tied unit weaves, good place to learn**
 - **There is more to tied unit weaves than summer and winter**
 - **4 blocks limit the options, making the challenge doable**

Areas of Confusion I Identified

- **Blocks vs. tied unit weaves**
- **Characteristics of tied unit weaves**
- **How to determine whether a structure is a tied unit weave**
- **Profile drafts**

What is a Block?

According to the Merriam-Webster dictionary:

**“a quantity, number, or section of things
dealt with as a unit”**

Weaving Blocks

In weaving we have blocks formed in a variety of ways:

- **Color, in gamps**
- **Twills**
- **Satins with at least 10 shafts**
- **Rectangular float weaves, for example, lacey weaves, etc.**
- **Supplementary weft weaves, for example overshot**
- **Double weave**
- **Supplementary patterning weaves, for example, unit weaves**

Blocks vs. Unit Weaves

Unit weaves form blocks

Not all blocks are unit weaves

!!

Characteristics of (Tied) Unit Weaves

- **Blocks are fixed, thus they can be repeated**
- **Floats are anchored by ties, which limit the float length**
- **Blocks are independent**
 - **They can be repeated in the threading, floats are tied**
 - **They can be combined in the treadling**
 - **They generally don't share pattern threads**

Unit Weaves as Compound Weaves

- **Usually unit weaves are compound weaves with supplementary patterning wefts**
 - **This means one warp and two wefts, one of which is “supplementary”, not needed for the integrity of the cloth**
- **We will use summer and winter as an example**

Blocks are Fixed, They Can Be Repeated

Block is fixed; changing the threading would change the structure

Block A of summer and winter:

3		3	
	2		
			1

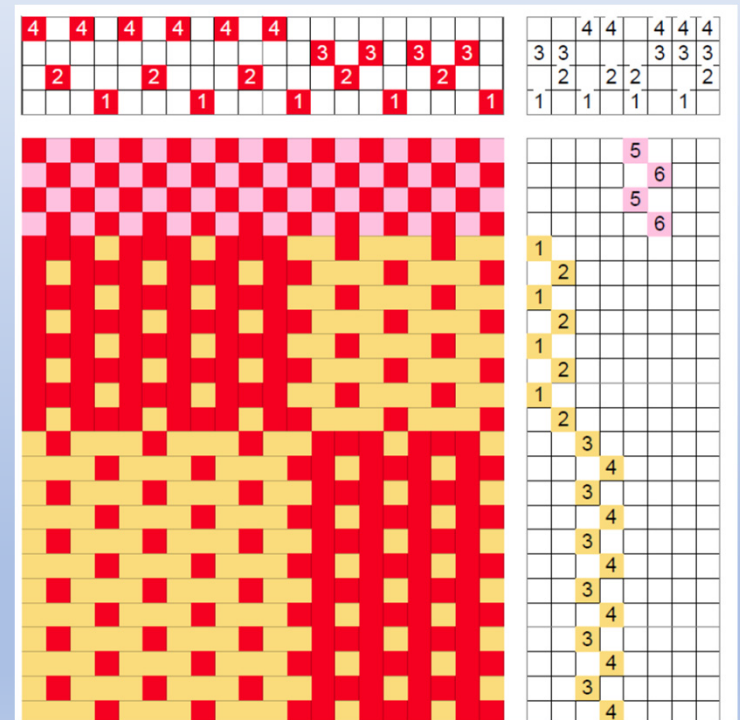
Blocks can be repeated

Two blocks of A, 3 of B:

4		4		4		4		4									
										3		3		3		3	
	2			2			2			2			2			2	
			1			1			1				1				1

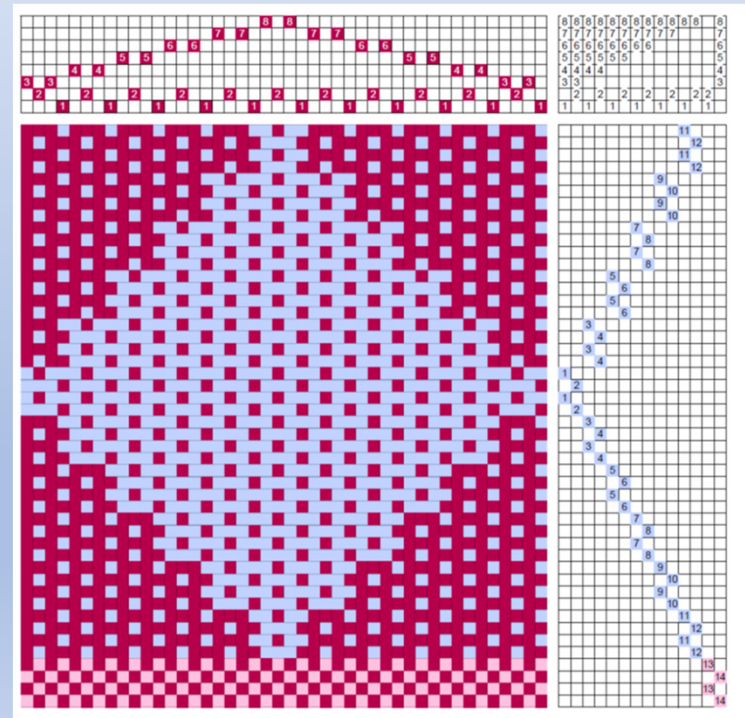
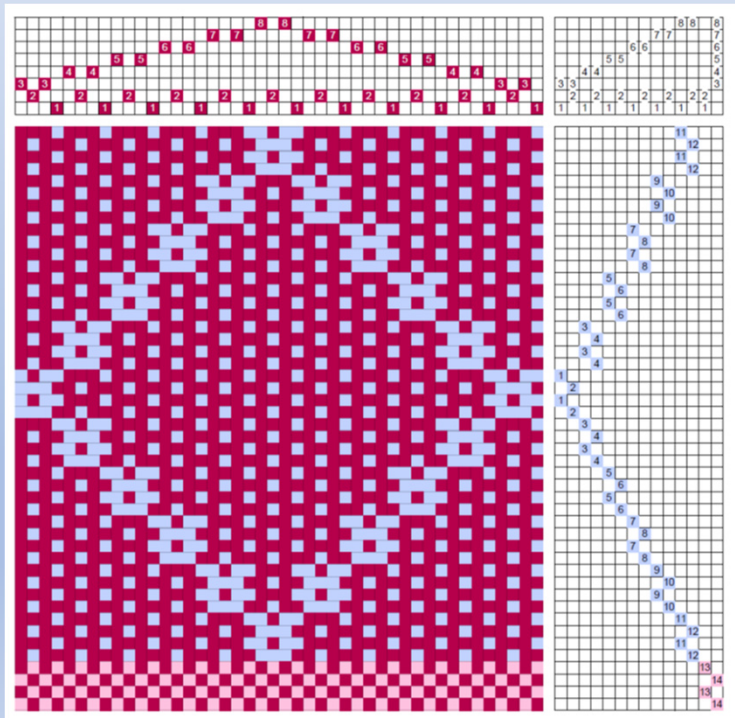
Floats Are Anchored by Ties, Limiting Float Length

- No matter how many times the block is repeated, the float length will never be more than over 3 threads, tied by shafts 1 or 2
- If we want a design of a certain size, we just repeat the blocks as many times as we need



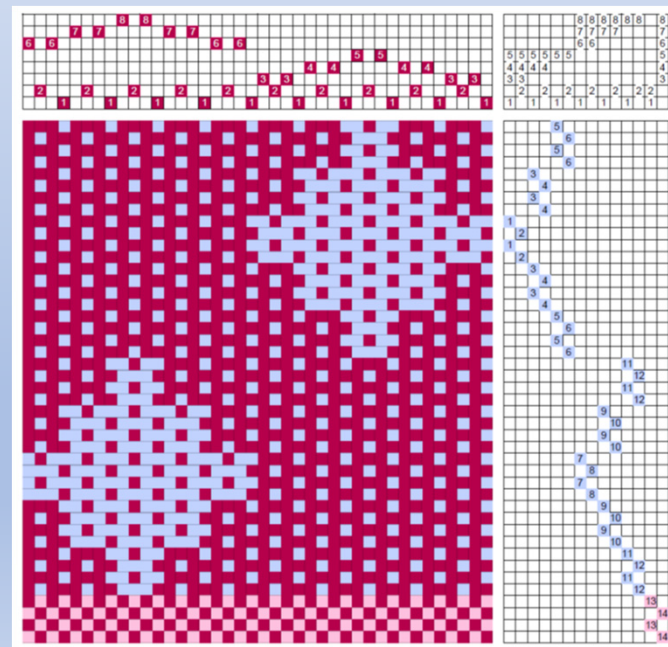
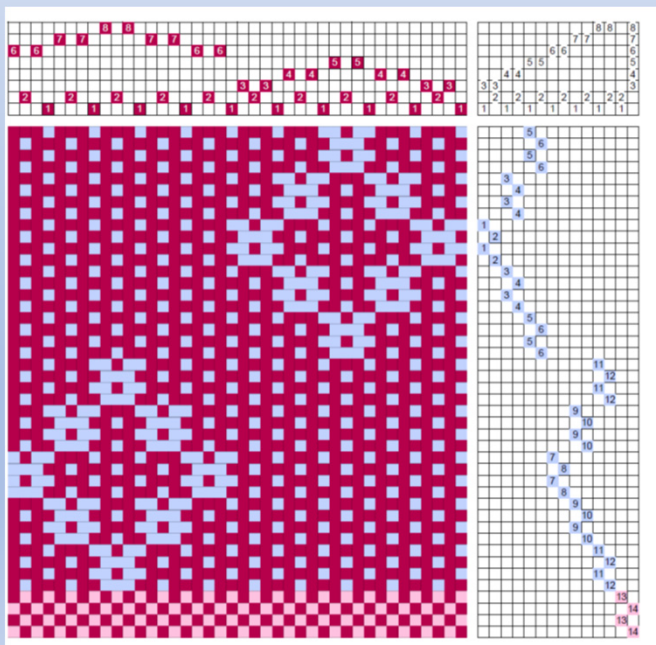
Independent Blocks

Many block weaves can be used for the design on the left, unit weaves are needed for the combined treading on the right



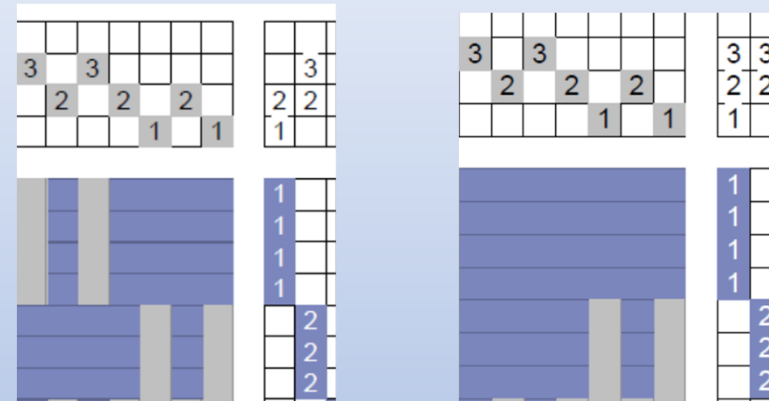
Independent Blocks (2)

The threading can also be combined in different ways, blocks don't share pattern shafts



Is Overshot a Unit Weave?

Fixed Block	Variable blocks; A: 1, 2 or 1, 2, 1, 2 or 1, 2, 1, 2, 1, 2
Anchored by ties	No ties, float over entire block, stopped by next unused shaft
Independent blocks	Block threadings are not repeated, they are extended; blocks cannot be treadled together, pattern shafts are shared



On the left is a traditional treadling for blocks A and B

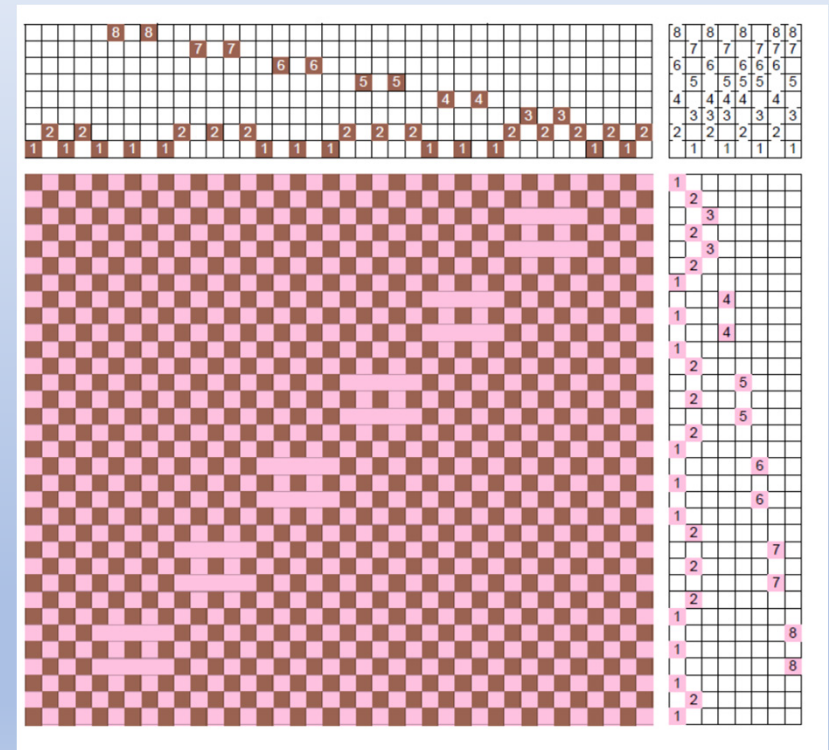
On the right blocks A and B have been combined, not a good result

Overshot is NOT a unit weave!

- **It doesn't meet any of the tied unit weave characteristics**
- **It is classified as a supplementary weft weave**

Is Huck a Unit Weave?

Fixed Block	Variable blocks; A: 2, 3....., 2
Anchored by ties	No ties, float over entire block, stopped by next block
Independent blocks	Block threadings are not repeated, they are extended; shafts 1 and 2 are shared by alternating blocks; only certain blocks can be treadled together

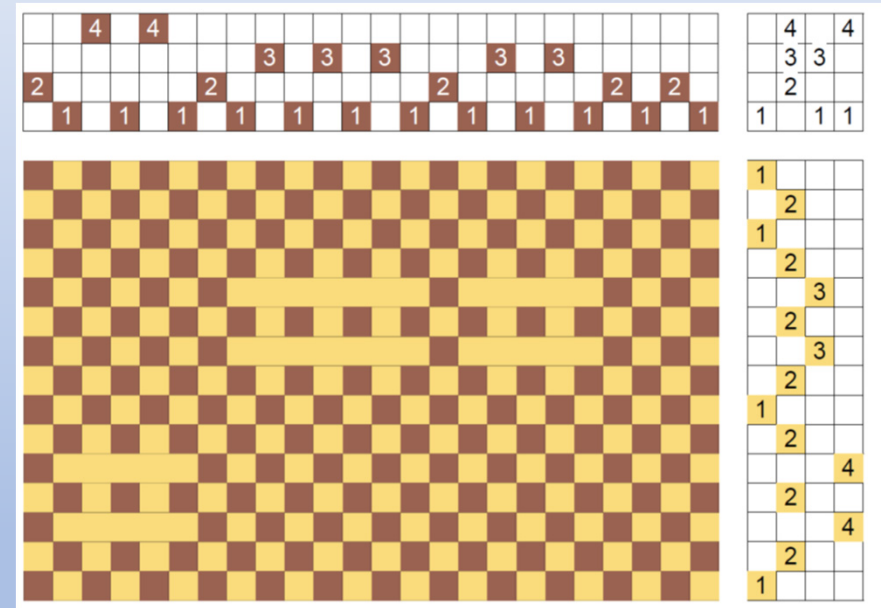


Huck is NOT a Unit Weave

- **It doesn't meet any of the characteristics of a unit weave**
- **Blocks can be combined only**
 - **using different kind of floats, warp & weft**
 - **when they share a shaft**

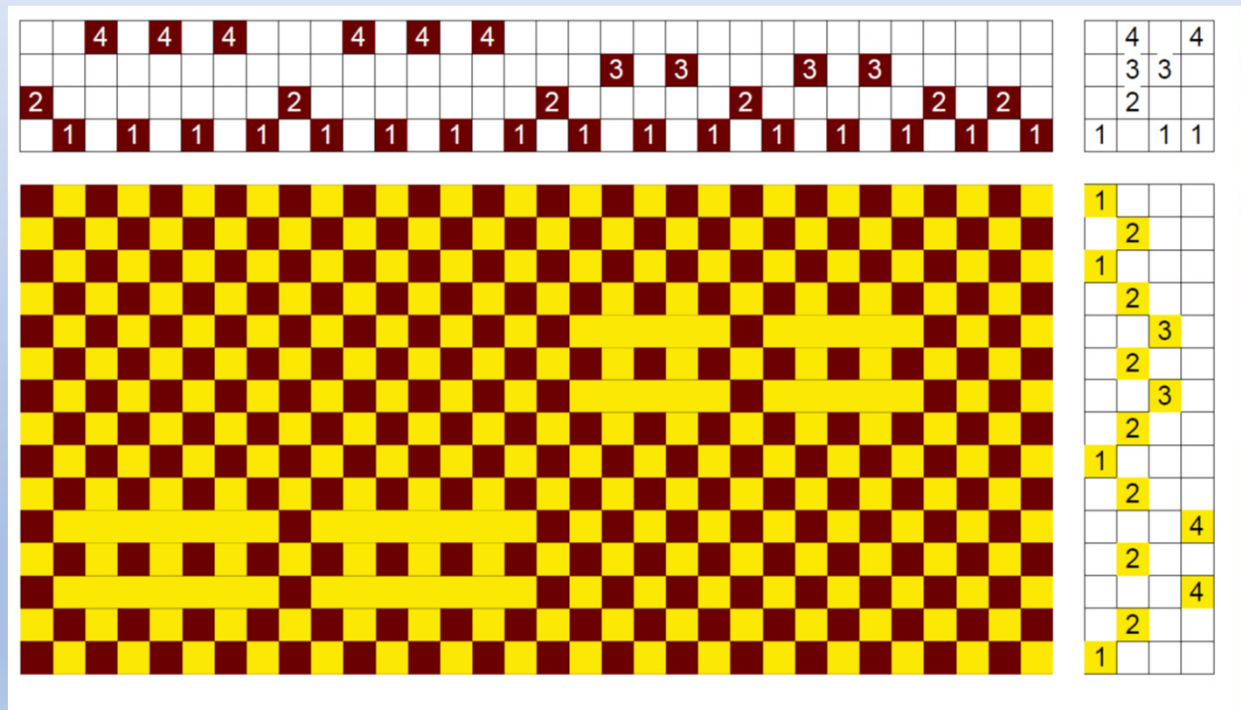
Is Bronson Lace (Atwater Bronson) a Unit Weave?

Fixed Block	Partially, block A: 1, 3...1, 2 always ends in 2
Anchored by ties	One tie, weft floats until it meets shaft 2
Independent blocks	If we define a block size, blocks can be repeated; blocks can be combined; shaft 1 is shared with all blocks



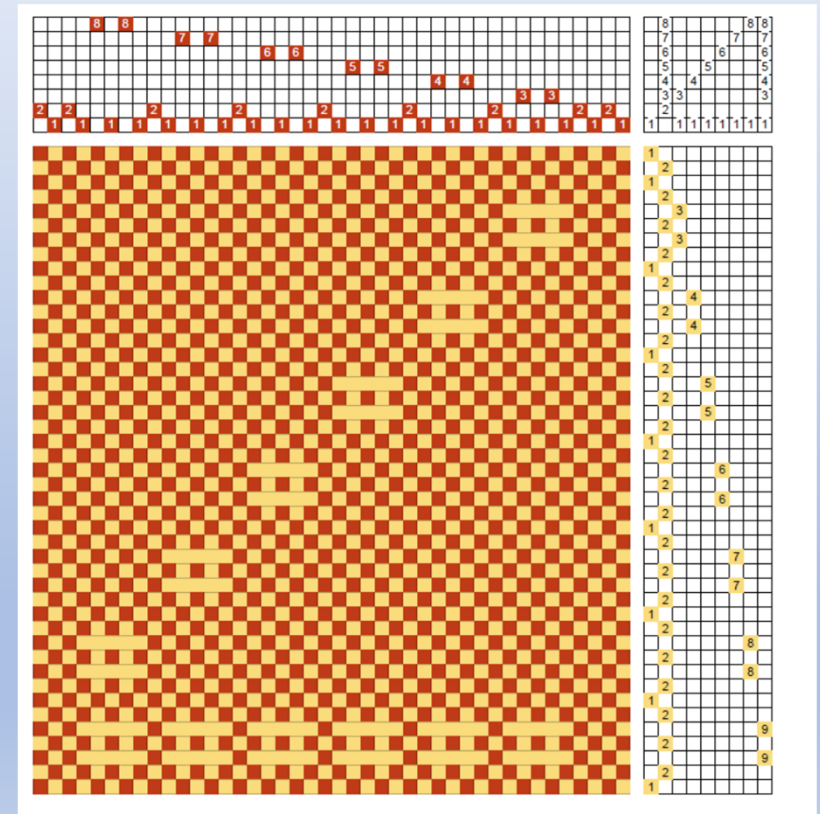
Pre-defined Blocks Can Be Repeated

- We can define a block threading any way we want, without changing the structure
- Once defined, we can repeat a block by separating the floats with a tie on shaft 2



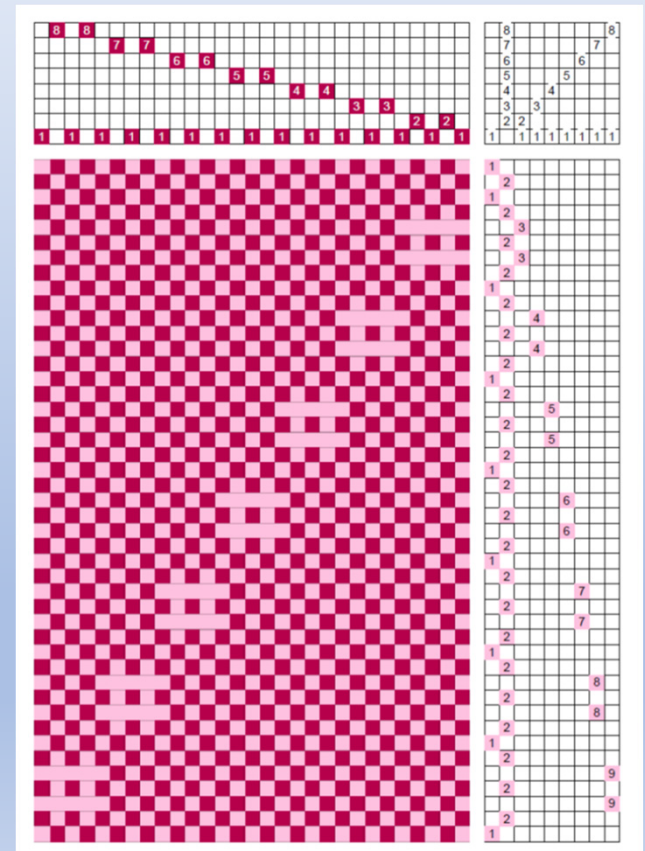
Combining Bronson Lace Blocks

- It's these characteristics that cause the structure to be classified as a unit weave
- I like to think of it as a **hybrid**
- How would we classify it?
Double (one repeated), one tie,
with a 1:? ratio



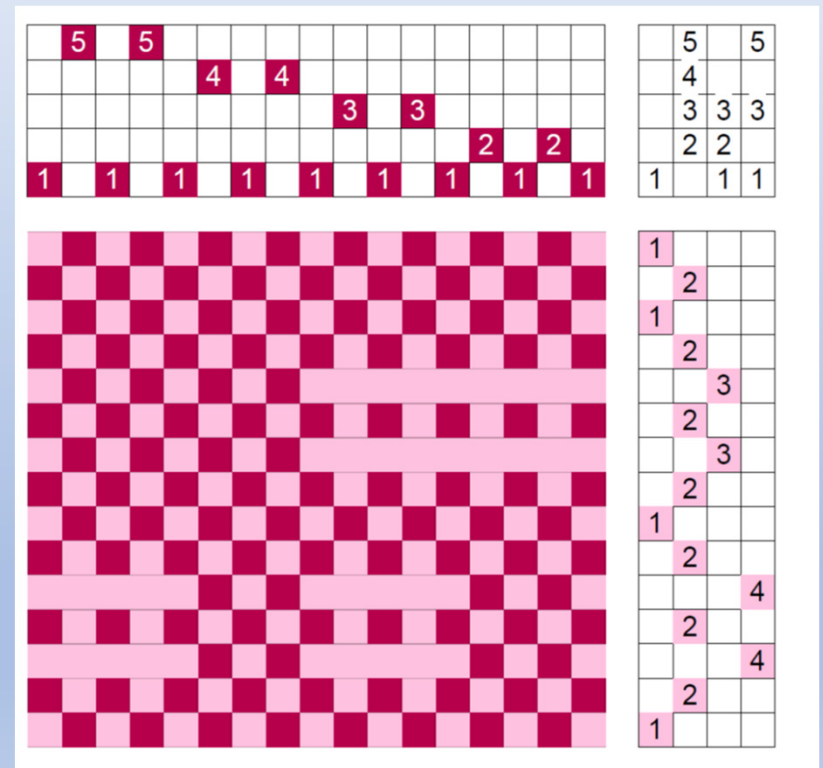
Are Spot Bronson / Barley Corn Unit Weaves?

Fixed Block	No, block A: 1, 2.....1
Anchored by ties	No, float ends with the 2nd shaft of the next block
Independent blocks	Blocks cannot be repeated, they can be extended; non-adjacent blocks can be combined



Combining Spot Bronson / Barley Corn Blocks

- Adjacent blocks result in a long float over the two blocks, on the right blocks A and B
- Non-adjacent blocks can be combined, on the right B and D



Are Spot Bronson / Barley Corn Unit Weaves?

No

They don't meet the characteristics of unit weaves

Contrary to what I learned in the past, the threads on shaft

1 common to all blocks ARE NOT ties!

Analyzing the Profile Draft

- **A, B, B, C, D, D, C, B, B**
- **I need 4 different blocks of a unit weave**
- **I need 2 blocks of B and of D**
 - **With unit weaves, this is not a problem, simply repeat**
- **Blocks are in pointed order**
 - **With unit weaves, this is not a problem, blocks can be arranged in any manner**

Profile Draft “Math”

- Options that have 4 blocks or more are possible
- Appears limiting, but the ties can be arranged in different ways

# of Ties	# of Pattern Shafts	Possible Blocks
1	1	6 blocks (8 shafts -1 tie – 1 repeated)
2	1	6 blocks (8 shafts – 2)
2	2	3 blocks $((8 \text{ shafts} - 2) / 2)$
3	1	5 blocks (8 shafts – 3)
4	1	4 blocks (8 shafts – 4)
5	1	3 blocks (8 shafts – 5)

Tied Unit Weaves for the Profile Draft

# of Ties	# of Pattern Shafts	Possible Blocks	Unit Weave
1	1	6 blocks (8 shafts -1 tie – 1 repeated)	Bronson Lace (hybrid)
2	1	6 blocks (8 shafts – 2)	Summer and Winter, single, 2-ties unpaired with 1:1 ratio
3	1	5 blocks (8 shafts – 3)	Single unpaired 3 ties with a 1:1 ratio, “half satin”; more than one option by threading ties other than a straight draw
4	1	4 blocks (8 shafts – 4)	Single unpaired 4 ties with a 1:1 ratio, more than one option by threading ties other than a straight draw

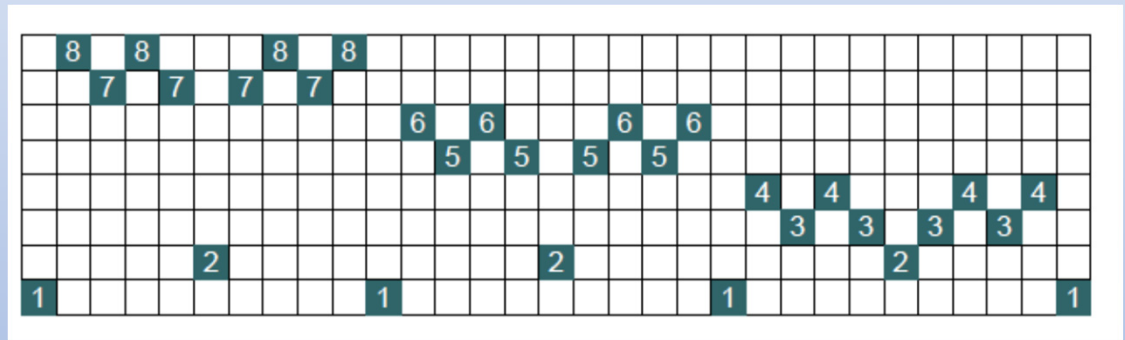
Linen Weave

- **Judy Steward, Yarn Lab, Handwoven, Sept / Oct 2021**
- **Linen Weave, Davison's book, *A Handweaver's Pattern Book***
- **Four entries for Linen Weave:**
 - **Canvas Weave, looks like double canvas blocks**
 - **Caroline Halvorsen's Linen Weave, two twill blocks on 4 shafts**
 - **Two in Thousand Flowers chapter, woven as overshot**
 - **The first is "Linen Weave Unit"**
 - **The second uses a block of the first and one inverted to make a plaid**

Expanding the “Linen Weave Unit”

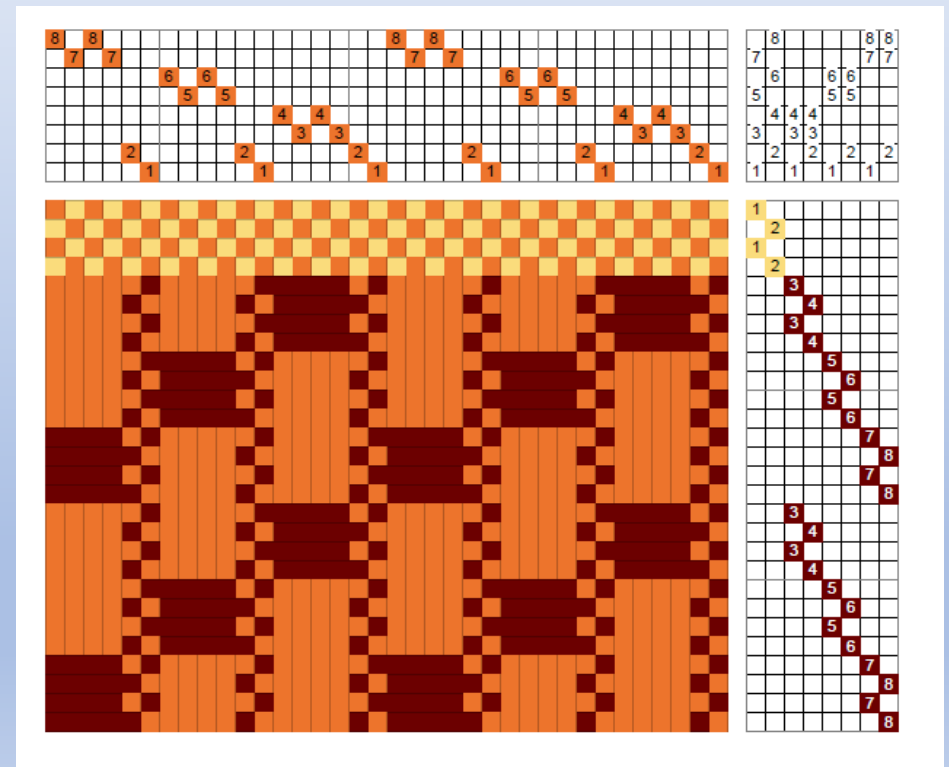
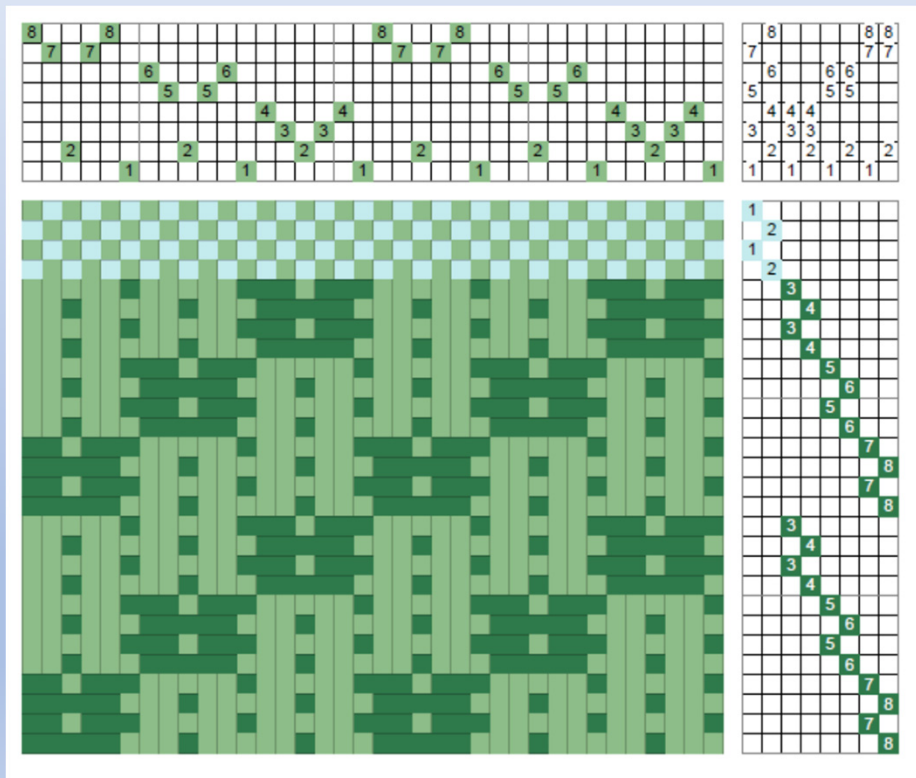
As a unit weave, it could be classified as a double (2 shafts per block), 2 ties (shafts 1 & 2), unpaired with a 1:4 ratio, in a pointed twill order

That looks somewhat familiar.....



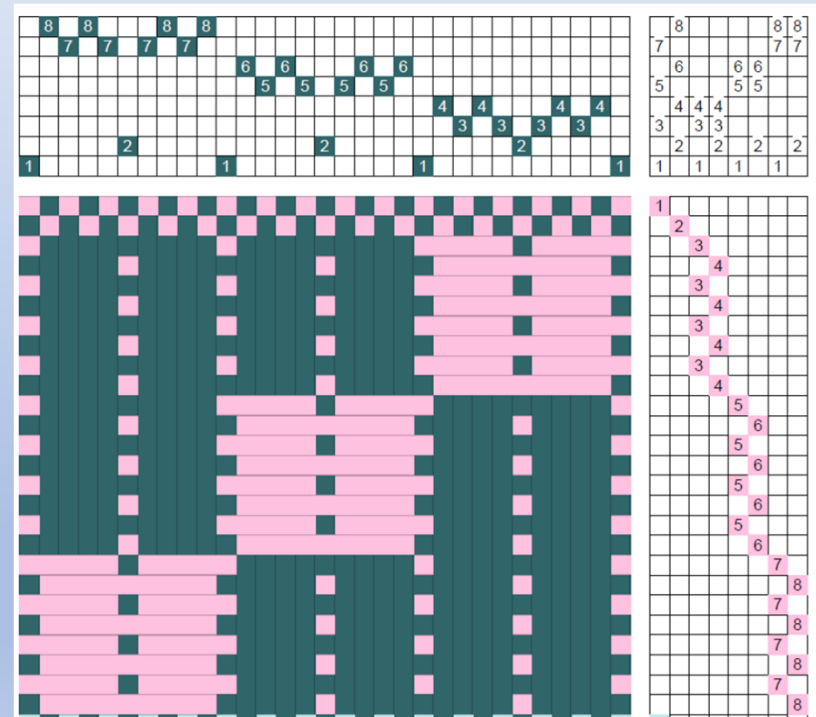
Double unpaired two-tie unit weave ratio 1:2

Double paired two-tie unit weave ratio 1:2 (2:4)



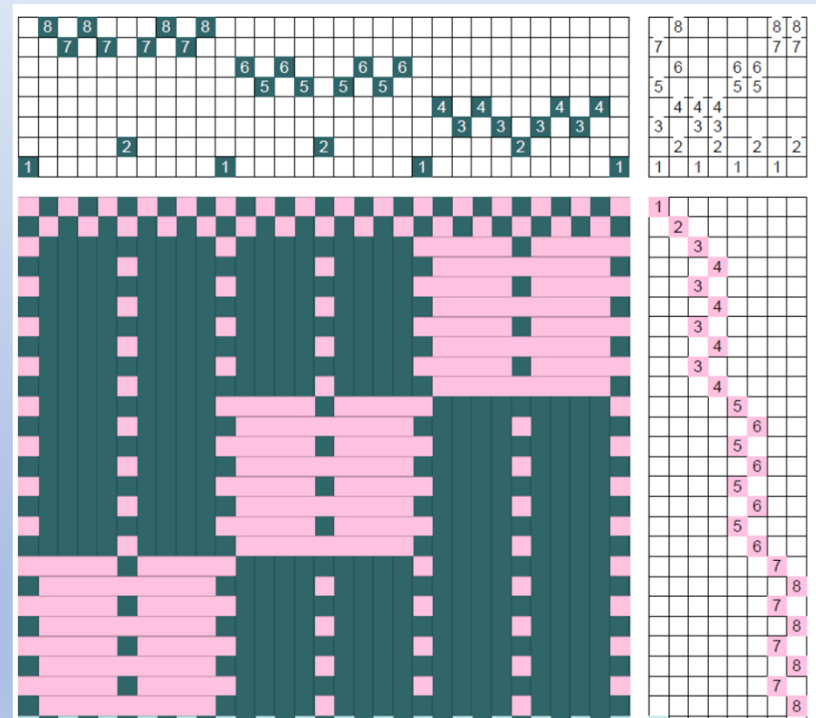
Treading “Linen Weave Unit”

One way to treadle a unit weave is to pair each tie shaft with the pattern shafts, as was done for the previous two drafts and here for the linen weave unit



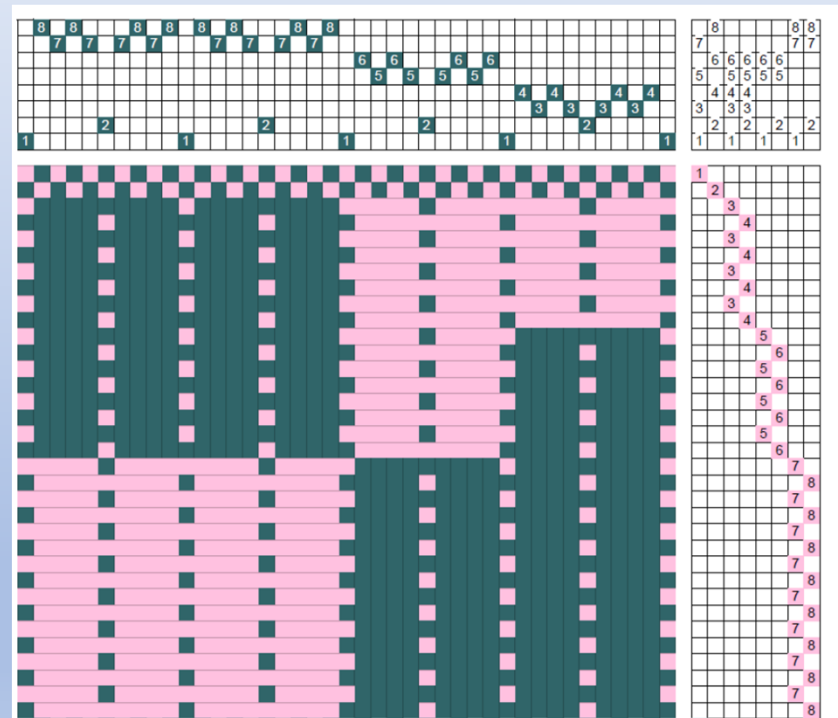
Is Linen Weave Unit a Unit Weave?

Fixed Block	Yes, block A: 1, 4, 3, 4, 3, 2, 3, 4, 3, 4
Anchored by ties	Yes, shaft 1 anchors floats at the edge, shaft 2 in the middle
Independent blocks	Block threadings can be repeated; blocks can be treadled together; no shared pattern shafts



Linen Weave Unit Independent Blocks

On the right blocks A and B have been combined
The float length hasn't changed



Tied Unit Weaves

- **There is a world of tied unit weaves ready to be discovered**
- **They are versatile with easily controlled floats**
- **Easily turned!**

Month 8 Challenge Part 1

- **Take 1 of the 3 choices of unit weaves (1 warp, 2 wefts) and expand it to the profile draft**
 - **Do just the ascending portion: A, B, B, C, D, D**
 - **Some have more than one choice, just pick one**
 - **Be mindful of the number of treadles!**

Month 8 Challenge Part 2

- **Turn the draft**
 - **The warp becomes the weft, the two wefts become a warp and a supplementary warp**
 - **I have step-by-step directions of my blogs**
 - **DO NOT USE software, do it by hand**

Month 8 Challenge

- There are really 2 topics:

- Turning a draft

<https://www.marcypetrini.com/marcy-s-blogs/296-blog-078-turning-a-draft>

<https://www.marcypetrini.com/marcy-s-blogs/297-blog-079-turning-a-draft-II>

- Supplementary warp

<https://www.marcypetrini.com/images/Pictionary/Supplementary%20Warp%20Weaves.pdf>

- That's why you need to start with a structure that has a supplementary weft